NATURE'S PHARMACY
EVIDENCE-BASED ALTERNATIVES TO DRUGS

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with forewords by
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Nature’s Pharmacy
EVIDENCE-BASED ALTERNATIVES TO DRUGS

GreenMed info
The Science of Natural Healing

PAMELA DUFF, RN, CSNC
Dedicated to all those who are looking for ways to improve health.
Forewords

Erin Toner BA, DHMHS, PTS

Since 2006, when I began postgraduate studies in homeopathy after a family tragedy, I have become increasingly aware that there is tremendous harm being done by conventional medicine, and not enough healing. Every case I encounter further solidifies my opinion that despite the time, research and funding pouring into pharmaceuticals and medical technology, our culture is one with widespread illness and death. This is due to a culture too willing to accept that there is a pill to fix everything quickly; we have lost sight of the more traditional forms of medicine in favour of medical ‘advances’ which may prolong life, but which certainly do not increase health.

When I first met Pam Duff, I immediately felt a connection; her knowledge, no-nonsense attitude and passion for health and helping people resonated with me. Having studied homeopathy, holistic nutrition and other health care modalities extensively, I share her disappointment in the current state of the health care system and the strong desire to change it. I have come to regard highly her opinion and have a tremendous amount of respect for her, both as a person and as a medical professional.

To say that I was excited to learn that she was writing this book would be to put it mildly. This book is what people working in holistic health fields, and those who take great interest in them, have been waiting for. It is the culmination of years of study, research and first-hand experience. Pam’s experience in the health care system, together with her knowledge and passion for holistic health, provide the reader with a book like no other, a book that will likely ruffle a few feathers in the conventional medical world.

This book comes at a very important time, a time when this culture is slowly, but surely awakening. Never before have we had access to so much information and misinformation, and we are hungry for knowledge and answers. Many people obtain their medical information from their physicians or from mass media, where the latest drugs and vaccines are forced upon them with the use of clever, colourful marketing tools, and are not exposed to other viewpoints or health modalities.

This is a very important text, which can be used as a reference tool for both the health professional and average citizen alike. Simply stated and clear-cut, Pam tells it like it is and presents medical and scientific fact. This book echoes the sentiments of many living in our time, those who are taking their health into their own hands.
It is a book that presents health alternatives, that challenges the current medical model and that displays Pam's tireless efforts to help people achieve health. I think the author can be confident that many people will gain a broader understanding of the health implications of pharmaceuticals and the effective alternatives that are available, because of her efforts.

~ Erin Toner

**Parminder Kaur Khaira BSc, DC, CAFCI**

I am honoured to write a forward to this excellent book on natural ways to take care of our health. Pam and I share a common background: We are both highly educated health professionals with extensive knowledge in holistic medicine. Pam is a retired registered nurse and I am a chiropractor. With my background it is very natural for me to use alternative medicine to treat and heal my family. I can diagnose a condition and find a natural solution that will work best. This approach works effectively for me because I have the background to make the right choices when it comes to selecting the correct treatment. I am fortunate to have this knowledge, however, not everyone has this depth of information.

In our world the role of alternative medicine in our society is expanding exponentially. For those individuals who want to use natural alternatives, deciphering truths and facts from misleading information can be overwhelming. Our main source of information today is the internet and it is full of either fact or fiction. The public wants to explore options outside of conventional medicine to regain their health but how can this be done when there is an overabundance of information? How do we make sense of this information? How do we make the best choices for ourselves and our family?

Pam Duff's latest book fills the major gaps in health information about the use of natural medicine. By presenting a research-based book the consumer now has complete knowledge of their benefits, advantages and disadvantages. This book has been created in a particular format to help the reader understand what the condition is and which supplements will work best. The research studies that support the treatment are listed and if the reader wishes more information he may locate the study and read it completely. This is convenient and makes a research based book convenient, accessible, and friendly to the general public.

From reading this book it is clear that science supports natural medicine and this will aid consumers in taking control of their own health initiatives. This book is about educating the public with facts and sound advice that is supported by research. It is well written and up to date. It is an excellent resource for the public and health professionals. Enjoy the book and use it to regain your health.

~ Parminder Kaur Khaira
Although I spent several years researching for this book, others have helped me along the way.

I have always valued the opinion of my husband of 48 years, Duane Duff, a retired high school teacher. His support has been invaluable. He even proof-read the book while admitting he had no idea what he was reading but as long as the right punctuation and grammar were there, he was happy – and so was I. I can never thank him enough for all he has done for me.

Thank you goes to Alejandro Duff for the author photo. His natural keen eye for a great photograph came at a very young age. He can make anything look good, including his grandmother.

It was my clients and co-workers who kept prodding me for more and more information that gave rise to this task. If it wasn’t for their insistence, I never would have started to climb this mountain nor finished it! I am truly grateful to them for pushing me beyond what I thought I was capable of doing.

I am inspired and grateful to all the enlightened conventional and alternative health care providers, authors, and websites that offer quality information. They have contributed to my knowledge as I try to bridge the gap between conventional and alternative healing. And a special thank you goes to all those bridges that continue to pop up.

To find evidence-based alternatives, I used Google Scholar and PubMed for many months. But when I stumbled upon GreenMedInfo.com, I thought I had died and gone to abstract heaven! This is a marvelous resource and one I highly recommend. Both Sayer Ji and Cameron Fillers promptly addressed all my questions. Their hard work is a much-needed resource and I am truly thankful to them for cutting down my search time.

~ Pamela Duff
**About the Book**

This book is unorthodox in several ways.

First, it dares to suggest that foods and herbs just might be a first-line of defence for health instead of modern medications. Far too much emphasis is placed on using drugs first and ignoring what centuries of world-wide practise has shown that using plants prevent disease and restore health during illness.

Second, it uses book format to publicize hard-to-find pro-plant-based studies rather than utilizing other forms of technology. Not that there is anything wrong with that, but some practitioners still need a book-in-hand as a resource.

Third, it keeps studies right with statements instead of buried at the back of the book where few tend to look at the best of times.

That said, *Nature’s Pharmacy: Evidence-Based Alternatives to Drugs* is meant to be a bridge between conventional and alternative practices. It is meant to give both sides to the story of healing practices. These days, we are only given one side of a preference and not the other. Both need to be taken into consideration so that individuals can make informed choices regarding their own health and that of their loved ones. Worse yet, harmful side effects of medications are glossed over until severe illness or death jolts people into finally looking at them and then, maybe an alternative.

Although there is room in the world of health for alternatives, the information provided here is to be used as an open door to both realms of healing. This book is meant to show that alternatives are not snake oil but have scientifically proven benefits just as conventional medicine claims to have had for years.

*Nature’s Pharmacy: Evidence-Based Alternatives to Drugs* is NOT a means to diagnose, treat, or alter any course of action prescribed by a doctor. Any change you might want to try must be discussed with him/her. If your doctor refuses to listen to you, find one that does because there are more and more of them out there now.

**Remember: Herbs are Medicines.** They can interact with pharmaceutical medications. Therefore, just because they are listed as alternatives, do not go out and try to replace what your doctor has already prescribed. Investigate everything you put into your mouth, whether it is medication, supplements, herbs, food or water. Then work with a professional to see if there is an alternative right for you.

Study both sides just as I did and then take charge of your own health.

~ Pamela Duff
INTRODUCTION

This book began as a few sheets of paper that were used as reference material for advisors at The Organic Grocer, an award-winning certified organic store in Surrey, BC, Canada. We have customers from around the world that come because they know they can obtain quality information from our professional staff.

Frequently frustrated, customers related stories about their doctors ignoring questions regarding taking medications with a supplement. Often they were treated like children and told to stay away from using nutrients for healing because they were nothing more than snake oil. That never sits well with people and only tends to drive them into the “other” camp. Those unsettling experiences led me into a fascinating area of study, one which, unknowingly, started many years ago.

I was forced to retire early as a registered nursing director. Antibiotics over long periods of time plummeted my condition and contributed to other health concerns. The stress, improper eating habits, and lack of rest deteriorated my health to such an extent that I basically went home to die. Instead, when I regained my health through the use of alternatives, I knew I could never go back to the solitary conventional methods. Today, my health and quality of life are better than they were almost 20 years ago when I left nursing.

I continued to study though, taking courses from both camps – conventional and alternative. After receiving several certifications in nutritional areas, I was asked to join the team of consultants at The Organic Grocer. There, I was, and still am, able to guide people toward better diets along with a wiser use of supplements in conjunction with their medications.

Patients are usually cautioned about drug to drug or drug to herb interactions. No one tells them, however, about the nutrients their medications are destroying nor are they told that taking supplements could offset this loss.

On the other hand, once someone is made aware that maybe their medications are depleting valuable nutrients, he/she assumes that medications can be taken together with their supplements. Such is not the case.

Studies have shown that almost all drugs deplete at least one nutrient needed by the body; most often it is the very nutrient required to correct the problem. Most medications deplete a long list of nutrients.
This book lists only the nutrient depletions that have been studied. More are suspected but, as yet, have not been “scientifically” proven.

For example, if a drug depletes one fat-soluble vitamin (A, D, E, or K) or one B-vitamin (there are about 14 in the family), then there is a strong likelihood that their relatives will succumb as well. Therefore, we should assume that destroying one member triggers a domino effect that could involve others. The same applies for minerals and proteins.

In an attempt to be fair, I have to say that doctors are not completely at fault for their lack of knowledge in nutrition. Such courses have not been taught at most medical schools and what are available, give the barest of outlines based on a food pyramid. What is unforgiveable is their not wanting to even take a peak at what the alternative world of healing has to offer. A closed mind is a stagnant excuse for knowledge.

Doctors, instead of taking the time to find out, spew forth skewed information offered up by pharmaceutical representatives; information that does not include such facts as nutrient depletions and certainly, would never suggest that a plant could be used as an alternative.

Nature’s Pharmacy: Evidence-Based Alternatives to Drugs is by no means a comprehensive listing. There are thousands upon thousands of drugs and alternative studies so it would be humanly impossible to list them all, although I did try!

I chose to list drugs according to general categories of ailments for which they are used. I found that most people cannot name the drug they are taking but they did know why – usually.

I still recommend that if you are in doubt, check with your doctor or pharmacist. There are ones out there who do know this information or who are willing to learn. If yours does not, encourage him/her to find out or find someone who does know or willing to find out.

All drugs cause side effects as well as nutritional destruction. This is because they are usually based on one active ingredient. Foods contain hundreds of substances that work synergistically and rarely cause discomfort to the extreme of some medications.

Worse yet is this statistic. Since 2009, prescription drug deaths have outnumbered deaths from traffic accidents in the United States; claiming a life every fourteen minutes. (LA Times, Sept. 17, 2011)

Canada fares only slightly better.

According to the United States National Poison Data System, NO DEATHS have resulted from taking vitamins, minerals, proteins or herbs. Yet which ones are pulled off the shelves at the speed of light if someone reports a “stomach ache” that might be connected – not the drugs. Those are allowed to kill people and still remain available to repeat the practise yet herbs, with no history of mortality, are not allowed to be sold or severely restricted in some way.
Ironically, scare tactics seem to work when it comes to frightening people away from using anything natural in favour of prescribed synthetics. There is definitely something wrong with the priorities of our present-day so-called health care systems.

Suggested Alternatives are included with each category. These are only suggestions that should be investigated further and approved by your doctor or pharmacist since some can interfere with other medications. Often a medication can be substituted, although the medical profession does not want you to know that.

The alternative suggestions are those that have been studied by scientists and used by medical doctors, chiropractors, naturopaths, and other professional health care providers in their own practises.

If nothing else, replenish what your medication is destroying, but do so wisely. It is your quality of life that is in jeopardy and you should not be made to suffer needlessly through the dictates of those supposedly under the oath of “do no harm”.

The body needs nutrients in order to function. Think cars. If you were to put diesel fuel into a BMW or sugar into your gas tank, the car would soon stop running, with parts unable to function again. So it is with the human body. Give it the fuel it needs and it heals itself but give it junk instead, and the results are predictable with evidence all around us.

Dr. Carl Pfeiffer said it best: “For every drug that benefits a patient, there is a natural substance that can achieve the same effect.”

**CAUTIONS**

- **Do not take any supplement at the same time as a medication** whether it is prescribed or over-the-counter. This includes herbs, vitamins and minerals. Unless completely contraindicated, taking supplements two to three hours away from medications usually prevents or minimizes any possible interference.

- **Fruit and Fruit juices should not be used to take medications.** Fruit juices are powerful healers but, unfortunately, they can interfere with the action of medications. The one most studied is Grapefruit juice; but there have also been studies done on many other fruits (see the Appendix).

- More than 20 years ago, grapefruit juice proved to alter the effectiveness of more than 30 prescription drugs. Since then, other fruits have been studied that mirror similar effects, although, with results not as drastic as in some cases with grapefruit interactions.

- Grapefruit, and its juice, has the potential for the most harm. Grapefruit contains certain flavonoids (naringenin, quercetin, kaempferol) which increase the concentrations of many drugs, sometimes tripling the amount, and delaying their release to where the bloodstream can be flooded with the medication, occasionally with fatal results. Effects can last for three days or more so taking juice at a different time of the day is out of the question.
Some interesting studies have also been performed on a few exotic tropical juices including Noni, Mangosteen, Goji, and Acai. Those brought out the benefits with none suggesting possible drug interactions. Despite the enormous health benefits that far out-weigh any possible damage done by taking them, it is still a good idea to avoid taking any medication with juice.

Take medications with water only.

Do not take medications with Milk either. Dairy products interfere with certain antibiotics, especially tetracyclines, osteoporosis-prevention medications, and laxatives, to name a few.

Do not take medications with Alcohol, Tea, Coffee, Sodas, Ma huang, bitter orange, or chocolate or any other liquid except water.

Know your medication. Know why you are taking it; what the side effects are; and what foods (yes, foods) might interact.

Above all, know what nutrients you should take to compensate for what your drug is costing you.
ACID BLOCKERS/Antacids/Anti-ulcer

(Used to treat gastrointestinal ulcers, acid reflux, or heartburn)

Common examples:

Antacids
- aluminum/magnesium – Gaviscon, Maalox, Mylanta, Milk of Magnesia, Amphojel
- calcium carbonate – Tums, Titracle, Rolaid, and others
- sodium bicarbonate – baking soda

Anti-flatulent (anti-foaming agent)
- Alka-Seltzer Gas Relief, Gas-X, Maalox Anti-Gas, Mylanta Gas, Mylicon Infant, Ovol, Phazyme Infant and many others

H2-Blockers (Histamine receptor antagonists)
- cimetidine – Tagamet
- famotidine – Pepcid
- nizatidine – Axid
- ranitidine – Zantac

Proton Pump Inhibitors (PPIs)
- esomeprazole – Nexium
- iansoprazole – Prevacid
- omeprazole – Prilosec, Zegarid
- pantoprazole – Protonix
- rabeprazole – Aciphex
... and others

Others
- sucralfate – Carafate
- sulfasalazine – Azulfidine, Salazopyrin

Deplete:
A, beta carotene, B1, B2, B3, B6, B9, B12, C, D, E, K, calcium, chromium, copper, iron, magnesium, phosphorus, potassium, selenium, zinc, CoQ10, glutathione/NAC, melatonin, good intestinal bacteria

Acid Blockers basically destroy all nutrients, or prevent them from being absorbed. Altering the pH balance of the digestive tract lays the groundwork for a whole host of diseases and disorders. Reducing stomach acids makes it harder for the body to digest food. Oftentimes, what appears
to be too much acid is really the opposite with food sitting too long in the stomach waiting for enough digestive juices to form in order to break it down.

*Bohager 2009:39
*Henry et al: Proton pump inhibitors reduce the bioavailability of dietary vitamin C. Aliment Pharmacol Ther 2005 Sep 15;22(6):539-45
*McCott: Effect of proton pump inhibitors on vitamins and iron. Am J Gastroenterol 2009 Mar;104 Suppl 2:S5-9
*Oh: Proton pump inhibitors - uncommon adverse effects. Aust Fam Physician 2011 Sep;40(9):705-8
*Skikne et al: Role of gastric acid in food iron absorption. Gastroenterol 1981 Dec;81(6):1068-71

**Acid Blockers** cause a vitamin B12 deficiency. B12 requires adequate stomach acids in order to make intrinsic factor which is necessary to absorb the B12 molecule. It is often advisable to take a sublingual (SL – under the tongue) B12 supplement which bypasses the digestive system. Take note, that the amount required to correct a mild B12 deficiency in the elderly is 200 times greater than the RDA (recommended dietary allowance).


**Acid Blockers** are linked to muscle weakness (myopathy), infertility and stomach cancer. They are also not an effective treatment for infantile symptoms of GERD (gastroesophageal reflux disease).

**Acid Blockers**

**PPIs** are the most potent of the acid-reducing medications. They reduce stomach acid production up to 99% which strongly interferes with nutrient absorption. Ironically, they are also capable of inducing acid-related symptoms. PPIs are the most common cause of diarrhea and pneumonia in the elderly and in children. One study revealed that doses taken for a year or more, more than doubled the risk of osteoporosis and hip fractures. They concluded that the increased risk was likely the depletion of calcium and vitamin D, which hampered the body's ability to build new bone.


- PPIs significantly increase the risk of acquiring the deadly superbug, C. difficile by 320% after just 30 days of use (Saputo video) by both adults and children.


**PPIs** can induce dangerously low sodium levels to the point of delirium and cause rhabdomyolysis (destruction of the skeletal muscle tissue).
**Acid Blockers**

Pamela Duff, RN, CSNC

- **PPIs** are associated with a number of metabolic, infectious, cardiac, and orthopedic health problems.

- **Various factors** contribute to inflammatory bowel disease that seemingly require acid blockers or other drugs but which often inflame an already bad condition: medications, MMR (measles, mumps, rubella) vaccines, oral contraceptives, some iron supplement forms, cola drinks, chocolate and alcohol consumption, sucralose and so on. Sucralose is a sweetener used in the food processing industry, especially in Canada, where they have the highest incidence of inflammatory bowel disease in the world.
  - *Cornish et al: The risk of oral contraceptives in the etiology of inflammatory bowel disease: a meta-analysis. Am J Gastroenterol 2008 Sep;103(9):2394-400*
  - *Erichsen et al: Low-dose oral ferrous fumarate aggravated intestinal inflammation in rats with DSS-induced colitis. Inflamm Bowel Dis 2005 Aug;11(8):744-8*
  - *Qin: What made Canada become a country with the highest incidence of inflammatory bowel disease: Could sucralose be the culprit? Can J Gastroenterol 2011 Sep;25(9):511*

**Suggested Alternatives:**

**Aloe vera juice or gel** helps calm and heal the digestive tract and is particularly helpful in treating inflammatory bowel diseases.
  - *Davis et al: Randomised double-blind placebo-controlled trial of aloe vera for irritable bowel syndrome. Int J Clin Pract 2006 Sep;60(9):1080-6*

**Alkaline foods** – eat more of them! A good listing can be found online.
  - *www.rense.com/1.mpicons/acidalka.htm*

**American Ginseng** decreases colitis inflammation.
  - *Angelica is an herb that helps decrease symptoms of ulcerative colitis and other inflammatory bowel diseases.*
**Acid Blockers**

Apples inhibit H. pylori bacterium; decrease damage to the gastric mucosa; and prevent the development of inflammatory bowel disease. Be sure to eat only organic apples because conventionally grown apples are the number one fruit for chemical content.

* Apples worst for pesticides on produce list. CBC News, Jun 14, 2011
* Shabecoff: 100 Chemicals for Apples Add Up to Enigma on Safety. NY Times Feb 5, 1989

**Arginine** (an amino acid) and **Garlic** help prevent acid-induced ulcerative colitis.


**Artichoke, Dandelion root, Turmeric, and Rosemary** relieve symptoms of dyspepsia (impaired digestion).

* Sannia: Phytotherapy with a mixture of dry extracts with hepatoprotective effects containing artichoke leaves in the management of functional dyspepsia symptoms. Minerva Gastroenterol Dietol 2010 Jun;56(2):93-9

**Astaxanthin** is a potent antioxidant (500 times greater than vitamin E) with anti-inflammatory properties that help treat dyspepsia (indigestion). It is this carotenoid derived from algae sources that give some fish and flamingos their pink colour.


**Ayurvedic Herbal** combination is just as effective as steroids in treating inflammatory bowel disease and without the side effects: Bilwa (Aegle marmeloes), Dhanyak (Coriandrum sativum), Musta (Cyperus rotundus), Vala (Vetiveria zinzanioids).


**Banana powder** suppresses ulcer formation.

Bay leaves prevent ulcer formation.


Bitter Herbs help improve poor digestion. Swedish bitters is a combination of herbs that have been used for decades. Some bitter herbs include arugula (rocket), dandelion, gentian, goldenseal, garlic mustard, milk thistle, watercress, and yarrow. Use them often in salads or green smoothies.

*Abascal & Yarnell: Combining herbs in a formula for irritable bowel syndrome. Alt Compl Ther 2005 Feb;11(1):17-23
*Challem: Bitter herbs for better digestion: looking for a safe and natural alternative to antacids? Try the remedy used for years by Europeans for upset stomach and digestive troubles. Better Nutrition February 2007 online article

B-complex, Melatonin, Amino acids, and Hydrochloric acid combination prove to be more effective than omeprazole (a PPI) in treating acid reflux.


Beta glucans are polysaccharides derived from oats, mushrooms, or yeasts. Beta glucans are safe and effectively used to treat a number of diseases including colitis and stomach cancer as well as simple colds and flus. (see more under Anti-virals and Cancer)

*Daddaoua et al: Active hexose correlated compound acts as a prebiotic and is antiinflammatory in rats with hapten-induced colitis. J Nutr 2007 May;137(5):1222-8

Boswellia (Frankincense) gum resin decreases ulcers, regulates the digestive tract and improves nutrient absorption.


Bromelain is a combination of protein-digesting enzymes extracted from pineapple. Bromelain effectively treats digestive disorders by enhancing absorption and permeability while decreasing inflammation.

*Hale et al: Dietary supplementation with fresh pineapple juice decreases inflammation and colonic neoplasia in IL-10 deficient mice with colitis. Inflamm Bowel Dis 2010 Dec;16(12):2012-21
**Acid Blockers**


**Butterbur** is an herb from the daisy family that helps prevent ulcers. It is also an effective remedy for migraines.


*Wang et al: Calcium-antagonizing activity of S-petasin, a hypotensive sesquiterpene from Petasites formosanus, on inotropic and chronotropic responses in isolated rat atria and cardiac myocytes. Naunyn Schmiedebergs Arch Pharmacol 2004 Mar;369(3):322-9

**Cambuca** (*Plinia edulis*), a Brazilian herb, proves more effective than lansoprazole in preventing ulcers.


**Cardamom seeds** protect the gastric system.


**Carotenoids** from red bananas and paprika, Golden Delicious apples, and Valencia oranges has an effect on the *H. pylori* bacterium and some multi-drug resistant strains.

*Englberger et al: Carotenoid and vitamin content of Karat and other Micronesian banana cultivars. Int J Food Sci Nutr 2006 Aug-Sep;57(5-6):399-418


**Catechins** are a group of flavonoids that have the same effects as PPIs but without the side effects. Catechins can be found in such foods as green tea, acai fruit, dark chocolate and berries.


**Celery extract** significantly protects the digestive tract.

*Al-Howiriny et al: Gastric antulcer, antisecretory and cytoprotective properties of celery (*Apium graveolens*) in rats. Pharm Biol 2010 Jul;48(7):786-93

**CLA** (conjugated linoleic acid) reduces bacteria-induced colitis and often helps with weight-loss.

**Cloves** and **Cinnamon** are particularly effective against the H. pylori bacterium that often causes ulcers.

*Bhamarapravati et al: Extracts of spice and food plants from Thai traditional medicine inhibit the growth of the human carcinogen Helicobacter pylori. Indian J Ophthalmol 2009 May-Jun;57(3):185-9

**Coconut Water** or **Coconut Milk** helps prevent ulcers and reduces the toxic effects of aluminum poisoning. By replacing part of omega-6 fatty acid supplementation with medium-chain fatty acids of Coconut, colitis attacks are decreased.


**Colic** in infants is a legitimate digestive complaint caused by a variety of reasons. A safe herbal treatment was found to be effective within one week by using Fenugreek, Fennel and Melissa (lemonbalm). A weak tea can be fed to the infant, if possible, and/or taken by the breast-feeding mother.


**Cow milk elimination** helps infants overcome GERD that is not responsive to medications. Probiotics also help with infant and adult GERD (see below).


**Curcumin** (the active substance in Turmeric) reduces a number of chemicals that lead to colitis and damage the digestive tract. Since much of what we consume or put on our bodies have loads of chemicals, it is wise to take Curcumin as a supplement or use Turmeric in cooking as often as possible in order to decrease the harm caused by chemicals.

*Camacho-Barquero et al: Curcumin, a Curcuma longa constituent, acts on MAPK p38 pathway modulating COX-2 and iNOS expression in chronic experimental colitis. Int Immunopharmacol 2007 Mar;7(3):333-42
*Hanai & Sugimoto: Curcumin has bright prospects for the treatment of inflammatory bowel disease. J Lab Clin Med 1997 Dec;130(6):576-84
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*Ukil et al: Curcumin, the major component of food flavour turmeric, reduces mucosal injury in trinitrobenzene sulfonic acid-induced colitis. Br J Pharmacol 2003 May;139(2):209-18
*Venkataraman et al: NCB-02 (standardized Curcumin preparation) protects dinitrochlorobenzene-induced colitis through down-regulation of NFkappa-B and iNOS. World J Gastroenterol 2007 Feb 21;13(7):1103-7
*Zhang et al: Curcumin inhibits trinitrobenzene sulfonic acid-induced colitis in rats by activation of peroxisome proliferator-activated receptor gamma. Int Immunopharmacol 2006 Aug;6(8):1233-42

Damiana is an herb that has significant antacid and anti-ulcer effects.

Dandelion, Fennel, Lemonbalm, Marigold (Calendula), St. Johns Wort are herbs that effectively treat colitis and diarrhea.


Dates are comparable to lansoprazole in preventing gastric ulcers.

Diet rich in fruits, vegetables and fiber significantly decrease digestive disorders including Barrett’s esophagus, as well as all types of cancers (see separately), diabetes, and heart disease.

**Digestive Enzymes** and/or **Hydrochloric acid** (Hcl) at every meal enhances digestion and the immune system.

* Bohager 2009:65-69

**DGL** (deglycyrrhizinated licorice root) before a meal helps protect the stomach lining especially if there is an ulcer present.

- Russell et al: Studies on the protective effect of deglycyrrhinised liquorice against aspirin (ASA) and ASA plus bile acid-induced gastric mucosal damage, and ASA absorption in rats. Scand J Gastroenterol Suppl 1984;92:97-100

**Dong quai** (*Angelica sinensis*), also known as the female ginseng, naturally increases estrogen levels but it also decreases the effects of ulcerative colitis.


**Ellagic acid**, found in red raspberries, has the same effect as PPIs but without the side effects.


**Essential oils** have gastro-protective effects; help to regulate bowel flora; improve digestion; and some are effective in preventing H. pylori. They can safely be taken internally by adults or children although infants should be massaged with the oils in a carrier oil instead of giving internally: Caraway, Fennel, Lavender, Lemon, Marjoram, Neroli, Nutmeg, Orange, Oregano, and Peppermint (especially effective).

Acid Blockers

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*May et al: Efficacy and tolerability of a fixed combination of peppermint oil and caraway oil in patients suffering from functional dyspepsia. Aliment Pharmacol Ther 2000 Dec;14(12):1671-7

Fish oil, FOS (prebiotic food), Soluble fiber, Gum arabic and Antioxidants reduce the need for steroids in ulcerative colitis.


Flavonoids (bioflavonoids) are the what give fruits and vegetables their colour. They have a wide variety of health benefits include gastro-protective effects.


Gallstones (as well as liver and kidney stones) are signs of poor digestion. They can be eliminated using various techniques including Garlic oil or Chanca piedra (Spanish for “stone crusher”).

*Moritz: The Liver and Gallbladder Miracle Cleanse, Ulysses Press, 2007
*Raintree Tropical Plant Database - www.rain-tree.com(chanca.htm

Ginger is a valuable herbal root that prohibits ulcer formation, protects the digestive tract from aluminum damage, and is up to eight times more effective than lansoprazole.

*Nanjundiah et al: Gastroprotective effect of ginger rhizome (Zingiber officinale) extract: role of gallic acid and cinnamic acid in H+, K+-ATPase/H. pylori Inhibition and anti-oxidative mechanism. Evid Based Compl Alt Med 2009 Jul 1

Ginkgo biloba is an herb often used to improve memory (mainly because it improves circulation). It also has anti-inflammatory effects that help reduce colitis symptoms.

*Kotakadi et al: Ginkgo biloba extract EGB 761 has anti-inflammatory properties and ameliorates colitis in mice by driving effector T cell apoptosis. Carcinogen 2008 Sep;29(9):1799-806
Glucosamine is an essential sugar required by many cells in the body for proper functioning. It is effective for decreasing the effects of such autoimmune disorders as inflammatory bowel diseases and arthritis.

* Russell: Glycoaminoglycan (GAG) deficiency in protective barrier as an underlying, primary cause of ulcerative colitis, Crohn’s disease interstitial cystitis and possibly Reiter’s syndrome. Med Hypoth 1999 Apr;52(4):297-301
* www.innvista.com/health/nutrition/sugars/glucosamine.htm

Glutamine is a non-essential amino acid that plays a role in gut-healing, especially after a bowel resection or in premature infants. Along with Arginine (another amino acid), Honey or Curcumin, Glutamine’s effects are increased.

* Kul et al: Enteral glutamine and/or arginine supplementation have favorable effects on oxidative stress parameters in neonatal rat intestine. J Pediatr Gastroenterol Nutr 2009 Jul;49(1):85-9

Goldenseal and Bloodroot are herbs that inhibit the H. pylori bacteria, often the cause of stomach ulcers.


Grapes protect against the H. pylori bacterium. Buy only organic grapes as they are #7 on the list of foods that are highest in pesticides, which are known carcinogens.


Hawthorn is an herb often used to strengthen the heart muscle but it also has other multi-beneficial effects including gastro-protective.


Homeopathic treatment in areas of anxiety, depression, and irritable bowel proves to be more than 75% positive.


Honey (non-pasteurized or Manuka), Olive oil, and Beeswax is a safe and effective combination to use on painful hemorrhoids or anal fissures that often develop after prolonged digestive problems. Manuka honey is an effective rehydration additive for infants and children after a bout of gastroenteritis; lessens inflammatory bowel
diseases; and helps overcome stomach ulcers caused by H. Pylori (warning: it will also feed Candida yeast that often accompanies H. pylori). Use only unpasteurized or Manuka honey as the average “grocery store honey” is not real honey and therefore, not medicinally effective.


**Indian Oyster Mushroom** reduces colitis inflammation.


**Iron supplements** are often necessary but can aggravate colitis. **Vitamin E** can lessen these effects but iron supplements should always be taken with food. Some forms are easier to absorb than others but which ones depends on the person. Ferrous fumarate is a form often prescribed and very difficult to absorb with most causing constipation. Because of poor absorption, iron deficiency anemia is common in those with celiac disease, H. pylori and GERD.

*Erichsen et al: Low-dose oral ferrous fumarate aggravated intestinal inflammation in rats with DSS-induced colitis. Inflamm Bowel Dis 2005 Aug;11(8):744-8

**Japanese apricots** lessen the effects of ulcerative colitis and help heal stomach lesions caused by H. pylori.

*Singh et al: Exploring the ameliorative potential of Punica granatum in dextran sulfate sodium induced ulcerative colitis in mice. Phytother Res 2009 Apr 15

**Magnesium deficiency** can cause seizures in those taking PPIs for a long time.


**Mango flowers** and leaves protect the gastric system and help heal ulcers.

Mangosteen is a fruit with numerous health benefits including anti-inflammatory and analgesic (pain-relieving) action.


Melatonin not only can be used to induce sleep but provides a safe and effective alternative to PPIs; improves symptoms of colitis and GERD (gastroesophageal reflux disease); reduces aging effects in the digestive tract; and decreases gallbladder inflammation.


Melatonin and Curcumin protect against the development of medication-induced gastric ulcers.


MSM (methylsulfonylmethane) is a non-odourous sulfur compound and metabolite of DMSO. Derived from either wood pulp or fossil fuels, it is nearly impossible to determine which supplement comes from which source. However, it appears to have anti-inflammatory effects for colitis and osteoarthritis.


Neem is an herb with natural anti-microbial properties and therefore useful in preventing bacteria-caused ulcers as well as having other gastro-protective effects.


Noni fruit controls nausea and vomiting after surgery. It also decreases symptoms of reflux esophagitis and gastric ulcers.


Olive leaves (yes, from the olive tree) have numerous health benefits including preventing the development of non-alcoholic fatty liver.

**Orange** or **Lemon juice** helps reduce the formation of kidney stones better than potassium citrate. Stones are often a sign of poor digestion and made worse by antacids.


**Papaya fruit** (unripened) has beneficial effects on gastric ulcers. It is able to detoxify gliadin, a protein found in wheat that an increasing number of people are unable to digest.

*Cornell et al: Papaya latex enzymes capable of detoxification of gliadin. Amino Acids 2009 Jan 21


**Papaya leaf extract** protects the gastric system and has antioxidant effects similar to vitamin E.

*Protective effect of Carica papaya L leaf extract against alcohol induced acute gastric damage and blood oxidative stress in rats. West Indian Med J 2008 Sep;57(4):323-6


**Pectin liquid** helps overcome GERD in children with cerebral palsy.


**Peppermint oil** eases irritable bowel symptoms.


*May et al: Efficacy and tolerability of a fixed combination of peppermint oil and caraway oil in patients suffering from functional dyspepsia. Aliment Pharmacol Ther 2000 Dec;14(12):1671-7


**Pineapple juice (fresh)** has natural enzymes that decrease inflammatory bowel symptoms.

*Hale et al: Dietary supplementation with fresh and colonic neoplasia in IL-10-deficient mice with colitis. Inflamm Bowel Dis 2010 Dec;16(12):2012-21

**Pomegranates** are fruits that protect the digestive tract from alcohol and aspirin-induced damage and prevents the kidneys from forming stones. Pomegranates also increase good bacteria (probiotics) which are vital for good digestion and the immune system.

**Acid Blockers**

- *Singh et al*: Exploring the ameliorative potential of Punica granatum in dextran sulfate sodium induced ulcerative colitis in mice. Phytother Res 2009 Apr 15

**Probiotics** improve digestion and inflammatory bowel conditions in adults and infants; strengthen the immune system in adults and infants; play an important role in the prevention of superbugs and various autoimmune disorders; are more effective and safer than simethicone for colicky babies.

- *Mohamadzadeh & Owen*: Reprogramming intestinal immunity is the answer to induced pathogenic inflammation. Immunother 2011 Dec;3(12):1415-7
Psyllium is a soluble fiber that often helps to correct digestive disorders and proves to be as effective as mesalamine (an anti-inflammatory drug) for treating ulcerative colitis.

*Psyllium, Mint, Coriander, and Lemonbalm are all effective for treating IBS (irritable bowel syndrome).

**Quercetin and Vitamin E dramatically reduce the severity of esophageal reflux and without damage to the gastrointestinal tract.
Acid Blockers

Pamela Duff, RN, CSNC


Red Yeast Rice is usually given to lower cholesterol levels but it can also increase bile acid excretion which helps digestion.


Reishi mushrooms speed the healing of acid-induced ulcers.


Resveratrol and Piceatannol (a metabolite of Resveratrol) are powerful antioxidants that prevent colitis and reduce the risk of colon cancer often associated with severe and prolonged colitis.


Rooibos Tea is native to South Africa and used for centuries to relieve spasm and help calm a hyperactive gastrointestinal tract. It is safe even for babies.


Sage and Red Sage have the same effects as PPIs but without the side effects and should not be taken with other PPIs.


Slippery elm bark is soothing to the digestive tract.

*Natural Medicines Comprehensive Database
*University of Maryland Medical Centre [www.umm.edu/altmed/articles/slippery-elm-000274.htm]

Spices improve the intestinal villi quality which is vital for proper nutrient absorption. Spices tested included black and red peppers and ginger.


Spirulina is a blue-green algae derived from aquatic cyanobacteria, Arthrospira platensis (Africa, Asia, South America), Arthrospira pacifica (Hawaiian Islands) or Arthrospira maxima (Central America). It has long been used for its many health benefits including the prevention and healing of bowel inflammations. One reason may be its Selenium and B12 content which are deficient in those with colitis.
Acid Blockers

Sprouted Barley improves inflammatory bowel conditions. When grains, seeds and legumes are sprouted (germinated), the effect improves the availability of nutrients, sometimes increasing their nutrient content. The process also improves the digestion of the fiber which makes a good food source for probiotics and called prebiotics.

Steam cooking improves the bile acid-binding effects of foods.

Teas (herbal) after a meal help digestion of adults and improves infantile colic. Drops of Essential oils can also be put into hot water and taken as a tea: Fenugreek, Fennel, Ginger, Melissa, Peppermint are the most effective either as an herbal tea or an essential oil.

Water safely and effectively reduces stomach acids without the use of medications. It is best to drink filtered water and not tap water.

Wheatgrass juice is an effective treatment for ulcerative colitis.
**Yacón root** is native to the Andes mountains and showing promise in several health areas. Its prebiotic properties have beneficial effects in treating colitis by stimulating the growth of the protiotic Lactobacillus and Bifidobacterium strains.

ACNE

COMMON EXAMPLES:

- tretinoins (retinoids)
- adapalene [Differin]
- isotretinoin [Accutane]
- tazarotene [Tazorac, Avage, Zorac]
- tretinoin [Retin-A, Vesanoid]
- steroid creams, lotions, ointments (see even more Depletions from that list)

Antibiotics are often prescribed (see even more Depletions from that list)

... and others

DEPLETE:

A, E, zinc (the very nutrients needed to improve skin conditions)

SUGGESTED ALTERNATIVES:

AVOID!

ẑ Dairy (there are over 60 hormones in dairy including raw, organic milk) and watch the sugar/carbohydrate/fat intake

*Acne: Are Milk and Sugar the Causes? By Mark Hyman, MD, online article in the Huffington Post
Pamela Duff, RN, CSNC


がありました。Fast food

* Litt: McDonald’s Acne. Arch Dermatol 1974;110(6):956

Chocolate (high fat content)


Alternative and Complementary medicine is preferable to acne-sufferers than conventional medicine.


Antioxidants reduce acne and skin aging. Acne can appear at any age as a result of hormonal changes, poor diet, or stress. Antioxidants improve skin conditions of all age groups and include vitamins E and C, CoQ10, alpha-lipoic acid, glutathione, and others. A diet containing plenty of fresh fruits and vegetables, fermented soy products, goji berries, flaxseed and borage oils, aloe vera, and pomegranates have proven to be important along with exercise.

* Cho et al: Dietary aloe vera supplementation improves facial wrinkles and elasticity and it increases the type I procollagen gene expression in human skin in vivo. Ann Dermatol 2009 Feb;21(1):6-11
* Lacroix et al: Supplementation with a complex of active nutrients improved dermal and epidermal characteristics in skin equivalents generated from fibroblasts from young or aged donors. Gastroenterol Hepatol 1997 Apr;20(4):172-4
* Reeve et al: Mice drinking goji berry juice (Lycium barbarum) are protected from UV radiation-induced skin damage via antioxidant pathways. Photochem Photobiol Sci 2010:9:601-607

Beta carotene (vitamin A) and Vitamin E play important roles in reducing and preventing acne.


Brewer’s Yeast (Saccharomyces cerevisiae) is not the same as Candida yeast and, therefore, a beneficial food high in trace nutrients, especially the B-vitamins.

**Diet changes** toward proper nutrition are crucial – which will not only help acne but mood and depression as well which often go hand-in-hand with acne. Good nutrition is vital for any age but especially for teens who are going through hormonal changes.

* Cordain, PhD: Implications for the Role of Diet in Acne. Seminars in Cutaneous Medicine and Surgery 2005 June;24(2):84-91

**Echinacea** is an herb well-known for its immune-boosting antimicrobial properties. It reduces acne by inhibiting bacterial-induced inflammation.


**EGCG** (epigallocatechin-3-gallate) is a potent antioxidant found in Green Tea that can improve hormone-induced acne.

* Shaw: Green tea polyphenols may be useful in the treatment of androgen-mediated skin disorders. Arch Dermatol 2001;137:664

**Essential oils** are potent antimicrobials that can be applied topically to reduce acne infections: Basil, Rosemary, and Tea Tree (Melaleuca).


**Green tea lotion** is an inexpensive but an effective topical treatment for acne.


**Guggul** is an Ayurvedic herb often used to control Cholesterol levels but it is proving useful in treating difficult cystic acne better than tetracycline.


**Homeopathic Medicines** can successfully treat acne.

**Hops** is an herb used in the brewing industry and often used as a calming agent but it also prevents acne-causing bacteria.

*Yamaguchi et al: In vitro evaluation of antibacterial, anticolonagenase, and antioxidant activities of hop components (Humulus lupulus) addressing acne vulgaris. Phytomed 2009 Apr;16(4):369-76

**Licorice root** has better effects in reducing bacterial-induced acne than erythromycin.


**Mangosteen** is a fruit that has free radical-scavenging properties and anti-acne effects.


**Melatonin** is often thought of as being just for inducing sleep but it has so many other functions including the improvement of skin conditions.


**Minerals**, especially **Zinc** [internal and topical], **Selenium**, **Chromium**, **Potassium**, and **Copper** along with **B vitamins** improve acne and other skin conditions as well as relieving some of the depression that often accompanies the condition.


*Katzman & Logan: Acne vulgaris: nutritional factors may be influencing psychological sequelae. Med Hypoth 2007;69:1080-4


*Micaelsson: Decreased concentration of selenium in whole blood and plasma in acne vulgaris. Acta Derm Venereol 1990;70:92

*Niren & Torok: The nicamide improvement in clinical outcomes study (NICOS); results of an 8-week trial. Cutis 2006 Jan;77(1 Suppl):17-28


**Niacinamide** (a form of niacin, B3) and **Glucosamine** improve acne, rosacea, and skin discolourations (hyperpigmentation).


*Niren & Torok: The nicamide improvement in clinical outcomes study (NICOS); results of an 8-week trial. Cutis 2006 Jan;77(1 Suppl):17-28
**Omega-3 fatty acids** (flax or fish oils, sacha inchi seeds) reduce acne inflammation sometimes caused by a diet that is too high in omega-6. Omega-3 also improves the depression often associated with the condition.

- Conklin et al: High omega-6 and low omega-3 fatty acids are associated with depressive symptoms and neuroticism. Psychosom Med 2007;69:932-4
- Rubin et al: Acne vulgaris, mental health and omega-3 fatty acids: a report of cases. Lipids in Health and Disease 2008:7:36

**Prebiotic makeup** is far healthier for the skin than chemically-laden popular antibiotic brands.


**Probiotics** and **Fiber** promote healthy immune and digestive systems which in turn, reduce the risk of developing acne and other skin problems.


**Resveratrol** is a potent antioxidant found mainly in the skins of red grapes and can be used topically or internally to treat acne. All antioxidants help a variety of health issues by preventing the damaging effects of free radicals.

- Coenye et al: Eradication of Propionibacterium acnes biofilms by plant extracts and putative identification of icarin, resveratrol and salidroside as active compounds. Phytomed Available online 1 February 2012

**Vitamin D3** is actually a pre-hormone which might explain its success in improving several hormonal issues including acne. D3 can be obtained from the sun or supplements and significantly improves the immune system. Avoid using D2 as it has different action in the body and one the body cannot utilize as efficiently as D3.

- Berg: Epidemiological studies of the influence of sunlight on the skin. Photodermatol 1989 Apr;6(2):80-4
ADHD/Narcolepsy

(Used to treat Attention Deficit Hyperactivity Disorder [an Autism Spectrum Disorder] and Narcolepsy [a sleep disorder])

Common Examples:
- amphetamines – Adderall, and others
- dextroamphetamine – Dexedrine, DextroStat, and others
- lisdexamfetamine – Vyvanse
- methylenephrines – (illegal but in the same class of drugs used for ADHD)
- methylphenidate – Concerta, Daytrana, Metadate, Methylin, Ritalin, others
- modafinil – Alertec, Provigil, Sparlon, Vigicer, and others
- pemoline – Cylert

Deplete:
- B6, B7, C, D, E, magnesium, zinc, tyrosine

For over forty years, I have witnessed transformations in dozens of children, including my own, simply with diet changes. Despite knowing that this would make a difference in their child, far too many parents are unwilling to make the necessary changes.


ADHD drugs often hurt more than help.

*Death by Ritalin: The Truth Behind ADHD. National Alliance Against Mandated Mental Health Screening and Psychiatric Drugging of Children - www.ritalindeath.com/

Anesthesia drugs for surgical procedures are linked to a significant increased risk for post-ADHD and brain damage.
Drugs have little effect but alternatives do and without the side effects.

- **Sprung et al**: Attention-Deficit/Hyperactivity Disorder after early exposure to procedures requiring general anesthesia. Mayo Clinic Proceedings 2012 Feb;87(2):120-129

**Ritalin acts like cocaine.**

- **Vastag**: Pay attention: ritalin acts much like cocaine. JAMA 2001 Aug 22-29;286(8):905-6

**Sugar and sugar substitutes** also act like drugs. Aspartame, in particular, is linked to certain mental disorders and compromised learning and emotional functioning.

- **Avena et al**: Sugar-dependant rats show enhanced responding for sugar after abstinence: Evidence of a sugar deprivation effect. Physiol Behav 2005;84:359-362

**Food colouring and preservatives** affect behavior, liver toxicity, and the digestive tract in ADHD children.


- **Borda and Mandel**: Foods and additives are common causes of the attention deficit hyperactive disorder in children. Ann Allergy 1994 May;72(5):462-8

- **Howard et al**: ADHD is associated with a “Western” dietary pattern in adolescents. J Attn Dis 2010 Jul 14

- **McCann et al**: Food additives and hyperactive behaviour in 3-year-old and 8/9-year-old children
in the community: a randomised, double-blinded, placebo-controlled trial. Lancet 2007 Nov 3;370(9598):1560-7
*Rowe and Rowe: Synthetic food coloring and behavior, a dose response effect in a double-blind, placebo controlled, repeated-measures study. J Pediatr 1994 Nov;125(5 Pt1):691-8

Environmental triggers can aggravate ADHD including chemicals and pollutants, molds, heavy metals, vaccines, and nutritional deficiencies.

Suggested Alternatives:

Amino Acids are protein building blocks. Several are essential for autism spectrum children and include Glutamine, Arginine, and Taurine. Such deficiencies are often seen as salt cravings. According to this study, “Several interventions offer promise: (a) taurine to suppress vasopressin and replenish astrocytes; (b) glutamine as fuel for intestines and brain; (c) arginine to spare glutamine, detoxify ammonia, and increase brain blood flow; and (d) oral rehydration salts to compensate dilutional hyponatremia.” NOTE: Rehydration salts can be made simply by mixing coloured sea salt (not white) with pure water. Coloured sea salt contains all trace minerals and not just sodium chloride found in the processed white version.


Antioxidants, such as Carnosine and Vitamin C, significantly reduce oxidative stress common in the autism spectrum children. Carnosine is produced in the body from two amino acids - alanine and histidine.

Carnitine is a non-essential amino acid that boosts brain energy while reducing impulse behaviour.


Chamomile is an herb well-known for its calming effect.

*Niederhofer: Observational study: Matricaria chamomilla may improve some symptoms of attention-deficit hyperactivity disorder. Phytomed 2009 Apr;16(4):284-6

Digestive enzymes at every meal. While digestive enzymes high in proteases do help, the Enzymedica brand does make a significant difference in autistic children, including ADHD which is a part of the spectrum. As a result of their effectiveness, the company has joined forces with the autism community in the USA.

*see Reference section for books by Bock, Bohager, Buckley, McCarthy and Matthews

Flax oil (omega-3) and Vitamin C significantly improve behavioral symptoms of ADHD.

*Joshi et al: Supplementation with flax oil and vitamin C improves the outcome of Attention Deficit Hyperactivity Disorder (ADHD). Prostaglandins Leukot Essent Fatty Acids 2006 Jan;74(1):17-21

Ginseng and Ginkgo biloba are herbs that improve ADHD symptoms.


Glutathione deficiency is often found in autism spectrum kids. Glutathione, the “master antioxidant”, is vital for the liver's ability to detoxify heavy-metals and metabolize nutrients. Glutathione can be stimulated in the body by such substances as Whey protein, Alpha-lipoic acid, Arginine, and Selenium. It has poor absorption as a stand-alone supplement.

*McCarthy (an excellent description on glutathione function by Dr. Jerry Kartzinel on pp 206-15)
*see Reference section for books by Bock, Buckley and Matthews

Gluten- and Dairy-free diet improve ADHD symptoms as well as accompanying digestive issues.

*see Reference section for books by Bock, Buckley, McCarthy and Matthews

Goji berries/Wolfberry have significant prenatal effects on the later cognitive abilities of the offspring. They also have a neuroprotective effects and improve eyesight.

Healthy Lifestyle Changes are being effectively used by many parents as a first-line treatment for ADHD symptoms.

Iron deficiency occurs in over 80% of ADHD kids. Iron is a vital mineral responsible for producing proper dopamine neurotransmission in the brain which is responsible for healthy central nervous system function.

Magnesium and B6 boost low serotonin levels and improves autistic/ADHD symptoms.

Melatonin is a safe treatment for sleep disturbances in autistic/ADHD children.

Omega-3 fatty acids (flax or fish oils, sacha inchi seeds) significantly improves behaviour, attention, and focus.
Phospholipids (lecithin, phosphatidylcholine, phosphatidylserine) are fatty molecules that are required by all cells for proper functioning and often deficient in autism-spectrum children. Natural food sources include fatty nuts, seeds, and plants but avoid the trans fats found in processed foods.

Probiotics in high doses and multiple strains improve digestion, the immune system and brain function.

Protein (good quality and easy to digest forms) enhances mental function while minimizing ADHD symptoms. Adding probiotics and digestive enzymes also improve digestion and absorption of all foods but especially proteins.

Pycnogenol is an antioxidant derived from pine bark that has numerous health benefits including modifying ADHD behaviour.
**Vitamins** and **Minerals** are especially important for ADHD kids (Bock; Buckley; McCarthy; Matthews). They act as co-factors for enzymes. In other words, without either, the other does not work. DO NOT use gummies or Centrum-type vitamins as these contain sugars and colours with little nutrient value, and worse yet, often cause a deterioration in a child’s behaviour. Some recommended companies that formulate vitamins and minerals especially for kids within the autism spectrum include:

**BrainChild Nutritionals - brainchildnutritionals.com/**  
**Kirkman Labs - www.kirkmanlabs.com/**  
**Metagenics - www.metagenics.com/**  
**New Beginnings Nutritionals - www.nbnus.com/**  
**Nordic Naturals - www.nordicnaturals.com/**

**Zinc** is an important mineral for producing neurotransmitters and metabolising dopamine and fatty acids.

**Yorbik et al: Potential effects of zinc on information processing in boys with attention deficit hyperactivity disorder. Prog Neuropsychopharmacol Biol Psych 2008 Apr 1;32(3):662-7**

**For Narcolepsy**

**L-Tyrosine** is an amino acid that appears to help with this sleep disorder. Like B-vitamins, single amino acids should be taken in combination with others. Therefore, if adequate protein is being consumed, then adding taurine along with digestive enzymes high in proteases can increase absorption and related effectiveness.


**Low-carbohydrate diet** is sometimes effective but use wisdom. Good carbohydrates include whole grains and fresh fruit and vegetables. Carbohydrates are necessary for energy so choose whole foods as opposed to processed ones. In other words, do not count calories but look at the quality of the food rather than the quantity.

Alcohol depletes:

A, B1, B2, B3, B5, B6, B7, B9, B12, C, D, E, EFAs, choline, calcium, chromium, glutathione/NAC, iron, magnesium, phosphorus, potassium, selenium, zinc, melatonin, good intestinal bacteria

Known as the sixth food group to many people, Alcohol impairs the mind and the body but, here, I am only addressing nutrient losses. Alcohol, even in small amounts and at the very least, affects the liver’s ability to produce digestive enzymes thus preventing the absorption of all nutrients. Those who consume alcohol on a regular basis, rapidly become nutrient deficient with the predictable consequence of developing diseases and disorders as well as causing Fetal Alcohol Syndrome in a developing fetus.

* Dreosti: Nutritional factors underlying the expression of the fetal alcohol syndrome. Ann NY Acad Sci 1993 Mar;678:193-204

Alcohol, Caffeine and Smoking often go together with the trio decreasing fertility; increasing miscarriages and stillbirths; and significantly increasing the risk of pancreatic disease and ultimately, diabetes.


Alcohol consumption is one of the 9 measured risk factors for heart attacks, cardiac arrhythmias and pneumonia.

* Gyárfás et al: Effect of potentially modifiable risk factors associated with myocardial infarction in 52 countries in a case-control study based on the INTERHEART study. Orv Hetil 2006 Apr 16;147(15):675-86
* Shellito et al: Effect of alcohol consumption on host release of interleukin-17 during pulmonary
Fructose, a sugar alternative, can have similar effects as alcohol consumption.


**SUGGESTED ALTERNATIVES TO OFFSET ALCOHOL-INDUCED DAMAGE**

**Alpha lipoic acid** is a potent antioxidant that can reduce injury to the digestive tract.


**Amino acids** have anti-oxidant and anti-inflammatory effects on the digestive tract as well as the liver.

- Nanji et al: Arginine reverses ethanol-induced inflammatory and fibrotic changes in liver despite continued ethanol administration. J Pharmacol Exp Ther 2001 Dec;299(3):832-9
- Senthilkumar & Nalini: Glycine prevents hepatic fibrosis by preventing the accumulation of collagen in rats with alcoholic liver injury. Pol J Pharmacol 2004 Jan-Feb;56(1):121-8

**Amla** is an Ayurvedic herb which helps reduce alcohol-induced brain damage and overall toxicity.


**Apricots** and the kernels reduce alcohol-induced testicular damage and liver fibrosis.

- Abdel-Rahman: Can apricot kernels fatty acids delay the atrophied hepatocytes from progression to fibrosis in dimethylhydrazine (DMN)-induced liver injury in rats? Lipids Health Dis 2011 Jul 7;10(1):114

**Ashwaganda** is an Ayurvedic herb known to reduce anxiety. One multi-herb formula that included Ashwagandha, Holy Basil, Green tea, Triphala and Shilajit proved to be a good alternative to benzodiazepines for anxiety caused by alcohol or withdrawal.


**B12** and **B9 (folate)** reduce alcohol-induced fetal developmental damage. (see Appendix for a list of the B vitamins by number and name)
Bay leaves can provide some protection to the liver and stomach.

* Matsuda et al: Inhibitory mechanism of costunolide, a sesquiterpene lactone isolated from Laurus nobilis, on blood-ethanol elevation in rats: involvement of inhibition of gastric emptying and increase in gastric juice secretion. Alcohol 2002 Mar-Apr;37(2):121-7

Chrysin, a bioflavonoid found in certain passion flowers, helps protect the liver from alcohol-induced damage.


Cinnamon helps protect the liver from alcohol-induced damage.


Coconut contains necessary saturated fatty acids that have numerous health benefits including protecting the liver from alcohol-induced damage.

* Nanji et al: Medium chain triglycerides and vitamin E reduce the severity of established experimental alcoholic liver disease. J Pharmacol Exp Ther 1996 Jun;277(3):1694-700
* Nanji et al: Dietary saturated fatty acids reverse inflammatory and fibrotic changes in rat liver despite continued ethanol administration. J Pharmacol Exp Ther 2001 Nov;299(2):638-44

Cordyceps mushrooms improve liver function while decreasing and preventing symptoms of liver cirrhosis.

* Wang et al: Acting mechanism of Cordyceps mycelia extract for antagonizing hepatic sinusoidal capillaryization in rats with dimethylnitrosamine induced liver cirrhosis. Zhongguo Zhong Xi Yi Jie He Za Zhi 2009 Sep;29(9):810-5

Curcumin, a major component of Turmeric eases withdrawal symptoms and protects the memory part of the brain, the liver, and testicles.

* Bao et al: Curcumin alleviates ethanol-induced hepatocytes oxidative damage involving heme oxygenase-1 induction. J Ethnopharmacol 2010 Jan 18
Curcumin and NAC (N-acetylcysteine) decreases the effects of alcohol-induced toxicity.


Dandelion protects the liver from chemically-induced damage.

Alcohol

Nature’s Pharmacy: Evidence-Based Alternatives to Drugs


*Park et al: Amelioration of oxidative stress by dandelion extract through CYP2E1 suppression against acute liver injury induced by carbon tetrachloride in Sprague-Dawley rats. Phytother Res 2010 Sep;24(8):1347-53


D-Ribose is a monosaccharide made within the body that is necessary for energy and DNA and RNA production of all cells. It is particularly effective in reducing symptoms of heart failure, even that brought on by alcoholism.


EGCG (epigallocatechin-3-gallate) is a polyphenol found in Green tea that has liver-protecting effects.


*Kaviarasan et al: Epigallocatechin-3-gallate(-)protects Chang liver cells against ethanol-induced cytotoxicity and apoptosis. Basic Clin Pharmacol Toxicol 2007 Mar;100(3):151-6

Fenugreek is an herb often used as a digestive aid but it also provides some protective benefits to the liver.


*Kaviarasan et al: Fenugreek seed (Trigonella foenum graecum) polyphenols inhibit ethanol-induced collagen and lipid accumulation in rat liver. Cell Biol Toxicol 2007 Nov;23(6):373-83

*Kaviarasan et al: Fenugreek (Trigonella foenum graecum) seed extract prevents ethanol-induced toxicity and apoptosis in Chang liver cells. Alcohol 2006 May-Jun;41(3):267-73


Gamma-oryzanol is a mixture of substances derived from rice bran oil that has liver-protecting effects.

*Chotimarkorn & Ushio: The effect of trans-ferulic acid and gamma-oryzanol on ethanol-induced liver injury in C57BL mouse. Phytomed 2008 Apr 17

Ginger is a well-known herb used as a digestive aid but it also protects the liver from fibrosis.

*Motawi et al: Zingiber officinale acts as a nutraceutical agent against liver fibrosis. Nutr Metab (Lond) 2011;8:40

Grape juice has liver-protecting properties.


Green Tea may help prevent a fatty liver.
Herbal combination of Red sage, Ginseng, and Camphor help prevent an alcohol-induced fatty liver.

**Kudzu** is a noxious weed in many places but it is proving to have several health benefits including the reduction of alcohol cravings and withdrawal symptoms as well as offering some protection for the digestive tract.

**Milk Thistle** is an herb long-used to improve liver function especially in those with a fatty liver or alcohol-induced cirrhosis.

**Noni fruit** is a potent antioxidant that has liver-protecting effects.

**Papaya** protects against chemically-induced liver damage.

**Phospholipids** (lecithin, phosphatidylcholine) protect the pancreas and liver.

**Pomegranates** protect the digestive tract from alcohol and aspirin-induced damage and the liver from fibrosis.
Liv 52 is an Ayurvedic herbal combination that has proven protection for the liver while increasing the rate of alcohol elimination.


Magnesium improves constricted blood vessels and decreases liver damage.


Marjoram oil and Grapeseed extract protects against toxicity.


Milk Thistle is a well-known and long-used liver protector.


Naringenin is a citrus bioflavonoid that has liver-protecting effects.


Oats prevent leaky gut caused by liver damage.

*Tang et al: Oats supplementation prevents alcohol-induced gut leakiness in rats by preventing alcohol-induced oxidative tissue damage. J Pharmacol Exp Ther 2009 Jun;329(3):952-8

Omega fatty acids help prevent a fatty liver. Omega-3 fatty acids are rapidly depleted from the brain by alcoholism and a deficiency leads to what is called, a fatty liver.


**Papaya leaf** protects the digestive tract and the blood from free-radical damage.

**Persimmon vinegar** helps prevent metabolic disorders caused by over-consumption of alcohol.

**Pomegranates** protect the digestive tract from alcohol and aspirin-induced injury.

**Probiotics** improve liver enzymes and protects the digestive tract.

**Quercetin** protects the brain; reduces anxiety; and decreases the effects of withdrawal.

**Reishi mushrooms** protect the liver from chemically-induced damage.

**Resveratrol** (alone or with vitamin E) prevents free-radical DNA damage that results from alcohol and sugar consumption.
*Bishayee et al: Resveratrol and liver disease: from bench to bedside and community. Liver Int 2010 Sep;30(8):1103-14
*Rocha et al: Weekend ethanol consumption and high-sucrose diet: resveratrol effects on energy expenditure, substrate oxidation, lipid profile, oxidative stress and hepatic energy metabolism. Alcohol 2011 Jan-Feb;46(1):10-6
*Yan et al: Protection of resveratrol and its analogues against ethanol-induced oxidative DNA damage in human peripheral lymphocytes. HIV Med 2010 Jan 5

**St. John’s Wort** reduces withdrawal symptoms BUT, it should never be taken with alcohol or other medication.


**SAMe (S-adenosylmethionine)** is a substance produced in the body that is often sold as a supplement to improve mood and depression but it also has other benefits including protecting the liver from cancer.

*Lu & Mato: Role of methionine adenosyltransferase and S-adenosylmethionine in alcohol-associated liver cancer. Alcohol 2005 Apr;35(3):227-34

**Vitamin C** increases the rate of alcohol removal from the blood.


**Vitamin E** prevents alcoholic liver disease and vitamin E from palm oil protects the digestive tract from damage.


**Whey protein isolates** and **Collagen** protect the stomach from forming ulcers.


**Zinc** decreases toxic effects caused by alcohol.

*Pathak et al: Effect of zinc supplementation on the status of thyroid hormones and Na, K, And Ca levels in blood following ethanol feeding. Biol Trace Elem Res 2011 May;140(2):208-14
*Szuster-Ciesielska et al: Zinc supplementation attenuates ethanol- and acetaldehyde-induced liver stellate cell activation by inhibiting reactive oxygen species (ROS) production and by influencing intracellular signaling. Biochem Pharmacol 2009 Aug 1;78(3):301-14
**Alzheimer’s Disease**

**Common Examples:**
- donepezil – Aricept
- galantamine – Reminyl
- memantine – Namenda
- rivastigmine – Exelon
- tacrine – Cognex

**Deplete: C**

It is strongly suspected that many more nutrients are depleted but testing has not officially confirmed this. Studies have found that patients diagnosed as having Alzheimer’s disease or dementia are instead severely deficient in many nutrients. Once these nutrients were replaced, symptoms disappeared or were dramatically reduced. A number of nutraceuticals were specifically identified as being important in preventing or slowing the disease: **Policosanol; Beta-carotene; Hops; DHA; B12; folate (B9), Cacao; Chromium picolinate and Cinnamon for blood sugar control; Vitamin D; Genistein; Sesame.**

*Chandra: Effect of vitamin and trace-element supplementation on cognitive function in elderly subjects Nutr 2001;17:709–12
*No authors listed: High doses of vitamins fight Alzheimer’s disease: Why don’t doctors recommend them now? Orthomol Med News Serv 2008 Dec 9
Alzheimer’s disease

Aspartame is linked to certain mental disorders, compromised learning and emotional functioning.


Donepezil and memantine are known to cause a lowered heart rate while increasing the risk of seizures.


Drugs taken for Alzheimer’s disease increase tremors and symptoms of Parkinson’s disease.


Fluoride has shown to significantly affect the brain in both children and adults (see Fluoride) and raises the risk of developing Alzheimer’s.


**SUGGESTED ALTERNATIVES:**

*(valuable brain protectors)*

Açaí fruit is a potent antioxidant that prevents damage to the brain and elsewhere in the body.

*Oliveira de Souza et al: Diet supplementation with acai (Euterpe oleracea Mart.) pulp improves biomarkers of oxidative stress and the serum lipid profile in rats. Nutr 2010 July-Aug;26(7-8):804-810

Alpha-lipoic acid is a potent antioxidant that has neuroprotective properties making it an ideal treatment for such diseases as Alzheimer’s and Parkinson’s.


Alpha-lipoic acid, Carnitine, and Vitamin E reduce memory loss. Carnitine is formed in the body from two amino acids, lysine and methionine. Tocotrienols are important members of the vitamin E family. A good vitamin E supplement should consist of 4 tocopherols and 4 tocotrienols in order to obtain optimal neuroprotective benefits.

Anthocyanins are flavonoids found in red, blue, or purple foods. They are potent antioxidants that are able to cross the blood-brain barrier to promote healthy learning and memory.

Antioxidants such as Vitamins A, E, C and Resveratrol as well as many others, provide protection against neural cell death from oxidation (free radical damage).

Apples prevent the decline in cognitive performance. But do yourself a favour, eat only organic fruit as apples are the number one food that contain pesticides which are toxic enough to severely affect an already overwhelmed brain.

Aromatherapy (inhalation or massage) using Essential oils (Lavender, Roman Chamomile, Ylang-Ylang) calm and relieve sleep problems even in the severely demented. Be aware that whatever is put on the skin or inhaled is the same as eating it therefore, it is imperative that chemically-laden products be avoided.

Ashwaganda is an herb of the nightshade family that possesses adaptogenic and neuroprotective properties (regulates the body). It is often used to support the adrenal glands which are affected by stress.
**Asthazanin** is an antioxidant carotenoid extracted from marine algae and found to have significant neuroprotective effects.


*Liu & Osawa: Astaxanthin protects neuronal cells against oxidative damage and is a potent candidate for brain food. Forum Nutr 2009;61:129-35


*Lu et al: Neuroprotective effect of astaxanthin on H(2)O(2)-induced neurotoxicity in vitro and on focal cerebral ischemia in vivo. Brain Res 2010 Nov 11;1360:40-8

*Wang et al: Astaxanthin upregulates heme oxygenase-1 expression through ERK1/2 pathway and its protective effect against beta-amyloid-induced cytotoxicity in SH-SY5Y cells. Brain Res 2010 Nov 11;1360:159-67

**B vitamins** help improve cognitive and nerve function. Since there are about 14 in the family which all work together, it is important to take them as a complex to prevent causing a deficiency in others if one is taken separately. It is also important to take an additional **B12** sublingually (under the tongue) to reduce the chances of developing a type of anemia (pernicious) and to make use of its brain-enhancing properties. **Nicotinamide** (a form of niacin, B3) restores cognition in Alzheimer’s disease. (see Appendix for the list of B vitamins by name and number)


*Low Vitamin B12 levels may lead to brain shrinkage, cognitive problems. Ame Acad Neurol 2011 Sept 26


**B6, 9, and 12 deficiency** contributes to increased levels of **homocysteine** which is associated with neurological disorders as well as cardiovascular disease and bone fractures. Supplementation of these three B-vitamins (in addition to a complex) help prevent or reverse such disorders.

*Ientile et al: Homocysteine, vitamin determinants and neurological diseases. Front Biosci (Schol Ed) 2010;2:359-72


Bacopa is an herb often used in Ayurvedic medicine because of its neuroprotective, antioxidant and brain-enhancing effects.

Bamboo extract is useful in restoring brain cell function.

Berries, Grape juice, Spinach and Walnuts are foods of choice for enriching brain function and reducing the effects of neuro-degenerative diseases such as Alzheimer’s.

Black Pepper contains an alkaloid that improves brain function and cognitive abilities.

Buckwheat is a gluten-free non-cereal grain that is related to rhubarb and not to wheat. It has several health benefits including the reduction of memory-impairment.


Carotenoids are found in red, yellow, and orange fruit as well as many dark green vegetables. Carotenoids significantly reduce the oxidative stress (free radicals) that lead to cognitive decline.

**Pu et al:** Protective effect of buckwheat polyphenols against long-lasting impairment of spatial memory associated with hippocampal neuronal damage in rats subjected to repeated cerebral ischemia. J Pharmacol Sci 2004 Apr;94(4):393-402

**Unno et al:** Beta-cryptoxanthin, plentiful in Japanese mandarin orange, prevents age-related cognitive dysfunction and oxidative damage in senescence-accelerated mouse brain. Biol Pharm Bull 2011;34(3):311-7


**Carotenoids**

Cherries protect the brain from neuron destruction.

**Kim et al:** Sweet and sour cherry phenolics and their protective effects on neuronal cells. J Agric Food Chem 2005 Dec 28;53(26):9921-7

**Chinese club moss** (Huperzia serrata) contains a component called Huperzine A which improves memory and focus and is more effective in raising blood levels of acetylcholine and dopamine than drugs.

**Liang & Tang:** Comparative studies of huperzine A, donepezil, and rivastigmine on brain acetylcholine, dopamine, norepinephrine, and 5-hydroxytryptamine levels in freely-moving rats. Acta Pharmacol Sin 2006 Sep;27(9):1127-36

**Shang et al:** Improving effects of huperzine A on abnormal lipid peroxidation and superoxide dismutase in aged rats. Zhongguo Yao Li Xue Bao 1999 Sep;20(9):824-8


**Ye et al:** Improving effects of huperzine A on spatial working memory in aged monkeys and young adult monkeys with experimental cognitive impairment. J Pharmacol Exp Ther 1999 Feb;288(2):814-9


**Zhang & Tang:** Huperzine A attenuates the neurotoxic effect of staurosporine in primary rat cortical neurons. Neurosci Lett 2003 Apr 10;340(2):91-4

**Liang and Tang:** Comparative studies of huperzine A, donepezil, and rivastigmine on brain acetylcholine, dopamine, norepinephrine, and 5-hydroxytryptamine levels in freely-moving rats. Acta Pharmacol Sin 2006 Sep;27(9):1127-36

**Chinese skullcap** (Scutellaria baicalensis) contains a flavonoid called wogonin which reduces the production of nitric oxide and inflammatory cells that lead to brain cell destruction.

**Piao et al:** Neuroprotective effect of wogonin: potential roles of inflammatory cytokines. Arch Pharm Res 2004 Sep;27(9):930-6

**Coconut Water and Oil** contain MCTs (Medium Chain Triglycerides) which are fatty acids vital for the brain and found in virgin **coconut and palm oils**. One medical doctor used coconut oil to reverse her husband’s Alzheimer’s disease (Newport).

**Coconut Water and Oil**

**Fife:** Stop Alzheimer’s Now!: How to Prevent & Reverse Dementia, Parkinson’s, ALS, Multiple Sclerosis & Other Neurodegenerative Disorders. Piccadilly Books, 2011
Colostrum is the first “milk” produced by mammals who have just given birth. It is high in nutrients and antibodies needed by the new infant. Colostrum is proving to have neuro-protective effects which may prevent Alzheimer’s.

CoQ10 is required by every cell in the body for energy and has a special affinity for the heart but it also reduces plaque, protects neurons and improves behaviour in the Alzheimer’s patient.

CoQ10 and Creatine is a combination proving to be useful in treating neurodegenerative diseases. Creatine alone improves muscle quality in the aged, the athlete and those with muscular diseases. It also reduces muscle cramps and is safe to take for diabetics and those on dialysis.

Cruciferous Vegetables (cabbage family) contains an antioxidant substance called sulforaphane which has numerous health benefits including protecting the cells from damage. Sulforaphane is particularly high in broccoli sprouts.
**Curcumin** is an active compound found in Turmeric. It has numerous healing benefits including neuro-protective effects and reducing the depletion of glutathione, valuable in treating such diseases as Parkinson’s and Alzheimer’s.

*Lee et al: Neuroprotective effect of curcumin is mainly mediated by blockade of microglial cell activation. Pharmacie 2007 Dec;62(12):937-42
*Ng et al: Curry consumption and cognitive function in the elderly. Am J Epidemiol 2006 Nov 1;164(9):898-906
*Pan et al: Curcumin improves learning and memory ability and its neuroprotective mechanism in mice. Chin Med J (Engl) 2008 May 5;121(9):832-9

**EGCG** (epigallocatechin-3-gallate) from Green Tea is a potent antioxidant polyphenol that has profound health benefits including improving the memory and other cognitive functions.

**Alzheimer’s Disease**

Pamela Duff, RN, CSNC


*Zhang et al: Green tea polyphenol (-)-epigallocatechin-3-gallate enhances the inhibitory effect of huperzine A on acetylcholinesterase by increasing the affinity with serum albumin. Nutr Neurosci 2009 Aug;12(4):142-8

**Exercise** protects the brain from degeneration.


**Fruit and Vegetables** reduce AGEs (advanced glycation end products) which lead to various so-called age-related diseases including cardiovascular, cataracts, diabetes, and Alzheimer’s and protect against the formation of cancer cells.


*Platt et al: Fruits and vegetables protect against the genotoxicity of heterocyclic aromatic amines activated by human xenobiotic-metabolizing enzymes expressed in immortal mammalian cells. Mutat Res 2010 Aug 14

*Ramful et al: Citrus fruit extracts reduce advanced glycation end products (AGEs)- and H(2)O(2)-induced oxidative stress in human adipocytes. J Agric Food Chem 2010 Sep 30

**Genistein** is an isoflavone found in a few plants (kudzu, fava beans, soy beans) that can have such benefits as improving brain function but these foods can also be hormone-disrupters. Therefore eating them should be limited to the occasional use. However, fermentation of such foods does rid them of such harmful effects.


**Ginkgo biloba** is an herb long-known for its memory-enhancing properties mainly because it increases blood flow to the brain and protects brain cells from chemical-induced damage.


*Shi et al: Ginkgo biloba extract EGb761 protects against aging-associated mitochondrial dysfunction in platelets and hippocampi of SAMP8 mice. Platelets 2010;21(5):373-9

Ginseng improves short term memory and prevents degeneration of the nervous system.


Glucosamine is one of eight known “essential” sugars needed by certain cells in the body for proper functioning including repair of neurons and joints.

*www.innvista.com/health/nutrition/sugars/glucosamine.htm

Goji berries/Wolfberry are high in antioxidants which protects the nervous system from degeneration.


Gotu kola is native to Asian countries and used for thousands of years for a variety of disorders. In modern times, gotu kola is used to improve blood flow and to decrease anxiety.

*Gotu kola: University of Maryland Medical Center website
*Xu et al: Gotu Kola (Centella Asiatica) extract enhances phosphorylation of cyclic AMP response element binding protein in neuroblastoma cells expressing amyloid beta peptide. BMC Microbiol 2008 Mar 11;8:45

Grape juice and Grape Seed extract contain potent antioxidants which significantly improve brain function.

Horny Goat Weed is an herb known to increase blood flow and often used by body-builders but it also protects against memory loss.

Kava is a valuable herb with neuroprotective properties but despite its health benefits, it is not allowed in Canada.

Lion’s Mane mushroom stimulates nerve regeneration.

Maca, a Peruvian root, enhances memory and gives a general sense of well-being. Maca is often used to balance hormones in both men and women.

Magnesium is an important mineral with numerous health benefits including reversing several age-related conditions.

Mandarin oranges contain a potent antioxidant that has anti-aging effects that also prevent cognitive decline.
**Mango fruit** improves memory.

**Mangosteen fruit** contains potent antioxidants that prevent cellular damage from free radicals.

**Melatonin** reduces oxidative damage to the aging brain; increases the effects of another antioxidant called Resveratrol; has general neuro-protective effects; and improves liver function in the aged.
*Cuesta et al: Melatonin improves inflammation processes in liver of senescence-accelerated prone male mice (SAMP8). Exp Gerontol 2010 Dec;45(12):950-6
*Gutierrez-Cuesta et al: Effects of melatonin in the brain of the senescence-accelerated mice-prone 8 (SAMP8) model. Rev Neurol 2011 May 16;52(10):618-622

**Melissa (Lemonbalm)** is an herb that contains a flavonoid called Luteolin which reduces anxiety; improves coordination and cognitive function; and reduces agitation in those with mild Alzheimer’s disease.
*Orhan & Aslan: Appraisal of scopolamine-induced antiamnesic effect in mice and in vitro antiacetylcholinesterase and antioxidant activities of some traditionally used Lamiaceae plants. Food Chem Toxicol 2010 May 10

**Nettle (Stinging Nettle)** is an herb that reduces toxic effects that lead to brain lesions and memory loss.
Neutraceuticals refer to food substances that provide health benefits. A variety of them hold promise in preventing Alzheimer’s disease.


**Noni fruit** improves blood flow thereby increasing cognitive function, endurance, flexibility and balance.


*Muto et al: Morinda citrifolia fruit reduces stress-induced impairment of cognitive function accompanied by vasculature improvement in mice. Physiol Behav 2010 Sep 1;101(2):211-7


**Omega-3 fatty acids** (fish, flaxseed oil, sacha inchi seeds) have numerous health benefits including brain-protecting qualities.


**Organic plant foods**, especially those containing: **Apigenin** (a flavonoid found in parsley, artichoke, basil, celery and other plants) and **Luteolin** (a flavonoid found in celery, thyme, green peppers, and chamomile tea) are potent brain protectors.


*Liu et al: The anti-amnesic effects of luteolin against amyloid beta(25-35) peptide-induced toxicity in mice involve the protection of neurovascular unit. Neurosci 2009 Sep 15;162(4):1232-43

*Rezai-Zadeh et al: Apigenin and luteolin have anti-inflammatory effects and may have neuroprotective-disease-modifying properties in various neurodegenerative disorders, including Alzheimer’s disease. J Neuroinfl 2008;5:41


**Plum Juice** helps improve cognitive function.

*Shukitt-Hale et al: Plum juice, but not dried plum powder, is effective in mitigating cognitive deficits in aged rats. Nutri 2009 May;25(5):567-73

**Pycnogenol** is a potent antioxidant extract from pine bark that has numerous health benefits including protecting cognitive function.


**Quercetin** is a citrus bioflavonoid used most often for its natural anti-histamine properties but it also improves alcohol-induced deteriorating brain function.


**Red Yeast Rice** is not only good for lowering cholesterol but also for improving brain function.


**Reishi mushroom** has anti-aging effects and protects neurons from degeneration.

*No authors listed: Ganoderma lucidum protects dopaminergic neuron degeneration through inhibition of microglial activation. Evid Based Compte Alternat Med 2009 Jul 16

**Resveratrol** is a potent antioxidant found in blueberries and grapes (but not much in wine) that helps prevent Alzheimer’s as well as other diseases.

*Chang et al: Low-dose pterostilbene, but not resveratrol, is a potent neuromodulator in aging and Alzheimer’s disease. Neurobiol Aging 2011;08:15
*Doré: Unique properties of polyphenol stilbenes in the brain: more than direct antioxidant actions; gene/protein regulatory activity. Neuropharma 2008 Jun;54(7):1112-9

**Rooibos Tea** is native to South Africa and long used as a rejuvenation tonic for adults and babies. It possesses antioxidant properties that protect brain function from damaging effects of free radicals.


**Saffron** is a spice whose actions are comparable with donepezil but without the side effects.

Sage is a common spice that is effective in treating mild to moderate Alzheimer’s.


Skullcap (Scutellaria biaacalensis) is an herb that is proving to reverse cognitive decline.

*Song et al: Scutellaria flavonoid supplementation reverses ageing-related cognitive impairment and neuronal changes in aged rats. Brain Inj 2009 Feb;23(2):146-53

Spirulina is a blue-green algae derived from aquatic cyanobacteria: Arthrospira platensis (Africa, Asia, South America), Arthrospira pacifica (Hawaiian Islands) or Arthrospira maxima (Central America). It has long been used for its many health benefits including improving memory and reducing oxidative stress caused by free radicals.


St. John’s Wort is a well-known herb often used for depression but it appears to improve spatial memory as well.

*Trofimiuk et al: Activation of CREB by St. John’s wort may diminish deleterious effects of aging on spatial memory. AAPS PharmSciTech 2005 Sep 20;6(1):E74-82

Trans-fats contribute to diminished cognitive function. Trans fats are formed in the food processing industry especially those containing fats or oily foods.


Vinpocetine is an extract from the periwinkle plant that is proving to be even more effective than the standard ginkgo biloba for improving cognitive function.


*Valikovics: Investigation of the effect of vinpocetine on cerebral blood flow and cognitive functions. Ideggyogy Sz 2007;60(7-8):301-10

Vitamins and Minerals increase cognitive abilities and lifespan while decreasing the risk and duration of infections.


**ANALGESICS/ANTI-INFLAMMATORIES/NSAIDs/OPIOIDS**

(Used to control various levels of pain, inflammation, and fevers)

**COMMON EXAMPLES:**

**NSAIDs** [non-steroidal anti-inflammatory drugs]

- **acetaminophen** – Tylenol and others
- **aspirin** (salicylates) – Bayer, Alka-Seltzer, Anacin, Darvon, Fiorinal, Percodan, and others
- **celecoxib** – Celebrex
- **diclofenac** – Voltaren
- **etodolac** – Lodine
- **flurbiprofen** – Ansaid
- **ibuprofen** – Advil, Motrin, and others
- **indomethacin** – Indocin
- **ketoprofen** – Orudis
- **mefenamic acid** – Ponstan
- **meloxicam** – Mobic, Mobicox
- **mesalamine (mesalazine, 5-ASA)** – Asacol, Canasa, Mesasal, Pentasa, Rowasa, Salofalk
- **naproxen** – Aleve, Anaprox, Naprosyn
- **penicillamine** – Cuprimine
- **piroxicam** – Apo-Piroxicam, Feldene, Nu-Pirox, Pirocam
- **sulindac** – Clinoril
  
  ... and many more

**Opioids** (used to treat moderate to severe pain)

- **buprenorphine** – Buprenex
- **butorphanol** – Stadol
- **codeine**
- **fentanyl** – Duragesic, Innovar and others
- **hydrocodone** – Dyazide, Maxzide, Lortab, Alor, Loracet, Vicodin, and others
- **hydromorphone** – Dilaudid
- **meperidine** – Demerol
methadone – Dolophine
morphine – Astramorph
oxycodone – OxyContin, Percodan
propoxyphene – Darvon
... and many more

**Deplete:**

B1, B2, B3, B5, B7, B9, B12, C, D, E, K, calcium, copper, iron, magnesium, potassium, sodium, zinc and almost all other minerals, melatonin, glutathione/NAC, protein

☞ **Acetaminophen** is a petroleum by-product derived from coal tar.

☞ **Fever-reducing drugs** (usually analgesics) increase the risk of influenza-associated deaths.

☞ **Food Additives** consist of thousands and many are linked to such painful conditions as migraines and fibromyalgia which improve when these are eliminated from the diet. Of special concern are Aspartame, MSG, Sucralose (Splenda) which are notorious for causing many health problems.
  *Patel et al: Popular sweeter sucralose as a migraine trigger. Headache 2006 Sep;46(8):1303-4

☞ **NSAIDS** and their chronic use, have been linked to a two-fold increased risk of blood cancer; restless leg syndrome, especially in those also taking antidepressants; blood clots; congestive heart failure; and death.

☞ **Sorbitol** is a sugar alcohol alternative that can cause abdominal pain and bloating.
**SUGGESTED ALTERNATIVES:**

- There are dozens of other evidence-based alternatives that relieve pain. Some of these include chiropractic treatments, yoga, acupuncture, massage, biofeedback, light therapy and many more but I am only addressing oral supplemental relief.

**Alpha-lipoic acid** (a potent antioxidant), **GLA** (the good part of omega-6) and **Carnitine** (made in the body from two amino acids, lysine and methionine) taken alone or in combination with each other, help relieve pain from various causes.

- Chiechio et al: L-Acetylcarnitine induces analgesia by selectively up-regulating mGlu2 metabotropic glutamate receptors. Mol Pharmacol 2002 May;61(5):989-96

**Andrographis** is an herb often used to improve the immune system but it also has anti-inflammatory activity.


**Anthocyanins** are found in such fruits as cherries and raspberries and have a similar effect as ibuprofen and naproxen but without the side effects.


**Arginine** is an amino acid used, in this case, for treating interstitial cystitis, a painful urinary bladder condition.


**Arnica** is the number one homeopathic pain-relieving choice. It is superior to NSAIDs or steroids in relieving pain and inflammation and does not affect blood clotting as do the medications. It can safely be taken by adults or children. 68 comparisons from 49 clinical trials show that Arnica has a significant effect in traumatic injuries.


**Aromatherapy Essential oils** prove more effective than standard analgesics for pain and reduced the amount of opioids needed (ginger, orange, peppermint, rosemary). The oils of clary sage, marjoram, cinnamon, ginger, and geranium in a base of almond oil proved an effective belly massage treatment for menstrual pain in high school girls.

*Higley 2010:438-40


*Yip & Tam: An experimental study on the effectiveness of massage with aromatic ginger and orange essential oil for moderate-to-severe knee pain among the elderly in Hong Kong. Microbes Infect 2006 May;8(6):1450-4
Avocado and Soybean oils protect against structural changes of osteoarthritis. I hesitate to recommend soybean oils because, unless a label states that they are organically grown, most soy oils are derived from GMO (genetically modified organisms) soybeans.


B-complex vitamins are important for healthy nerves and can help alleviate the pain of neuropathy. (see Appendix for a list of B vitamins according to name and number)


Bach Flower remedies can be used internally to relieve an assortment of conditions including pain.


Bees Wax compounds help protect against NSAID-induced gastric ulcers if taken internally. A warm beeswax massage can be soothing to painful joints.


Boswellia (Frankincense) is a plant that has been used for thousands of years for healing all manner of conditions. It has potent anti-inflammatory properties that reduce pain including that of Crohn’s disease.


Bromelain is a pineapple enzyme that has anti-inflammatory effects that equals or betters any pharmaceutical analgesic for most pain, including migraines.


*Hale et al: Dietary supplementation with fresh pineapple juice decreases inflammation and colonic neoplasia in IL-10-deficient mice with colitis. Inflamm Bowel Dis 2010 Dec;16(12):2012-21

**An Algesics/Anti-inflammatory**

**Nature’s Pharmacy: Evidence-Based Alternatives to Drugs**


**Butterbur** is an herb that is effective in preventing migraines in children, adolescents, and adults.


*Lipton et al: Petasites hybridus root (butterbur) is an effective preventive treatment for migraine. Neurology 2004 Dec;63(12):2240-4


**Cantelope** has antioxidant and anti-inflammatory properties.


**Capsaicin** is a substance in hot peppers that is, ironically, a natural pain reliever.


**Cat’s Claw** is an herb with known pain and inflammation relieving substances. With **Maca**, Cat’s Claw also protects chondroitin, an important part of joint and cartilage health.

*Allen-Hall et al: Uncaria tomentosa acts as a potent TNF-alpha inhibitor through NF-kappaB. J Ethnopharmacol 2009 Dec 6


*Miller et al: The chondroprotective actions of a natural product are associated with the activation of IGF-1 production by human chondrocytes despite the presence of IL-1beta. BMC Complement Altern Med 2006 Apr;7:6:13


**Celedrin cream** is a formula containing Cetyl myristoleate that helps relieve pain.


**Cherries** (tart and sweet) are natural anti-inflammatories that relieve gouty and post-exercise muscle pain.


**Chinese Skullcap** contains compounds that prove to be just as effective as naproxin for relieving pain. Flavocoxid is a combination of baicalin, found in Chinese skullcap, and catechin, a polyphenol.


**Clove spice** is as effective as benzocaine as a topical anesthetic.


**Coconut** reduces pain, fever, and inflammation.


**CoQ10** is a coenzyme with anti-inflammatory effects that can help prevent migraines while a deficiency can cause them. The Ubiquinol form has better absorption than the cheaper ubiquinone.

**Curcumin, Quercetin, Resveratrol, and Phosphatidylcholine** are potent antioxidants that often help relieve pain but a combination of the above is generally more effective than Curcumin alone.

- **Began et al:** Inhibition of lipoygenase 1 by phosphatidylcholine micelles-bound curcumin. Lipids 1998 Dec;33(12):1223-8
- **Csaki et al:** Synergistic chondroprotective effects of curcumin and resveratrol in human articular chondrocytes: inhibition of IL-1beta-induced NF-kappaB-mediated inflammation and apoptosis. Arthritis Res Ther 2009 Nov 4;11(6):R165
- **Gupta et al:** Bioavailability enhancement of curcumin by complexation with phosphatidyl choline. J Pharm Sci 2011 May;100(5):1987-95
- **Henrotin et al:** Biological actions of curcumin on articular chondrocytes. Osteoarth Cartil 2010 Feb;18(2):141-9
- **Jackson et al:** The antioxidants curcumin and quercetin inhibit inflammatory processes associated with arthritis. Inflamm Res 2006 Apr;55(4):168-75
- **Jancinová et al:** Decreased activity of neutrophils in the presence of diferuloylmethane (curcumin) involves protein kinase C inhibition. Eur J Pharmacol 2009 Jun 10;612(1-3):161-6
- **Marczylo et al:** Comparison of systemic availability of curcumin with that of curcumin formulated with phosphatidylcholine. Canc Chemother Pharmacol 2007 Jul;60(2):171-7
- **Shakibaei et al:** Suppression of NF-kappaB activation by curcumin leads to inhibition of expression of cyclo-oxygenase-2 and matrix metalloproteinase-9 in human articular chondrocytes: Implications for the treatment of osteoarthritis. Biochem Pharmacol 2007 May 1;73(9):1434-45
- **Sharma et al:** Effect of insulin and its combination with resveratrol or curcumin in attenuation of diabetic neuropathic pain: participation of nitric oxide and TNF-alpha. Phytother Res 2007 Mar;21(3):278-83
- **Takada et al:** Nonsteroidal anti-inflammatory agents differ in their ability to suppress NF-kappaB activation, inhibition of expression of cyclooxygenase-2 and cyclin D1, and abrogation of tumor cell proliferation. Oncogene 2004 Dec 9;23(57):9247-58

**Dandelion** is a potent antioxidant with many beneficial properties including anti-inflammatory and analgesic. Dandelion contains two substances that inhibit the inflammation process, Luteolin and Chicoric acid.

- **Hu & Kitts:** Dandelion (Taraxacum officinale) flower extract suppresses both reactive oxygen species and nitric oxide and prevents lipid oxidation in vitro. Phytomed 2005 Aug;12(8):588-97
- **Hu & Kitts:** Luteolin and luteolin-7-O-glucoside from dandelion flower suppress INOS and COX-2 in RAW264.7 cells. Mol Cell Biochem 2004 Oct;265(1-2):107-13
- **Kim et al:** Taraxacum officinale inhibits tumor necrosis factor-alpha production from rat astrocytes. Immunopharmacol Immuno toxicol 2000 Aug;22(3):519-30
- **Park et al:** Taraxacum officinale Weber extracts inhibit LPS-induced oxidative stress and nitric oxide production via the NF-kB modulation in RAW 264.7 cells. J Ethnopharmacol 2011 Jan 27;133(2):834-42
Pamela Duff, RN, CSNC


Devil’s Claw, White Willow Bark and Cayenne are potent pain relievers. White willow bark was the basis for making aspirin at one time.


EGCG (Epigallocatechin gallate) is a substance found in green tea that helps relieve pain, one of its many health benefits.


Enzyme therapy can speed pain relief as well as helping the digestion and the immune system. For pain relief, take between meals.

*Chichoke: Enzymes can hasten pain relief. Nutr Sci News 2001 Feb

5-HTP (L-5-hydroxytryptophan) helps overcome chronic headaches.


Fermented Whey and Probiotics have anti-inflammatory properties.

*Beaulieu et al: Anti-inflammatory potential of a malleable matrix composed of fermented whey proteins and lactic acid bacteria in an atopic dermatitis model. J Inflamm (Lond) 2007;4

Feverfew (with or without White willow bark) helps prevent migraines.


Flavonoids (Bioflavonoids) are plant substances that have numerous health benefits including reducing pain and bleeding after surgery.


Food sensitivities often cause pain (migraines, abdominal, muscle, joint). Common triggers include alcohol, artificial sweeteners, caffeine, chocolate, dairy (especially aged cheese), pickled foods, shellfish, wheat, MSG (monosodium glutamate), nitrates and smoke found in processed meats.


Genistein is an isoflavone found in high concentrations in such foods as soy and fava beans and kudzu (a pea plant considered to be a noxious weed in many places). Genistein has some anti-inflammatory properties that helps relieve pain.


GLA (gamma-linolenic acid) can help relieve arthritic pain. GLA is the “good” part of omega-6 fatty acid and found in such oils as borage, evening primrose, and black currant seed. It is also found in such foods as blueberries, walnuts, apples, flax seed and watercress.

*Gamma-linolenic acid. U Maryland Medical Center online

Glucosamine, Chondroitin, and Flavonoids help ease painful conditions.


Ginger is not only a good herb for digestion but proves superior to NSAIDs in relieving pain.


Ginkgo biloba is an herb often used to improve memory because it increases blood flow which is likely why it is effective in preventing some migraines.


Ginseng has long been used as a general restorative but it is also proving to be a safe alternative for pain.

Green Plantain Banana pulp protects the gastric mucosa from aspirin-induced erosions.


Guava leaf extract reduces menstrual pain better than ibuprofen.


Hawthorn is an herb with multi-beneficial effects including anti-inflammatory.


Holy Basil is an herb well known for its mood uplifting properties but it seems to help sciatic nerve pain as well.


Homeopathic remedies safely and effectively treat various painful conditions including fibromyalgia and migraines. Although arnica is the number one choice for relieving pain, there are others that are effective as pain-relievers.

*Relton et al: Healthcare provided by a homeopath as an adjunct to usual care for fibromyalgia (FMS): results of a pilot Randomised Controlled Trial. Homeopathy 2009 Apr;98(2):77-82

Honey (non-pasteurized, Manuka) has healing and anti-inflammatory effects. The average “grocery store honey” has no healing properties and very few should even be labelled as “honey”.


Hops is a calming herb that has anti-inflammatory activity which helps arthritis, liver inflammation and fibrosis.

*Cleemput et al: Hop bitter acids efficiently block inflammation independent of GRalpha, PPARalpha, or PPARgamma. Mol Nutr Food Res 2009 Aug 4
*Dorn et al: Xanthohumol, a chalcon derived from hops, inhibits hepatic inflammation and fibrosis. Mol Nutr Food Res 2010 Jan 19


**Horehound** is an herb long-used as an expectorant for lung congestion but it also has other properties that prove to be more potent than some well-known analgesics.


**Hyaluronic acid** is an important substance in the body. It is needed by every tissue to retain water and for lubrication. The vitreous humour of the eye contains high amounts of it and so do joints and skin. In this study, HA was effective in relieving the pain and urinary frequency of interstitial cystitis.


**Kudzu** is considered a noxious weed in many places but it does have health benefits including relieving the pain of cluster headaches.


**Lemon** has significant anti-inflammatory effects.


**Ligoric root** has long helped relieve the pain of stomach ulcers so it should come as no surprise that it helps with the pain of canker sores as well.


**Linden** and **Quercetin** are effective in treating arthritic pain. Linden is an herb often used for its sedative properties while Quercetin, a bioflavonoid, is used as a natural antihistamine and anti-inflammatory.

*Quercetin. U Maryland Medical Center online

**Magnesium, Selenium, Malic acid, and Fish oil** help prevent migraines and can safely be used even by children. A deficiency in magnesium especially, can constrict blood vessels that often leads to headaches.


**Maitake mushrooms** have anti-inflammatory properties similar to Cox inhibitors.

*Zhang et al: Cyclooxygenase inhibitory and antioxidant compounds from the mycelia of the edible mushroom *Grifola frondosa*. Endocr Pract 2002 Nov-Dec;8(6):417-23

**Mango** has anti-inflammatory and possibly anti-cancer effects.

*Garrodo-Suárez et al: A Mangifera indica L. extract could be used to treat neuropathic pain and implication of mangiferin. Molecules 2010;15(12):9035-45

**Mangosteen** reduces inflammation by increasing antioxidants.


**Melatonin**, often used to induce sleep, has many other health benefits including relieving headaches and reducing kidney damage caused by acetaminophen.


**Milk Thistle**, often used as a liver support, proves superior to drugs in reducing inflammation of osteoarthritis.


**MSM** (methylsulfonylmethane) is a sulfur compound that shows good results for relieving chronic pain.

*MSM (methylsulfonylmethane). WebMD online

**Mullein** is an herb that has been used for hundreds of years for bronchitis and heavy coughs but it is also an anti-inflammatory, helping to relieve pain.


**Myrtle** is an herb that manages the pain and inflammation of oral infections. A few drops of myrtle tincture or essential oil on toothpaste is a viable option.

**Natural substances** such as Curcumin, ECGC, Green Tea, Milk Thistle, Pomegranate, Quercetin, and Resveratrol help prevent osteo- and rheumatoid arthritis.


**Nettle** is an herb that contains a substance effective in reducing rheumatic pain.


**Neuropathies** may be caused by Gluten sensitivity or the antibiotic isoniazid.


**Niacin** (vitamin B3) helps prevent migraines but if extra is taken of this it must accompany a full B-complex for better effect since the B family all work together.


**Noni fruit** is as effective as analgesics and steroids for reducing pain and inflammation.


*Dixon et al: Ferment this: The transformation of Noni, a traditional polynesian medicine (Morinda Citrifolia, Rubiaceae). Econ Bot 53(1):51-68


*Nualsanit et al: Damnacanthal-induced anti-inflammation is associated with inhibition of NF-κB Activation. Inflamm Allergy Drug Targets 2011 Nov 1


**Olive leaf and Oil** have anti-inflammatory effects similar to COX-2 inhibitors (NSAIDs).


**Omega-3 fatty acids** are known anti-inflammatories and can be found in fish or flaxseed oils and sacha inchi seeds.


Orange peel (which is full of flavonoids) has effects similar to COX-2 inhibitors (NSAIDs).


Orchid tree leaf extract has anti-inflammatory effects.


Papaya leaves have anti-inflammatory properties.


Passion flower inhibits inflammation.


Pomegranates protect the digestive tract from inflammation caused by alcohol and aspirin and the chondroitin joint content in those with osteoarthritis.
**Pomegranates** and **Gotu kola** improve symptoms of periodontitis (inflammation and/or infection of jaw ligaments and bones).


**Probiotics** relieve abdominal pain and bloating in IBS; work better than mesalazine for diverticulitis; reduce complications in SIRS (Systemic inflammatory response syndrome); and relieve symptoms of arthritis.

*Hun: Bacillus coagulans significantly improved abdominal pain and bloating in patients with IBS. Postgrad Med 2009 Mar;121(2):119-24


*Tursi et al: Mesalazine and/or Lactobacillus casei in maintaining long-term remission of symptomatic uncomplicated diverticular disease of the colon. Hepatogastroenterol 2008 May-Jun;55(84):916-20

**Purple Passionfruit peel** reduces pain and stiffness in osteoarthritis.

*Farid et al: Oral intake of purple passion fruit peel extract reduces pain and stiffness and improves physical function in adult patients with knee osteoarthritis. Nutr Res 2010 Sep;30(9):601-6

**Pycnogenol** (alone or with certain vitamins [C, E]) helps prevent various types of pain including migraines. Pycnogenol is a powerful antioxidant extracted from pine bark.

*Chayasirisobhon: Use of a pine bark extract and antioxidant vitamin combination product as therapy for migraine in patients refractory to pharmacologic medication. Headache 2006 May;46(5):788-93


**Red Oranges** (navels, valencias, Blood) have the same orange-coloured peel on the outside but inside, they are a deep red to maroon colour. These red oranges have anti-inflammatory properties which also protect the chondroitin content in joints, particularly important in those with arthritis.


**Reishi mushrooms** are known immune boosters but they are also effective in relieving the pain of herpes and neuralgia.
**ANALGESICS/Anti-Inflammatories**


**Resveratrol** is a potent antioxidant with analgesic effects. It is found in the skins of blueberries and grapes but not much in wine (despite the propaganda).


**Riboflavin** (vitamin B2) helps prevent migraines but take it with a full B complex since they all work together for better effect and less likely to create a deficiency if taken separately.


**Rose Hips** have a high vitamin C content but they are becoming harder to find in supplemental form. Vitamin C is a known antioxidant and likely the reason for it being effective in relieving pain.

*Chrubasik et al: A one-year survey on the use of a powder from Rosa canina lito in acute exacerbations of chronic pain. Phytother Res 2008 Sep;22(9):1141-8

**St. John’s Wort** proves twice as effective as ibuprofen in relieving pain.


**Saffron, Celery seed, and Anise seed** prove more effective than mefenamic acid for menstrual pain.


**SAMe** (S-adenosylmethionine) is proving effective in relieving the pain of neuralgia disorders and arthritis.


**Savory** is an herb that appears to be effective in relieving sinus pain and inflammation.

**Serrapeptase** is an enzyme that relieves pain and inflammation but it should be taken on an empty stomach for greatest effect.


**Sesame oil** has anti-inflammatory effects.


**Shiitake mushrooms** protect the liver against acetaminophen damage. Shiitake and White button mushrooms reduce the incidences and severity of collagen-induced arthritis. Immunity (autoimmunity) to collagen type II can occur to cause arthritis rather than cure it.


**Tart Cherries** suppress inflammation and pain as effectively as indomethacin; prevent muscle damage; and improve recovery after exercise – in humans and horses.


**Tribulus** is an herb comparable to indomethacin for relieving pain.


**Ursolic acid** (found in many berries and herbs) is comparable to ibuprofen for relieving pain but without the stomach upsets.

Vari**ous Natural Health Products** have anti-inflammatory effects on a number of arthritic disorders. Those tested include EGCG, Resveratrol, and Curcumin, among others.


**Vitamin D3 deficiency** can cause **Myalgias** (persistent muscle pain). One study found that a single mega dose of vitamin D improved menstrual and other pain-related disorders in women. Dosages are often limited to 1000 or 2000 IU per day but even this is rarely enough to meet the minimum most people need.

*Badsha et al: Myalgias or non-specific muscle pain in Arab or Indo-Pakistani patients may indicate vitamin D deficiency. Clin Rheumatol 2009 Aug;28(8):971-3

**Vitamin E, Fish oil, and Nettle** combination decreases the need for analgesics.


**Water** is an important part of pain relief that is often ignored. Keeping well hydrated often relieves pain. (Batmanghelidj)

**White button mushrooms** have anti-inflammatory effects.


**Wobenzym** is an enzyme combination that also includes the bioflavonoid, rutin. It is proving effective as an anti-inflammatory and a protector against scar tissue formation.

*Riabokon et al: The effect of Wobenzym on the atherogenic potential and inflammatory factors at the rehabilitation stage for patients who have had a myocardial infarct. Lik Sprava 2000 Jul-Aug;(5):111-4

**Yacon** is a tuber grown in the Andes mountain regions that is related to sunflower and Jerusalem artichoke. It is showing significant antioxidant, antimicrobial and anti-inflammatory activity while helping to build bone.

**Antibiotics**

(Used to treat bacterial infections, including leprosy and tuberculosis)

**Common examples:**

- **Aminoglycosides** (-mycin, -micin)
  - gentamicin – Cidomycin, Garamycin, and others
  - neomycin – Mycifradin, Neo-Fradin, Neo-Tabs
  - streptomycin
  - *... and others*

- **Anti-tuberculars**
  - ethambutol – Myambutol
  - isoniazid – INH and others
  - pyrazinamide – Tebrazid and others
  - rifampin – Rifadin and others

- **Cephalosporins** (five generations and counting)

- **Chlorhexidine** – Oro-Clense, Peridex and others

- **Dapsone** – DDS, Aczone, Avlosulfon, Dapsone

- **Fluoroquinolones** (-oxacin’s)
  - ciprofloxacin – Cipro, Ciloxam, and others
  - levofloxacin – Iquix, Levaquin, Quixin
  - ofloxacin – Floxin, Ocuflox
  - *... and others*

- **Furazolidine** – Furoxon

- **Linezolid** – Zyvox

- **Loracarbef** – Lorabid

- **Macrolides**
  - azithromycin – Zithromax and others
  - clarithromycin – Biaxin
  - erythromycin – Apo-Erythro, Diomycin, E-Mycin, Erybid, and others
  - *... and others*

- **Metronidazole** – Apo-Metronidazole, Flagyl, Metro, Nidagel, and others

- **Nitrofurantoin** – Furadantin, Macrobid, Macrodantin, Nitro Macro, Urantoin

- **Penicillins** – amoxicillin, ampicillin, penicillin, and others

- **Streptogramins** (for VRSA)
**Antibiotics**

- **sulfonamides** (sulfa drugs)
  - sulfasalazine – Azulfidine and others used in Crohn’s or ulcerative colitis
  - sulfamethoxazole – Septra, Gantanol and others

- **tetracyclines** (or any of the many cyclines)
  - trimethoprim – Proloprim

... and many more...

**Deplete:**

- A, beta carotene, B1, B2, B3, B5, B6, B7, B8, B9, B12, C, D, E, K,
- PABA, glutathione/NAC, choline, calcium, copper, iron, magnesium,
- potassium, selenium, sodium, zinc, carnitine, good intestinal bacteria,
- CoQ10

Antibiotics have no effect on viruses so they should not be used for such infections as colds, flu, or most upper respiratory infections. They also have no effect on sinus infections since the majority of those are viral infections.

* Braglia: Research: Antibiotics Will Not Help Your Sinuses. GreenMedInfo newsletter 2012 Feb 21

Antibiotics literally mean “against life”. They kill bacteria, both the bad that is causing an infection and the good that is needed for the immune and digestive systems. Therefore, taking a PRO-biotic (“for life”) is vital to rebuilding the immune system so that it can naturally fight off invaders - of the bacterial kind. (see more on Probiotics below)

Antibiotics promote obesity, especially in children.

* Mercola: This Commonly Used Drug Found to Promote Obesity. Nov 24, 2011

Drug-resistant infections are causing grave concern and for good reason. The main cause is over-use of antibiotics which have been found in meat, milk, and community water supplies. As a result, there is an increase in ‘superbugs’ – those that mutate and become antibiotic-resistant. Therefore, use antibiotics only when absolutely necessary and then replenish your system with the nutrients they destroy, especially PRObiotics.

**Suggested Alternatives:**

- **Acacia gum, Arjuna, Clove, Cinnamon, and Eucalyptus** have strong antimicrobial activity against several multi-strain resistant bacteria.


- **Aloe vera** has some anti-bacterial effects.
*Alpinia galanga, a member of the ginger family, is effective against several drug-resistant bacteria.

**Angelica (Dong quai)** has significant anti-Tubercular activity.

**Apples** reduce the side effects caused by the cholera vaccine and with **Hops**, protects ligament cells in the mouth. Buy only **organic** apples as they are the #1 food that contains pesticides, many of which cause cancer.
*Apples worst for pesticides on produce list. CBC News, Jun 14, 2011
*Shabecoff: 100 Chemicals for Apples Add Up to Enigma on Safety. NY Times Feb 5, 1989
*Yoshino et al: Co-administration of cholera toxin and apple polyphenol extract as a novel and safe mucosal adjuvant strategy. Vaccine 2009 Jul 30;27(36):4808-17

**Astragalus** is an herb that enhances the immune system in TB patients as well as children with recurring tonsilitis.

**Avocado** has antioxidant and anti-microbial effects.
*Chia & Dykes: Antimicrobial activity of crude epicarp and seed extracts from mature avocado fruit (Persea americana) of three cultivars. Pharm Biol 2010 Jul;48(7):753-6

**Bay leaf** is effective against **MRSA** (Methicillin-resistant Staphylococcus aureus).
*Otsuka et al: Anti-methicillin resistant Staphylococcus aureus (MRSA) compounds isolated from Laurus nobilis. Biol Pharm Bull 2008 Sep;31(9):1794-7

**Bee propolis**, including the potent Brazilian green bee propolis, is effective against **MRSA** and other bacterial strains and in preventing ear infections in children chronically prone to them.


**Beetroot, Apple** and **Citrus pectins** have anti-bacterial activity against the staphylococcal bacteria.


**Berberine-containing plants** (Barberry, Goldenseal, Goldenthread, Oregon grape) are strong anti-microbials (against bacteria, viruses, fungi, protozoans, helminths, and chlamydia). They also have anti-cancer benefits.


*Serafim et al: Different concentrations of berberine result in distinct cellular localization patterns and cell cycle effects in a melanoma cell line. Cancer Chemother Pharmacol 2008 May;61(6):1007-18

**Beta Glucans** are polysaccharides derived from oats, mushrooms, barley or yeasts. Beta glucans are particularly effective for priming and normalizing the immune system and protecting the body against a number of pathogenic bacteria.


**Black Cumin Seed** is an effective anti-bacterial against MRSA.


**Capsaicin**, from hot peppers, is effective against the cholera bacterium.

Carotenoids, from red, yellow, orange and dark green fruits and vegetables) are effective against a variety of drug-resistant bacteria including H. Pylori, often blamed for causing stomach ulcers.


Catnip is an herb that is effective against Staphylococcus aureus.


Cat’s Claw is an herb that boosts the immune system but it also has antibacterial activity.

*Eberlin et al: Uncaria tomentosa extract increases the number of myeloid progenitor cells in the bone marrow of mice infected with Listeria monocytogenes. Int Immunopharmacol 2005 Jul;5(7-8):1235-46

Cinnamon and Oregano are effective against antibiotic-resistant Campylobacter.


Clove inhibits various bacteria and other pathogens.

*Bhamarapravati et al: Extracts of spice and food plants from Thai traditional medicine inhibit the growth of the human carcinogen Helicobacter pylori. Indian J Ophthalmol 2009 May-Jun;57(3):185-9

Clove, Guava and Lemongrass increase effects of antimicrobial drugs.


Clove and Holy Basil protect the body against Klebsiella bacteria.


Coconut water has antimicrobial effects.


Colloidal Silver inhibits several drug-resistant strains of bacteria including Pseudomonas aeruginosa and Aeromonas hydrophilia in tap water, possibly replacing the need for chlorine.

Cordyceps mushroom prevents pathogenic bacterial growth, including TB bacteria.


Cranberry extract resists adherence of E. Coli and is just as effective as trimethoprim.


Cruciferous vegetables (cabbage family) have antibacterial as well as antifungal and antitumour properties.


Curcumin is the active part of Turmeric and has many health benefits including antibiotic and antifungal effects.


Dandelion stimulates the growth of at least 14 strains of Bifidobacterium, a necessary PRObiotic. The other necessary probiotics are the Lactobacillus strains.


EGCG (epicatechin 3-gallate – from green tea) is effective against MRSA.


Essential Oils have anti-bacterial properties, especially Anise, Cinnamon, Clove, Cumin, Eucalyptus, Geranium, Grapefruit, Lavender, Lemon, Lemongrass, Mountain savory, Oregano, Peppermint, Rosewood, Sage, Sandlewood, Spearmint, Tarragon, Tea tree (melaleuca), Thyme, Turmeric, and Wintergreen.

Fennel, and its Essential oil, has significant anti-bacterial activity, especially for multi-drug resistant strains of tuberculosis and Acinetobacter baumannii.

Flaxseed oil protects against Streptococcus pneumoniae infection. Ground flaxseed also prevents various cancers and digestive disorders.

Garlic is the most-used natural antibiotic available world-wide and certainly the most cost-effective.
Grape seed extract is effective against MRSA.

Grapefruit – the Upside – prevents bacteria from communicating and forming groups. Despite its health benefits, grapefruit cannot be eaten by anyone on medication – even a one-a-day aspirin.

Grapefruit seed extract is effective against several bacterial strains.

Green Bananas are an effective treatment for children with diarrhea, hospitalized or at home, and is more effective than antibiotics.

Hawthorn has multi-beneficial effects including anti-microbial.

Homeopathics are safer and often more effective than conventional treatment for bacterial infections especially for children with ear and upper respiratory infections;
severe sepsis; relieving pain and bruising after surgery; diarrhea of bacterial or unknown origins; and for sinusitis.

*Witt et al: Homeopathic treatment of patients with chronic sinusitis: A prospective observational study with 8 years follow-up. BMC Ear Nose Throat Disord 2009 Jul 27;9:7

**Kiwifruit** contains antioxidants and antibacterial activity.


**Lemon juice** is effective against cholera.


**Limes** are more effective than certain spices against drug-resistant E. coli and may inhibit cholera from surviving in foods.


**Maitake mushroom** reduces effective dosage of vancomycin for Listeria while enhancing natural immunity.

Mangosteen fruit is effective against MRSA.


Manuka Honey and other non-pasteurized honey are especially good for preventing infections in wounds, including MRSA and other multi-drug pathogens. The Manuka plant of New Zealand is related to the Tea Tree plant of Australia. Both have superior antimicrobial properties. In one study alone (Cooper 2001) “…759 current infections ceased. The honey dressings did not adhere to or irritate the wound, and they were easily and painlessly renewed.” Use only unpasteurized or Manuka honey as the average “grocery store honey” is not real honey and therefore, not medicinally effective.

*Cooper & Molan: The use of honey as an antiseptic in managing Pseudomonas infection. J Wound Care 1999 Apr;8(4):161-4
*Gethin & Cowman: Bacteriological changes in sloughy venous leg ulcers treated with manuka honey or hydrogel: an RCT. J Wound Care 2008 Jun;17(6):241-4, 246-7
*Gethin & Cowman: Manuka honey vs. hydrogel--a prospective, open label, multicentre, randomised controlled trial to compare desloughing efficacy and healing outcomes in venous ulcers. J Clin Nurs 2009 Feb;18(3):466-74
*Jaganathan: Can flavonoids from honey alter multidrug resistance? Med Hypoth 2011 Jan 17
*Molan: Why honey is effective as a medicine: The scientific explanation of its effects. Bee World 2001;82(1):22-40
Nature’s Pharmacy: Evidence-Based Alternatives to Drugs


**Marjoram** is a common food spice that has antibacterial and antifungal activity.

**Nasturtium** and **Horseradish** are just as effective against several infections as standard antibiotics. Nasturtium flowers provide a tangy flavour to a salad.
*Goos et al: Efficacy and safety profile of a herbal drug containing nasturtium herb and horseradish root in acute sinusitis, acute bronchitis and acute urinary tract infection in comparison with other treatments in the daily practice/results of a prospective cohort study. Arzneimittelforschung. 2006;56(3):249-57

**Naturopathic ear drops** are safer and more effective than antibiotics for ear infections.

**Neem** has strong antibacterial properties. Neem oil is used the most often and derived from the seeds of a tree native to India.
*Thakurta et al: Antibacterial, antisecretory and antihemorrhagic activity of Azadirachta indica used to treat cholera and diarrhea in India. J Ethnopharmacol 2007 May 22;111(3):607-12

**Neem** and **Guava fruit, leaves and bark** have antibacterial effects.

**Neem** and **Mango** inhibit at least 4 strains of bacteria associated with dental cavities.
Noni fruit has antibacterial activity against tuberculosis and cholera.


Norway Spruce salve has anti-bacterial effects against multiple drug-resistant strains.


Nutmeg is a common spice that protects the mouth from bacteria.


Olive leaf and oil are effective against several drug-resistant strains of bacteria.


Papaya fruit and seeds have broad anti-bacterial properties and perfectly safe to eat during pregnancy. Add a few seeds to smoothies where the peppery flavour makes a nice addition to green drinks while giving anti-bacterial protection.


Pau d’Arco bark has anti-microbial properties including preventing MRSA bacteria.


Phosphatidylcholine improves survival rate of infants with neonatal sepsis caused by Klebsiella pneumonia.

**Pomegranates** have antibacterial activity against a broad range of pathogenic bacteria.

*Al-Zoreky: Antimicrobial activity of pomegranate (Punica granatum L.) fruit peels. Int J Food Microbiol 2009 Sep 15;134(3):244-8


**Pomegranate, Copper, and Vitamin C** proved effective against *Pseudomonas*. Pomegranate peel also has antibacterial and antifungal effects.


**Probiotics**, in significant amounts and varied strains, are vital in overcoming various bacterial infections, including superbugs like *C. difficile*, because they strengthen the immune system. 80% of the immune system is in the normal gut flora so it is important to keep the good bacteria well fed feed. When an infection develops, up the dosage. Yogurt does not have nearly enough good bacteria and many brands do not even have active culture. Antibiotics can often cause diarrhea and probiotics have proven to overcome this side effect.

*Banerjee et al: Lactobacillus delbrueckii ssp. bulgaricus B-30892 can inhibit cytotoxic effects and adhesion of pathogenic *Clostridium difficile* to Caco-2 cells. Gut Pathog 2009;1(1):8


*Gao et al: Dose-response efficacy of a proprietary probiotic formula of *Lactobacillus acidophilus* CL1285 and *Lactobacillus casei* LBC80R for antibiotic-associated diarrhea and *Clostridium difficile*-associated diarrhea prophylaxis in adult patients. Am J Gastroenterol 2010 Jul;105(7):1636-41

*Hickson: Probiotics in the prevention of antibiotic-associated diarrhoea and *Clostridium difficile* infection. Therap Adv Gastroenterol 2011 May;4(3):185–197


Quercetin, a bioflavonoid, inhibits significant oral pathogens.

Rosemary is effective against bacterial and fungal infections.

Saccharomyces boulardii is a probiotic yeast and not related to Candida albicans yeast that plagues many people. It is particularly valuable for bouts of colitis and controlling diarrhea caused by the C. difficile bacteria, which is often fatal for many hospital patients, especially the elderly. It should be taken with other probiotics for good protection. In children, it is used to overcome E. coli infections and vesicoureteral reflux (where the urine flows from the bladder back into ureters or kidneys).

Savory has antibacterial and antifungal activity but only with the methanol extraction and not the hexane.
**Shiitake mushroom** is a potent antimicrobial.


**Slovak Honeydew Honey** is more effective than Manuka honey (15+) against multi-strains of bacteria.


**Spices** have anti-microbial effects against cholera-type bacteria. Spices tested were basil, clove, garlic, horseradish, marjoram, oregano, rosemary, and thyme.


**Stevia**, an herb that is 200 times sweeter than table sugar, is often used by diabetics and non-diabetics alike because of its sweetness, health benefits and no calories. One of the health benefits is that it is effective against E. coli (and other food-borne pathogens) without affecting beneficial gut bacteria.


**Tripterygium wilfordii** is a Chinese herbal medicine that proves superior to sulfasalazine.


**Vitamin D3** is vital for strengthening the immune system. A deficiency can lead to such dangerous infections as Bacterial vaginosis during pregnancy and tuberculosis, among many diseases people are at risk of developing from vitamin D deficiency.


**Winter cherries** (**Physalis angulata**) have anti-bacterial effects against Mycobacterium.


**Wormwood** is the herb of choice when it comes to getting rid of internal parasites but it also has some antibacterial effects.


**Wormwood, Tarragon, and Eucalyptus** prove effective against E. coli.

ANTI-DEPRESSANTS

(Used to treat various forms of depression)

COMMON EXAMPLES:

Tricyclics
- amitriptyline – Elavil and others
- amoxapine – Asendin
- doxepin – Sinequan
- imipramine – Tofranil and others
- nortriptyline – Aventyl and others

*MAOs (monoamine oxidase inhibitors)
- eldepryl – Selegeline
- isocarboxazid – Marplan
- moclobemide – Aurorix, Manerix
- phenelzine – Nardil
- rasagiline – Azilect
- tranylcypromine – Parnate

SSRIs (selective serotonin reuptake inhibitors)
- citalopram – Celexa
- fluoxetine – Prozac, Sarafem, Fontex
- paroxetine – Paxil
- sertraline – Zoloft
- ... and others

Others
- bupropion – Wellbutrin
- trazadone – Desyrel
- venlafaxine – Effexor

DEPLETE:

B1, B2, B3, B5, B6, B8, B9, B12, C, choline, calcium, chromium, magnesium, selenium, melatonin, CoQ10, DHEA, glutathione/NAC

⚠️ MAO Caution: There are at least four types of foods that must be strictly avoided when taking these drugs. They contain tyramine which can cause serious side effects.
Nature’s Pharmacy: Evidence-Based Alternatives to Drugs

- broad beans (fava, Italian green beans)
- yeast concentrates (Marmite, brewer’s yeast, yeast supplements)
- salted, smoked, or pickled fish
- aged cheese

SSRIs are linked to sexual dysfunction in both men and women.

SSRIs are linked to congenital defects including high blood pressure in babies.
*Baker: SSRI horrors grow: women who take popular antidepressants risk babies with severe high blood pressure. NaturalNews Fri Jan 13, 2012

Analgesics taken regularly with Antidepressants increase restless leg syndrome.

Antidepressants have little or no positive effect compared to a placebo but instead, had more negative results including the increased need for multi-drug treatments.

Antidepressants are not safe to use in treating cocaine addiction.

Chocolate consumption increases when depressed.

Gastrointestinal inflammation increases the development of depression.
*Fehér et al: Role of gastrointestinal inflammations in the development and treatment of depression. Orv Hetil 2011 Sep 8 ;152(37):1477-85

Hair loss is associated with the antidepressant paroxetine (Paxil).

Nicotine use during teen years increases the likelihood of depression as adults.
*Iñiguez et al: Nicotine exposure during adolescence induces a depression-like state in adulthood.
Pesticides (organochlorine compounds, DDT, simazine, lindane and some of their active constituents) have long been associated with a significant increase in cancers as well as numerous other dangerous health conditions including disturbing thought processes.


Statin drugs used to lower Cholesterol levels actually increase the likelihood of depression.

*Buajordet et al: Statins – the pattern of adverse effects with emphasis on mental reactions. Data from a national and an international database. Tidsskr Nor Laegeforen 1997 Sep 20;117(22):3210-3


Suggested alternatives:

Astraxanthin helps relieve depression especially when it is alcohol-induced.


B-complex, especially B12 and B9 improve the effects of antidepressants since B vitamins are used as co-factors in the manufacture of such necessary neurotransmitters as serotonin and dopamine. (see Appendix for a list of B vitamins according to name and number)


Blue-green algae improves mood and decreases depression.


Carnitine is made in the body by two amino acids, lysine and methionine, and has antidepressant effects especially in older people.
Curcumin, alone or with Piperine (found in black pepper), has anti-depressant qualities that have the same effect as the drugs imipramine and fluoxetine.

- Mao et al: Involvement of serotonergic system in the antidepressant-like effect of piperine. Prog Neuropsychopharmacol Biol Psych 2011 Apr 6
- Xu et al: Antidepressant effects of curcumin in the forced swim test and olfactory bulbectomy models of depression in rats. Pharmacol Biochem Behav. 2005 Sep;518(1):40-6

**5-HTP/INN** (5-Hydroxytryptophan or oxitriptan (INN) is a derivative of tryptophan and the next-best thing since tryptophan cannot be sold in Canada. Along with light, tryptophan treats SAD (seasonal affective disorder). With the coenzyme, NAD (nicotinamide adenine dinucleotide), tryptophan can be as effective as the drug imipramine.


Ginseng root has been used for thousands of years to correct problems in the body, including depression.


**Goji berries/Wolfberry** improves the sense of well-being.
**Amagase & Nanse:** A randomized, double-blind, placebo-controlled, clinical study of the general effects of a standardized Lycium barbarum (Goji) Juice, GoChi. J Altern Complement Med 2008 May;14(4):403-12

**Graviola fruit** and **leaves** are from a tree that grows in the Amazon jungle. Graviola is proving to have anti-depressive qualities.

**Homeopathic Medicine** is as effective and far better tolerated than Prozac. Outcomes in areas of anxiety, depression, and irritable bowel proved to be more than 75% positive.

**Kava** is a safe antidepressant herb but, despite its positive effects, it is still not allowed to be sold in Canada.

**Lavender** is an herb long-used for its calming effects but it may have some antidepressant qualities as well.

**Light therapy** proves better than Prozac.

**Lobelia** is an herb also known as Indian tobacco and used to treat various lung conditions. While it is used to help people quit smoking, it has some anti-depressant qualities as well.

**Nutmeg** is a food spice that has some anti-depressant effects.

**Omega-3 fatty acids**, especially DHA, has antidepressant qualities and is as effective as Prozac but much safer. Omega-3 fatty acids are found in flax and fish oils and sacha inchi seeds.
Nature’s Pharmacy: Evidence-Based Alternatives to Drugs


Onions have anti-depressant effects.


Pomegranates improve mood and bone quality in postmenopausal women.


Probiotics help with depression because they repair a damaged digestive tract thereby increasing the absorption of nutrients.

*Bravo et al: Ingestion of Lactobacillus strain regulates emotional behavior and central GABA receptor expression in a mouse via the vagus nerve. Proc Natl Acad Sci USA 2011 Sep 20;108(38):16050-5


Resveratrol is a potent antioxidant found in the skins of red grapes and proving to have numerous health benefits including an anti-depressant-like effect.


Rhodiola is an herb often used for stress energy and as an adaptogen. It also improves mental and physical performance.

*Chen et al: The effects of Rhodiola rosea extract on 5-HT level, cell proliferation and quantity of neurons at cerebral hippocampus of depressive rats. Phytomed 2009 Sept;16(9):830-38


*Qin et al: Effects of Rhodiola rosea on level of 5-hydroxytryptamine, cell proliferation and differentiation, and number of neuron in cerebral hippocampus of rats with depression induced by chronic mild stress. Zhongguo Zhong Yao Za Zhi 2008 Dec;33(23):2842-6


Rosemary is an herb that is calming with mild anti-depressant effects.


St. John’s Wort is a safe alternative to SSRIs but should never be taken with other antidepressants.

* Franklin et al: Sub-chronic treatment with an extract of Hypericum perforatum (St John’s wort) significantly reduces cortisol and corticosterone in the rat brain. Eur Neuropsychopharmacol 2004 Jan;14(1):7-10

Saffron, a food spice, can be as effective as fluoxetine as an anti-depressant.

* Wang et al: Antidepressant properties of bioactive fractions from the extract of Crocus sativus L. J Nat Med 2009 Sep 29

SAMe (S-adenosylmethionine) improves depression especially in postmenopausal women and those with osteoarthritis.


Sesame oil has several health benefits including a calming effect during depression.


Tryptophan (along with light) is an effective antidepressant for SAD (seasonal affective disorder) and reduces the need for medications in treating aggressive psychiatric patients. Tryptophan is banned from Canada and the US but since it is an amino acid, it can be made in the body from other proteins. The closest legal supplement is 5-HTP.

Tryptophan and Nicotinamide (B3) has the same effect as imipramine for depression.


Valerian reduces anxiety and depression but since it is also a sleep aid, caution is advised as to when it is taken.

*Hattesohl et al: Extracts of Valeriana officinalis L. s.l. show anxiolytic and antidepressant effects but neither sedative nor myorelaxant properties. Phytomed 2008 Jan;15(1-2):2-15

Vitamin D3 deficiency is often the result of decreased sunlight exposure, especially for those of us who live in the north, making us more susceptible to depression as well as diabetes, MS, and various cancers.


Zinc deficiency can also lead to depression.

*Yary & Aazami: Dietary intake of zinc was inversely associated with depression. Biol Trace Elem Res 2011 Sep 20
ANTI-FUNGALS

(USED TO TREAT YEAST OR OTHER FUNGAL INFECTIONS)

COMMON EXAMPLES:

- **amphotericin B** – Fungizone
- **corticosteroids (Steroids)** – see more depletions from that list
  - triamcinolone – Nasacort
  - mometasone – Nasonex
  - fluticasone – Fonase
  - beclomethasone – Beconase
  - budesonide – Rhinocort
  - flunisolide – Nasarel
- **fluconazole** – Diflucan
- **flucytosine** – Ancobon, 5-FC, and others
- **griseofulvin** – Fulvicin, Grisactin, and others
- **itraconazole** – Sporanox
- **ketoconazole** – Ketozole, Nizoral
- **miconazole** – Monistat and others
- **nystatin** – Mycostatin and others

DEPLETE:

B1, B2, B3, B6, B7, B12, E, K, calcium, magnesium, potassium, sodium, good intestinal bacteria

SUGGESTED ALTERNATIVES:

**Adzuki beans** have antifungal activity.


**Acacia gum, Arjuna, Clove, Cinnamon, and Eucalyptus** have strong antimicrobial activity against several multi-drug resistant fungi.

Ashwagandha is an herb often used for adrenal gland support but it has anti-fungal effects that help prevent systemic Aspergillus infections.


Avocado has anti-fungal properties.


Bayberry is an herb with mild anti-fungal properties.


Bee propolis, Aloe vera and B-complex help treat fungal infections.


Bees wax, Honey, and Olive oil is an effective topical combination for treating common fungal infections.


Berberine-containing plants (Barberry, Goldenseal, Oregon grape, Goldenthread) are strong anti-microbials against a variety of organisms including bacteria, viruses, fungi, protozoans, helminths, and chlamydia.


Black cumin and Cloves have antifungal and antioxidant properties.

*Abdel-Wahhab & Aly: Antioxidant property of Nigella sativa (black cumin) and Syzygium aromaticum (clove) in rats during aflatoxicosis. Hepatology 2009 Dec;50(6):1756-64


Cabbage juice is not only a good digestive aid, but it has some anti-fungal effects as well.


Caper seeds have antifungal properties and can be added to salads or pizzas!

*Lam & Ng: A protein with antiproliferative, antifungal and HIV-1 reverse transcriptase inhibitory activities from caper (Capparis spinosa) seeds. Zhong Yao Cai 2004 Nov;27(11):848-50

Cayenne pepper has long been used for pain control and strengthening the heart but it also has anti-fungal properties as well as other antimicrobial effects.

Clove is a spice and potent antioxidant that is effective against Candida yeast infections.

Coconut has a long history of health benefits including that of an antimicrobial.

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Curcumin/Turmeric have antifungal and antibiotic effects.

Dandelion is an under-rated herb with numerous health benefits including several anti-fungal properties.

Echinacea is an herb long used as an immune booster during times of seasonal colds and flus but it is an effective antimicrobial as well.
EGCG (epigallocatechin 3-O-gallate) is a substance found in Green Tea that is a potent antifungal against pathogenic yeast infections.

Essential oils have potent antimicrobial effects which will include fungi, bacteria, viruses, and parasites. Particularly effective for fungi are the oils of: Anise, Cinnamon, Clove, Cumin, Eucalyptus, Geranium, Grapefruit, Holy Basil, Lavender, Lemon, Lemongrass, Mountain savory, Oregano, Peppermint, Rosemary, Rosewood, Sage, Sandlewood, Spearmint, Tarragon, Tea tree (melaleuca), Thyme, Turmeric, and Wintergreen.

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- Nov;48(7):949-58
- Nature's Pharmacy: Evidence-Based Alternatives to Drugs
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Flaxseed has antifungal activity.

French beans have antitumor, antifungal, and anti-HIV effects.

Garlic and Onions are potent antifungals against at least 18 strains of yeasts and dermatophytes, a group of three types of common fungi responsible for such skin infections as ringworm or Athlete’s foot.

Grapefruit seed extract has long been used as an antimicrobial.

Honey can be effective against Candida, Aspergillus mold, and the bacterium Staphylococcus aureus. Mixed with Tea Tree oil and cinnamon, honey is also effective against the Malassezia yeast (seborrhea). Use only unpasteurized or Manuka honey as the average “grocery store honey” is not real honey and therefore, not medicinally effective.
Korean Ginseng has significant activity against Candida yeast.


Lemongrass and Lemon juice are effective treatments for oral thrush, which is a fungal infection of the mouth.

* Wright et al: Treatment of oral thrush in HIV/AIDS patients with lemon juice and lemon grass (Cymbopogon citratus) and gentian violet. Phytomed 2009 Mar;16(2-3):118-24

Licorice compounds are showing promise for topically treating vulvovaginal candidiasis, a fungal infection that plagues women.


Lycopene is a carotenoid that has some potent health benefits including anti-fungal effects against Candida yeast infections.


Marjoram is a common cooking herb that has antifungal and antibacterial activity.


Moringa oleifera (Miracle or Horseradish tree) extracts and oils have antifungal properties.


Murill mushrooms kill Candida yeast.

* Martins et al: Polysaccharide-rich fraction of Agaricus brasiliensis enhances the candidacidal activity of murine macrophages. Mem Inst Oswaldo Cruz 2008 May;103(3):244-50

Myrrh has been used for thousands of years as an anti-microbial. It is particularly effective for infections of the mouth.


Neem and Herbs (soapberry and mint) are superior to Betadine for vaginal discharges.
*Salhan et al: A phase II randomized controlled trial to evaluate the safety and efficacy of Praneem polyherbal vaginal tablets compared with betadine vaginal pessary in women with symptoms of abnormal vaginal discharge. Asia Pac J Public Health 2009 Oct;21(4):461-8

**Noni fruit** is effective against several fungi and has a potent detoxifying activity that is 40 times better than sulforaphane (a compound found in broccoli).


**Olive leaf extract** has broad spectrum antimicrobial activity.


**Papaya** works synergistically with fluconazole to inhibit Candida albicans.


**Passion fruit seeds** contain an anti-fungal protein.

*Lam & Ng: Passiflora, a novel dimeric antifungal protein from seeds of the passion fruit. Phytomed 2009 Mar;16(2-3):172-80

**Pomegranate peel** has antifungal and antibacterial effects.


**Prickly Ash** is a small North American tree that has some potent antimicrobial effects.


**Probiotics** everyday is a good start in preventing microbes from taking hold but when they do, the intake needs to be increased, especially after taking an anti-fungal or antibiotic. (Bacillus coagulans was formerly known as Lactobacillus sporogenes)


**Purslane** is a salad green that has some antifungal activity.


**Red Lentils** contain antifungal peptides.


**Resveratrol**, a potent antioxidant found in the skins of blueberries and red grapes, has antifungal properties.
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Sarsaparilla was once used as a flavouring in soft drinks. It is still available as an herbal supplement with potent antifungal properties against pathogenic yeasts.


Savory is usually used as a flavour in cooking but it also has antifungal and antibacterial activity but only with the methanol extraction and not when hexane is used.


Shiitake mushroom is a potent antimicrobial.


*Ngai & Ng: Lentin, a novel and potent antifungal protein from shiitake mushroom with inhibitory effects on activity of human immunodeficiency virus-1 reverse transcriptase and proliferation of leukemia cells. Life Sci 2003 Nov 14;73(26):3363-74

Solanum chrysotrichum, a Mexican nightshade plant, is safe and effective in treating various skin and scalp fungal infections.


Spirulina not only enhances the immune system but has significant antifungal, antiviral, and anticancer activity. Spirulina is a blue-green algae derived from aquatic cyanobacteria, Arthrospira platensis (Africa, Asia, South America), Arthrospira pacifica (Hawaiian Islands) or Arthrospira maxima (Central America).


Tribulus is an herb often used by men to boost testosterone levels but it also displays potent antifungal activity against fluconazole-resistant fungi, including Candida.


Yucca flowers have potent antifungal activity. They are one of many edible flowers that make a nice addition to salads.

**Anti-histamines**

(Used to treat allergy symptoms)

**Common examples:**
- astemizole – Hismanyl
- brompheniramine – Dimetapp and others
- chlorpheniramine – Chlorotab and others
- clemastine – Tavist
- cyproheptadine – Periactin
- dimenhydrinate – Dimetabs, Dramamine, and others
- diphenhydramine – Benadryl, Nytol, and others
- ephedrine – Synergenex caffeine, 4Ever Fit, and others
- meclizine – Antivert and others
- pseudoephedrine – Sudafed, Actifed, Allegra, and others
- terfenadine – Seldane and others

**Deplete:**

B2, C, choline, CoQ10

- **Cow’s milk** increases mucus associated with respiratory problems.

- **Diphenhydramine (Benadryl)** is associated with early pregnancy defects, infant fatalities, and Rhabdomyolysis (break down of muscle tissue).

- **Margarine, but not butter**, increases eczema and allergic reactions in children.

- **Measles** may actually prevent allergies while **Vaccines** increase the risk as well as numerous other health issues in children, teens, and adults.
Nature’s Pharmacy: Evidence-Based Alternatives to Drugs

Meat and Fat consumption by the mother increases the risk of infant eczema.

Omega-6 over-consumption by pregnant women contributes to childhood allergies.

Phthalates contribute to allergies, asthma and a host of more severe health issues. Phthalates are chemicals added to numerous products from plastics to enteric coatings on drugs and “nutritional” supplements, from packaged food to children’s toys, detergents, clothing ... and many more places.

Wheat allergies can develop to the point of anaphylaxis. Wheat and other grains, have a protein called gluten which is often the cause of diverse allergic reactions. Barley is not a suitable alternative for those with wheat allergies since both contain gluten. (See Appendix for Gluten-containing and Gluten-free listing).

Wheat and Milk allergies appear more frequently in those who have eczema and respiratory problems.
SUGGESTED ALTERNATIVES:

Agrimony is an herb that is proving its traditional use as an anti-inflammatory, especially in allergy symptoms.


Allergen removal from the mother’s diet reduces infant colic. Allergens tested included: cow’s milk, eggs, peanuts, tree nuts, wheat, soy and fish.


Andrographis is an herb used to boost the immune system during illness but it also has anti-inflammatory and anti-allergic activity.


Apples decrease allergy symptoms. Be sure to eat only organic apples because conventionally grown apples are the number one fruit for chemical content.

- *Apples worst for pesticides on produce list. CBC News, Jun 14, 2011
- *No authors listed: Procyanidin C1 from apple extracts inhibits Fc epsilon RI-mediated mast cell activation. Int Arch Allergy Immunol 2008;147(3):213-21

Asian Pears suppress allergy symptoms.


B12 topical helps relieve allergic skin conditions.


Bee Pollen and Propolis help prevent and decrease allergy symptoms.


Beta-glucans (found in oats, barley, mushrooms or derived from yeasts) improve allergy symptoms. (See more studies under Immunosuppressants)
Anti-histamines

Nature’s Pharmacy: Evidence-Based Alternatives to Drugs


Black currants help reduce allergy symptoms.


Black cumin seeds help relieve allergy symptoms.


Burdock root has potent antioxidant and allergy-preventing properties since it helps cleanse the blood of impurities.

*Sohn et al: Anti-allergic and anti-inflammatory effects of butanol extract from Arctium Lappa L. Clin Mol Aller 2011 Feb 8;9:4

Butterbur is an herb that helps reduce seasonal allergy symptoms including headaches.

*Lipton et al: Petasites hybridus root (butterbur) is an effective preventive treatment for migraine. Neurology 2004 Dec 28;63(12):2240-4

Chlorella is a green algae that has numerous health benefits including the reduction of some milk allergies.


Cinnamon stops the formation of eczema-like skin allergy symptoms.

*Sung et al: Inhibitory effects of Cinnamomum cassia extract on atopic dermatitis-like skin lesions induced by mite antigen in NC/Nga mice. Headache 2005 Mar;45(3):196-203

Clove reduces allergy symptoms.


Colloidal Oatmeal and Rice used topically is a better and safer treatment than steroids for skin allergy symptoms.


Curcumin is the main active substance found in the cooking spice, Turmeric. Curcumin has many health benefits including the prevention and relief of allergy symptoms.
Dehydration is linked to allergy symptoms and psoriasis as well as other health issues. Since the body is made up of about 75% water, it is important to always stay well hydrated.

Ellagic acid (found in such foods as berries, walnuts, pecans, and pomegranates) has anti-allergy effects.

Essential oils are safely used on children to relieve allergic skin conditions but they must be added a carrier oil since essential oils are very potent and could irritate the skin. 36 oils were tested with these being the most effective for treating allergies: Marjoram, Frankinsence, German chamomile, Myrrh, Thyme, and Lavender.

Food Dyes, Aspartame (an artificial sweetener) and Glutamic acid (an amino acid processed as a flavour enhancer, eg. MSG) can aggravate sensitivities to the point of anaphylaxis.
**Gallic acid** (found in such foods as blueberries, walnuts, apples, flax seed and watercress) helps prevent some allergic reactions.


**GLA** (gamma-linolenic acid) is an effective and safe treatment for eczema-like conditions in infants or adults. GLA is the “good” part of omega-6 fatty acid and found in such oils as borage, evening primrose, and black currant seed. It is also found in such foods as blueberries, walnuts, apples, flax seed and watercress.


**Homeopathic remedies** safely and effectively treat allergy symptoms.


**Hops** is an herb used in the brewing industry and often added to herbal sleep-inducing remedies but it also helps relieve allergy symptoms.

**Loquats** (fruit, seeds, and leaves) relieve some allergy symptoms.

**Mangos** have anti-allergy and anti-parasitic effects and may reduce the risk of anaphylactic reactions.

**Mangosteen fruit** has antihistamine and anti-inflammatory effects.

**Medicinal mushrooms** (Cordyceps, Murill) prevent allergies and improve airway inflammation in asthmatics.

**Mediterranean Diet** in early life helps prevent the development of allergies.

**Minerals** (calcium, magnesium, and phosphorus) and **Seaweed** decrease allergy symptoms in children if they were first taken by their pregnant mothers.

**Motherwort** is an herb that reduces inflammation associated with allergy symptoms.

**MSM** (methylsulfonylmethane) is a sulfur compound found in all parts of the body. It has several functional abilities including that of relieving seasonal allergy symptoms.

**Nasal irrigation** helps relieve and prevent sinus infections and allergy symptoms.
**Nature’s Pharmacy: Evidence-Based Alternatives to Drugs**

*Tomooka et al: Clinical study and literature review of nasal irrigation. Laryngoscope 2000 Jul;110(7):1189-93*

**Olbas oil** is a combination of essential oils that makes an excellent sinus and upper respiratory decongestant during allergies or infections.

*Zalewski et al: Clinical evaluation of Olbas oil effect on nasal mucosa in acute rhinitis patients during common cold. Otolaryngol Pol 1997;51 Suppl 25:312-4*

**Omega-3 fatty acids** help prevent allergies (in humans and their pets)


*Furuhjelm et al: Fish oil supplementation in pregnancy and lactation may decrease the risk of infant allergy. Acta Paediatr. 2009 Sep;98(9):1461-7*


**Onions** help prevent allergies.


**Oyster mushrooms** can help relieve allergy symptoms.


**Passion flower** is an herb with multiple functions including anti-asthma effects.


**Peaches** have anti-allergic effects but buy only **organic** peaches since they are number 4 on the list of produce with numerous pesticides.


**Peppermint** helps relieve allergy symptoms.


**Perilla** (a common name for plants of the mint family) and **Rosmarinic acid** (a polyphenol from mint plants) reduce allergy symptoms.


*Yanagisawa et al: Effects of maternal exposure to di-(2-ethylhexyl) phthalate during fetal and/or neonatal periods on atopic dermatitis in male offspring. Environ Health Perspect 2008 Sep;116(8):1136-41*

**Prebiotics** (a dietary fiber that feeds probiotics), taken during the first two years of life, significantly reduces allergies.
**Anti-histamines**

Pamela Duff, RN, CSNC


**Probiotics** prevent and relieve allergy symptoms, including eczema, in all people from prenatal to the elderly.

*Angelis et al: Probiotic preparation has the capacity to hydrolyze proteins responsible for wheat allergy. J Food Prot 2007 Jan;70(1):135-44
*Hoang et al: Lactobacillus rhamnosus cell lysate in the management of resistant childhood atopic eczema. Inflamm Allergy Drug Targets 2010 Jul 1;9(3):192-6
*Johansson et al: Early colonization with a group of Lactobacilli decreases the risk for allergy at five years of age despite allergic heredity. PloS One 2011;6(8):e23031
*Karimi et al: Lactobacillus reuteri-induced regulatory T cells protect against an allergic airway response in mice. Am J Respir Crit Care Med 2008 Nov 21
*Marsella: Evaluation of Lactobacillus rhamnosus strain GG for the prevention of atopic dermatitis in dogs. Proc Natl Acad Sci USA 2009 Jun 30;106(26):10859-64
Anti-histamines

Nature’s Pharmacy: Evidence-Based Alternatives to Drugs

* Weston et al: Effects of probiotics on atopic dermatitis: a randomised controlled trial. Arch Dis Child 2005 Sep;90(9):892-7

**Pycnogenol** is a potent antioxidant extracted from pine tree bark that prevents histamine release which causes an allergic reaction.


**Quercetin** is a bioflavonoid known to be a natural antihistamine.

* Cruz et al: Immunomodulatory pretreatment with Kalanchoe pinnata extract and its quercitrin flavonoid effectively protects mice against fatal anaphylactic shock. Int Immunopharmacol 2008 Dec 10;8(12):1616-21
* Richards: Quercetin: Natural support for allergy & inflammation relief and more. ProHealth, Apr 9, 2010

**Resveratrol** is a potent antioxidant extracted from the skins of red grapes that decreases the risk of allergies.


**Rooibos Tea** boosts antibody production which reduces allergic reactions. Rooibos is native to South Africa and safe to drink even for babies.
**Anti-histamines**


**Rose petal extracts** decrease allergy symptoms, including inflammation and pain.

**Royal Jelly** suppresses any development of allergic skin conditions.

**St. John’s Wort cream** or oil relieves allergic skin conditions. It is especially helpful in reducing the pain of shingles.

**Siberian Ginseng** decreases allergy symptoms.

**Spirulina** reduces allergy symptoms. Spirulina is a blue-green algae derived from marine bacteria: Arthrosira platensis (Africa, Asia, South America), Arthrosira pacifica (Hawaiian Islands) or Arthrosira maxima (Central America).

**Vegetarian Diet** improves allergic skin conditions.

**Vitamins D** and **E** are often deficient in those with allergies and supplementation improves allergic conditions.
**ANTI-PARASITICS - EXTERNAL**

(USED TO TREAT FLEAS, LICE, SCABIES, ETC)

- **lindane**
  - gamma benzene hexachloride – Gambex™ shampoo
  - Hexit
  - Kwell
  - ... and others

- **benzyl benzoate**

- **OTC flea and pest medications for animals**
  - Advantagetm, Frontlinetm, Bio-Spottm, Programtm, Sentinel™
  - ... and others

**DEPLETE:**

**E, GABA**

**Warning:** Lindane is often prescribed for children as a remedy for lice. It is a **chlorinated hydrocarbon neurotoxic pesticide** which has been banned in over 50 countries but still sold in North America. NEVER USE ON INFANTS OR CHILDREN, so says the Canadian Paediatric Society on the Government of Canada website. In my opinion, it should not be used on pets, the elderly or anyone else for that matter.

 риск Lindane is a neurotoxin that interferes with GABA, which is the main neurotransmitter of the central nervous system (CNS). It affects the brain with side effects ranging from headaches and dizziness to anemia, seizures, convulsions, and death.

- Bloomquist et al: Inhibition of gamma-aminobutyric acid-stimulated chloride flux in mouse brain vesicles by polychlorocycloalkane and pyrethroid insecticides. Neurotox 1986 Fall;7(3):11-20
- Loge: Aplastic anemia following exposure to benzene hexachloride (lindane). JAMA 1965;193(2):110-
Lindane is a well-known carcinogen (for over 40 years), especially to the liver and prostate. Chronic exposure also increases the risk for diabetes, thyroid diseases, and hypertension as well as other dangerous health conditions.

Lindane affects the reproductive system.

Suggested alternatives to drugs:

Aloe vera proves to be just as effective for treating scabies as benzyl benzoate but without the side effects. Taken internally, aloe also protects the liver and other cells against Lindane-induced toxicity.

Essential oils are safe and effective against several parasites but they should be added to a carrier oil or a shampoo since essential oils are strong and could cause contact dermatitis if used alone. Clove oil proved to be the most effective of 38 oils.
tested for mosquito bites and chiggers but others can also be effective including Tea tree (melaleuca) (especially for head lice), Oregano, Citronella, Cinnamon, Pine, and Eucalyptus.


**Grapefruit seed extract** is safer and just as effective as any prescribed chemical.


**Neem** is a safe and effective anti-parasitic treatment to use on head lice.

* Abdel-Ghaffar & Semmler: Efficacy of neem seed extract shampoo on head lice of naturally infected humans in Egypt. Parasitol Res 2007 Jan;100(2):329-32

**Neem** and **Turmeric** is a safe combination to apply to scabies.


**Vitamin E** and **Alpha-lipoic acid** protect the brain from lindane damage.


Anti-Parasitics - Internal

(Used to treat malaria, cryptosporidium, giardia, cyclospora, leishmania and others)

Common examples:
- amodiaquine – Camoquin
- chloroquine – Aralen
- hydroxychloroquine – Plaquenil
- pentamidine – NebuPent, Pentacarinat, Pentam 300
- pyrimethamine – Daraprim
- quinine
...and others

Deplete:
B6, B9, D, calcium, magnesium

Suggested alternatives:

Aloe vera has some anti-leishmania effects.

Artemisia (Wormwood) and Artemisinin are more effective in combination with such substances as Curcumin, as treatments for malaria and leishmania.

Asafoetida is an oily gum resin that is effective against Schistosoma mansoni, a parasitic fluke that infects millions of people worldwide.
Nature’s Pharmacy: Evidence-Based Alternatives to Drugs

**Avocado seed extract** has some anti-parasitic effects.

**Banana** compounds, transformed by fungi, kill the leishmania parasite.

**Beta glucan** (Lentinan) from Shiitake mushrooms may be a prophylactic treatment for malaria and other micro-parasitics.
- *Di Luzio & Williams: The role of glucan in the prevention and modification of microparasitic diseases. Prog Clin Biol Res 1984;161:443-56*

**Berberine-containing plants** (Barberry, Goldenseal, Oregon grape, Goldenthread) are strong anti-microbials against a variety of bacteria, viruses, fungi, protozoans, helminths, and chlamydia.

**Coconut husk fibre extract** kills leishmaniasis and nematodes.

**Curcumin** is effective against flukes, worms and other parasites.
- *Charoensuk et al: Curcumin induces a nuclear factor-erythroid 2-related factor 2-driven response against oxidative and nitrative stress after praziquantel treatment in liver fluke-infected hamsters. Int J Parasitol 2011 Jan 21*

**Echinacea** decreases proliferation of and the inflammation caused by Leishmania.

**Homeopathics** prove to be beneficial in treating malaria.
Mango has anti-parasitic effects.


Myrrh is effective against flukes.


Neem has anti-malarial properties.

*Udeinya et al: An antimalarial extract from neem leaves is antiretroviral. Toxicol In Vitro 2009 Mar;23(2):251-8

Noni fruit has some anti-parasitic effects.


Papaya seeds are strong anti-parasitics. Adding a few seeds to your green smoothie adds a peppery flavour as well as parasitic protection.

*Kermanshai et al: Benzyl isothiocyanate is the chief or sole anthelmintic in papaya seed extracts. Phytochem 2001 Jun;57(3):427-35


Pumpkin seeds (paralyzes parasites) followed by Cascara or Senna (for removal) in one hour.


Quassia is obtained from the bark of the tree and is more effective than quinine for malaria.


Thyme, Yarrow, and Propolis prove superior to the drug glucantime (which is not available in Canada or the US) for Leishmaniasis.

*Nilforoushzadeh et al: Comparison of Thymus vulgaris (Thyme), Achillea millefolium (Yarrow) and propolis hydroalcoholic extracts versus systemic glucantime in the treatment of cutaneous leishmaniasis in balb/c mice. Biosci Biotechnol Biochem 2008 Jan;72(1):94-100
ANTI-PSYCHOTICS

(Used to treat various mental disorders)

Common examples:
- chlorpromazine – Thorazine and others
- clomipramine – Anafranil
- clozapine – Clozaril
- fluoxetine – Prozac, Sarafem, Fontex
- fluphenazine – Anatensol, Prolixin, and others
- haloperidol – Haldol
- lithium – Eskalith, Lithizine, Lithobid and others
- molindone – Moban
- promethazine – Phenergan and others
- risperidone – Risperdal and others
- thioridazine – Apo-Thioridazine and others
- trifluoperazine – Novo-Flurazine, Stelazine, and others

Deplete:
A, B2, B3, B6, B8, B9, B12, C, D, E, K, calcium, iron, potassium, selenium, CoQ10, glycine, NAC

Anti-psychotic medications are causing more harm than good, especially to older adults. The risk is greater with higher doses and with the use of haloperidol.

*Null et al: Death by Medicine. Online pdf with 152 references and an alarming number of facts.

Aspartame, a dangerous sugar substitute, is linked to certain mental disorders, compromised learning and emotional functioning.


Cholesterol (low levels) and Cholesterol-lowering medications are linked to aggressive behavior and other neuropsychiatric behaviors.
Anti-psychotics

Pamela Duff, RN, CSNC

*Golomb et al: Severe irritability associated with statin cholesterol-lowering drugs. QJM 2004 Apr;97(4):229-35
*Virkkunen: Serum cholesterol levels in homicidal offenders. A low cholesterol level is connected with a habitually violent tendency under the influence of alcohol. Neuropsychobiol 1983;10(2-3):65-9

Fluoride consumption (added to water supply, toothpaste etc and obtained from dentists) during pregnancy is linked to an increased risk of neurological and psychiatric disorders in adulthood.


Gluten intolerance increases the risk of schizophrenia. Gluten is a protein found in many cereal grains. (see Appendix for foods that do or do not contain gluten)

*Dickerson et al: Markers of gluten sensitivity and celiac disease in recent-onset psychosis and multi-episode schizophrenia. Biol Psych 2010 Jul 1;68(1):100-4
*Singh & Kay: Wheat gluten as a pathogenic factor in schizophrenia. Sci 1976 Jan 30;191(4225):401-2

Herbs can increase the effects of Lithium, causing possible toxicity: Butcher’s broom, buchu, dandelion, and juniper.

Pesticide exposure is linked to psychological distress and suicidal tendencies.


Statin drugs taken to reduce Cholesterol levels are associated with adverse mental and physical conditions. (see more under Cholesterol)

*Buajordet et al: Statins— the pattern of adverse effects with emphasis on mental reactions. Data from a national and an international database. Tidsskr Nor Laegeforen 1997 Sep 20;117(22):3210-3
*Hyypä et al: Does simvastatin affect mood and steroid hormone levels in hypercholesterolemia?
**Suggested alternatives:**

**Alpha lipoic acid** and **Niacinamide (B3)** are effective in treating schizophrenia.

**Amino acids**, Arginine and Lysine, reduce anxiety and psychosocial stress.

**B12** and **B9 deficiencies** are linked to OCD (obsessive-compulsive disorder).

**DHEA** (Dehydroepiandrosterone – a hormone that can be made in the body) is useful in treating schizophrenia. DHEA supplements are not allowed to be sold in Canada.
* Strous et al: Dehydroepiandrosterone augmentation in the management of negative, depressive, and anxiety symptoms in schizophrenia. Arch Gen Psychiatry 2003 Feb;60(2):133-41

**EPUFAs** (essential polyunsaturated fatty acids) significantly reduce symptoms of schizophrenia and bipolar disorder in children and adults. EPUFAs are important brain substances and neuron function regulators and include: **Omega-6**, especially effective is **GLA** (gamma-linolenic acid, the “good part of omega-6 found in such oils as borage, evening primrose, and black currant seed and in such foods as blueberries,
walnuts, apples, flax seed and watercress) and **Omega-3** from fish, flaxseed or sacha inchi seeds.

- Amminger et al: Long-Chain -3 fatty acids for indicated prevention of psychotic disorders, a randomized, placebo-controlled trial. Arch Gen Psych 2010;67(2):146-54
- Emsley et al: Clinical potential of omega-3 fatty acids in the treatment of schizophrenia. CNS Drugs 2003;17(15):1081-1091(11)
- Horrobin: The relationship between schizophrenia and essential fatty acid and eicosanoid metabolism. Prostaglan Leukotri E FAs 1992 May;46(1):71-77
- Khan et al: Reduced erythrocyte membrane essential fatty acids and increased lipid peroxides in schizophrenia at the never-medicated first-episode of psychosis and after years of treatment with antipsychotics. Schiz Res 2002 Nov;58(1):1-10
- Osher & Belmaker: Omega-3 fatty acids in depression: a review of three studies. CNS Neurosci Ther 2009;15(2):128-33

**Ginkgo biloba** is an herb often used to improve memory but it also has properties that reduce fear and symptoms of tardive dyskinesia in schizophrenics.


**Glycine** is an amino acid that, by assisting medication, significantly improves cognitive abilities in schizophrenia.


**High Homocysteine levels** play a role in the development of bipolar disorders and associated with various neurological dysfunctions. Lowering homocysteine levels can be accomplished by adding certain B vitamins (6, 9, 12) along with a B-complex. (see Appendix for a list of B vitamins according to name and number)

*Ientile et al: Homocysteine, vitamin determinants and neurological diseases. Front Biosci (Schol Ed) 2010;2:359-72
*Smith et al: Homocysteine-lowering by B vitamins slows the rate of accelerated brain atrophy in mild cognitive impairment: A randomized controlled trial. PLoS ONE 2010;5(9):e12244
*Spence et al: Understanding the complexity of homocysteine lowering with vitamins. JAMA 2011;306(23):2610-11

**Inositol (B8)** is an effective treatment for OCD (obsessive-compulsive disorder).


**Light therapy** proves to be more effective than Prozac.


**Melatonin** is a substance produced in the body but often taken as a supplement to induce sleep. It is an excellent scavenger of Hydroxyl radicals that are formed in the body and which contribute to bipolar disorders and schizophrenia.

*Li et al: Melatonin decreases production of hydroxyl radical during cerebral ischemia-reperfusion. Zhongguo Yao Li Xue Bao 1997 Sep;18(5):394-6
**Anti-psychotics**


*Shamir et al: Melatonin treatment for tardive dyskinesia a double-blind, placebo-controlled, crossover study. Arch Gen Psych 2001;58:1049-52


**Milk Thistle** is an herb often used to strengthen the liver but it is also an effective treatment for OCD (obsessive-compulsive disorder) compared to fluoxetine.


**NAC** (N-acetyl cysteine) is an amino acid that is safe and effective for depressive symptoms in bipolar disorder.


**St. John's Wort** has value in treating SAD (seasonal affective disorder) but it must never be taken with other medications.

*Terman & Terman: Controlled trial of naturalistic dawn simulation and negative air ionization for seasonal affective disorder. Pharmacopsych 1997 Sep;30 Suppl 2:89-93

**SAMe** (S-adenosyl-methionine) reduces aggressive behavior in schizophrenics.


**Tryptophan** (along with light) is an effective treatment for social phobia and SAD (seasonal affective disorder). It also reduces the need for medications in treating aggressive psychiatric patients. Tryptophan is banned in Canada and the US but since it is an amino acid, it can be made in the body from other proteins or eaten in foods such as gourd seeds. The closest legal supplement is **5-HTP**.


**Vitamin D deficiency**, from prenatal onwards, corresponds significantly to occurrences of schizophrenia.

*Kinney et al: Relation of schizophrenia prevalence to latitude, climate, fish consumption, infant mortality, and skin color: a role for prenatal vitamin d deficiency and infections? Schizophr Bull 2009 May;35(3):582-95
**Vitamin E** significantly improves tardive dyskinesia (a movement disorder) that often occurs during prolonged or high doses of some anti-psychotic medications.

*Cadet & Lohr: Possible involvement of free radicals in neuroleptic-induced movement disorders evidence from treatment of tardive dyskinesia with vitamin E. Ann NY Acad Sci 1989 Dec;570:176–85

**Vitamins and Minerals** have therapeutic value in treating OCD (obsessive-compulsive disorder) as well as many other conditions.

Anti-spasmodics/Muscle Relaxants

(Used to relieve muscle spasms or cramps)

Common examples:

- **baclofen** – Lioresal, Nu-Baclo
- **dantrolene** – Dantrium
- **dicyclomine** – Bentyl, Bentylol, and others
- **hyoscyamine** – Cystospaz, Levsin, and others

Deplete:

C, B9, calcium, iron, magnesium

Medications can contribute to muscle cramping. Diuretics are especially notorious because they remove minerals needed to prevent cramping along with the fluid buildup.

* Shiel: Myositis (Muscle Inflammation)...Check the Meds! MedicineNet online article
* Shiel: Muscle Cramps. eMedicineHealth online article
* Stöppler: Muscle Cramps (of Skeletal Muscles). MedicineNet

Suggested alternatives:

Anise seed has long been used as an anti-spasmodic.


Coriander seed is a natural muscle relaxant.


Essential Oils have anti-spasmodic effects, relieving pain and improving circulation. Often used in a carrier oil, essential oil massages reduce cramping. Peppermint oil can be taken internally to relieve gastric spasms and improve digestion. Oils studied as anti-spasmodics include Peppermint, Rosemary, and Thyme.

Mineral deficiencies are often the cause of cramping, especially in the legs. Taking electrolytes (potassium, sodium, chloride, bicarbonate) and other minerals including magnesium and calcium can help relieve cramping particularly after exercise. Minerals can safely be taken by anyone including pregnant women.

Noni fruit has antispamodic and vasodilating effects that can help reduce muscle spasms.

Purslane is an herb, often used in salads, that has muscle relaxant properties that work better than drugs.

Valerian is an herb with calming and antispasmodic effects.
ANTI-VIRALS/ANTI-RETROVIRALS

(Used to treat HIV, herpes, influenza, chickenpox, shingles, cold sores, and others)

COMMON EXAMPLES:

ANTIVIRALS

acyclovir – Avirax and others
amantadine – Symmetrel
famciclovir – Famvir
foscarnet – Foscavir
ganciclovir – DHPG, Cytovene, Vitraser, and others
oseltamivir – Tamiflu
ribavirin – Copegus, Rebetol, Ribaspere, Virazole
rimantadine – Flumadine
valacyclovir – Valtrex
zanamivir – Relenza
... and many others

ANTI-RETROVIRALS

abacavir – Epzicom, Ziagen
adefovir – Hepsera
amprenavir – Agenerase
cidofovir – Vistide
delavirdine – Rescriptor
didanosine – Videx
emtricitabine – Emtriva
efavirenz – Sustiva
enfurvitide – Fuzeon
indinavir – Crixivan
lamivudine – 3TC, Epivir, and others
nelfinavir – Viracept
nevirapine – Viramune
ritonavir – Norvir
saquinavir – Fortovase, Invirase
stavudine – Zeerit
tenofavir – Viread
zidovudine – AZT
...and many others

DEPLETE:

B1, B2, B12, E, calcium, carnitine, copper, iron, magnesium, NAC, potassium, zinc, CoQ10

Vaccines using animal cells are linked to retrovirus infections associated with chronic fatigue and prostate cancer.


Viral infections can subclinically prime a host for central nervous system (CNS) autoimmune diseases such as MS (multiple sclerosis), long after the original infection.


HPV (human papilloma virus) has been all over the news of late especially regarding enforced vaccinations. There are some 200 different kinds of the HP virus but the infamous Guardasil vaccine addresses only 4 types (GreenMedInfo) and does not have any effect on those who already have the virus. In the UK, Cervarix is the competing vaccine used on young women – and boys, of all things (Mathis: Dec 19, 2011; CBS news). The side effects from these vaccines can be devastating, often leading to a variety of autoimmune disorders (as do other vaccines). There is even a new name for these disorders: “Post-Guardasil Syndrome”. Recently, Tomljenovic & Shaw concluded that

“clinical trials show no evidence that HPV vaccination can protect against cervical cancer. Similarly, contrary to claims that cervical cancer is the second most common cancer in women worldwide, existing data show that this only applies to developing countries. In the Western world cervical cancer is a rare disease with mortality rates that are several times lower than the rate of reported serious adverse reactions (including deaths) from HPV vaccination.”

There are dozens of nutrients that can prevent and overcome the HPV without the harmful side effects of vaccines or drugs. Some natural alternatives are indicated below under HPV.

* CBS News: HPV vaccine now recommended for all boys, CDC says, February 3, 2012
* The Greater Good, documentary, Dr. Mercola dot com
* Hildesheim et al: Effect of human papillomavirus 16/18 L1 viruslike particle vaccine among young
women with preexisting infection: a randomized trial. JAMA. 2007 Aug 15;298(7):743-53

*Mathis: Medical journal openly questions science, ethics of HPV vaccinations. NaturalNews article, Friday Jan 13, 2012

*Mathis, Rosemary: Post-Gardasil Syndrome - the new name for the spectrum of side effects following HPV vaccination. NaturalNews, Wed, Dec 7, 2011

*Mathis: Gardasil boys come marching in - 4 new Gardasil deaths reported to VAERS. NaturalNews Dec 19, 2011


*Sims: Girl,13, left in ‘waking coma’ and sleeps for 23 hours a day after severe reaction to cervical cancer jabs. UK Daily Mail, Wed Nov 16, 2011


SUGGESTED ALTERNATIVES:

**Aloe vera** induces interferon production while displaying anti-viral effects against at least two potent viruses.


**Alpha lipoic acid, Milk Thistle, and Selenium** give a powerful triple approach for Hep C that is superior to traditional interferon and antiviral drugs which work less than 30% of the time.


**Antiviral nutrients** include A, C, E, NAC, Quercetin, Resveratrol, Selenium, Zinc (more on each below)


**Artemisinin** is a compound found in such herbs as wormwood and inhibits a wide range of viruses including HPV.


**Asafoetida** is an herb with antiviral effects against H1N1 flu.

*Lee et al: Influenza A (H1N1) antiviral and cytotoxic agents from Ferula asa-foetida. J Nat Prod 2009 Sep;72(9):1568-72

**Astragalus** is an herb often used to support the immune system but it is also effective against a broad range of viruses including viral myocarditis, which affects the heart.


Bamboo extract has antiviral effects against herpes viruses.

Banana lectins have immune-regulating activity and inhibits the HIV virus and cancer cells.

Bee Propolis (with or without Echinacea and Vitamin C) is a potent antiviral that is superior to acyclovir for genital herpes.

Berberine-containing plants (Barberry, Goldenseal, Oregon grape, Goldenthread) are strong anti-microbials against a variety of organisms including bacteria, viruses, fungi, protozoans, helminths, and chlamydia.

Beta Glucans are polysaccharides derived from oats, mushrooms, or yeasts. They are particularly effective for priming and normalizing the immune system; protecting the body from a number of viruses, including West Nile and H1N1; and effective in those who have been vaccinated and those who have not.
Nogusa et al: Low-dose supplementation with active hexose correlated compound improves the immune response to acute influenza infection in C57BL/6 mice. Nutr Res 2009 Feb;29(2):139-43
Ritz et al: Supplementation with active hexose correlated compound increases the innate immune response of young mice to primary influenza infection. JPEN J Parenter Enteral Nutr 2006 Jan-Feb;30(1):10-5

**Beetroot** has anti-influenza properties.


**Black cohosh** is an herb often used by women for menopausal symptoms but it also has anti-HIV activity.


**Black Cumin Seed** has antiviral effects especially against herpes viruses.

Salm & Hossain: Protective effect of black seed oil from Nigella sativa against murine cytomegalovirus infection. Int J Immunopharmacol 2000 Sep;22(9):729-40

**Bromelain** is an enzyme derived from Pineapple that has anti-viral properties. Bromelain also demonstrates a therapeutic effect in the treatment of Pityriasis lichenoides chronica, a skin disorder thought to be caused by viruses.


**Caper seeds** have anti-HIV effects.

Lam & Ng: A protein with antiproliferative, antifungal and HIV-1 reverse transcriptase inhibitory activities from caper (Capparis spinosa) seeds. Zhong Yao Cai 2004 Nov;22(9):729-40

**Carnitine** is an amino acid that is especially useful in treating painful neuropathy associated with anti-retroviral toxicity.

Cat’s claw is an herb often used to strengthen the immune system and appears to reduce infection caused by Dengue virus-2.

Chinese Skullcap is an herb that inhibits herpes viruses.

Cistus incanus (Pink Rockrose) is an herb that is proving to be a better anti-viral than amantadine.

Coconut has antimicrobial properties which includes anti-viral.

Colesus forskohlii is an Ayurvedic plant that has several health benefits including as an HIV inhibitor.

Colloidal Silver inhibits the Hep B virus.

CoQ10 and Carnitine prevent the toxic effects of anti-retroviral-induced neuropathy. The ubiquinol form of CoQ10 proves better than the cheaper ubiquinone form.

Cordyceps mushrooms improve liver function in those with Hep B.

Curcumin is a potent antiviral as well as an anti-cancer agent.
**Dandelion** has anti-influenza properties.


**Dandelion, Licorice** and **Chinese herbs** appear safe and effective in reducing herpes infection in pregnant women.


**Diet** rich in fruits and vegetables significantly lowers the risk of viral infections including HIV and herpes.


**Echinacea** has antiviral effects as well as immune-boosting properties.


*Sharma et al: Induction of multiple pro-inflammatory cytokines by respiratory viruses and reversal by standardized Echinacea, a potent antiviral herbal extract. Antiviral Res 2009 Aug;83(2):165-70

**Elderberry** is a potent virus blocker including that of HIV.


*Roschek et al: Elderberry flavonoids bind to and prevent H1N1 infection in vitro. Phytochem 2009 Aug 12


**Elderberry, Chondroitin, Glucosamine** and **Olive Leaf** makes an effective combination in preventing viral infections.


**Elderberry, Green Tea** and **Cinnamon** is another anti-viral combination.


**Enzymes** are safer and as effective as any pharmaceutical intervention for herpes.


**Essential oils** are strong anti-microbials making some of them potent antivirals that can be used internally or externally with knowledgeable guidance. The oils that have the most antiviral effects include: Cinnamon, Clove, Eucalyptus, Lemon, Melissa, Myrrh, Oregano, Tea tree, Peppermint, Rosewood, Thieves, Thyme. **Throat sprays**
and Nasal inhalers are also available that have essential oil content and are effective in treating sore throats and sinus congestion.

- **Ben-Arye et al:** Treatment of upper respiratory tract infections in primary care: a randomized study using aromatic herbs. Evid Based Complement Altern Med 2011;2011:690346
- **Hayashi et al:** Inhibitory effect of cinnamaldehyde, derived from Cinnamomi cortex, on the growth of influenza A/PR/8 virus in vitro and in vivo. Antiviral Res 2007 Apr;74(1):1-8
- **Hubbert et al:** Efficacy and tolerability of a spray with Salvia officinalis in the treatment of acute pharyngitis - a randomised, double-blind, placebo-controlled study with adaptive design and interim analysis. Eur J Med Res 2006 Jan 31;11(1):20-6
- **Kurokawa et al:** Purification and characterization of eugeniin as an anti-herpesvirus compound from Geum japonicum and Syzygium aromaticum. J Pharmacol Exp Ther 1998 Feb;284(2):728-35
- **Nenoff et al:** Antifungal activity of the essential oil of Melaleuca alternifolia (tea tree oil) against pathogenic fungi in vitro. Skin Pharmacol 1996;9(6):388-94
- **Nolkemper et al:** Antiviral effect of aqueous extracts from species of the Lamiaceae family against Herpes simplex virus type 1 and type 2 in vitro. Planta Med 2006 Dec;72(15):1378-82
- **Schuhmacher et al:** Virucidal effect of peppermint oil on the enveloped viruses herpes simplex virus type 1 and type 2 in vitro. Phytomed 2003;10(6-7):504-10
- **Schnittler et al:** Antiviral activity of Australian tea tree oil and eucalyptus oil against herpes simplex virus in cell culture. Pharmazie 2001 Apr;56(4):343-7

**Fiber** (pectins, flaxseed, acacia and myrrh gums) inhibits influenza viruses.


**Fig latex** is safe and effective to use for removing warts, which are usually caused by viruses.

- **Bohlooli et al:** Comparative study of fig tree efficacy in the treatment of common warts (Verruca vulgaris) vs. cryotherapy. Int J Dermatol 2007 May;46(5):524-6

**Flavonoids**, especially kaempferol found in numerous fruits and vegetables, exhibit antiviral properties including that of herpes.


**French beans** have anti-HIV, antitumor and antifungal effects.

- **Lam & Ng:** Isolation and characterization of a French bean hemagglutinin with antitumor, antifungal, and anti-HIV-1 reverse transcriptase activities and an exceptionally high yield. Phytomed 2009 Sep 7

**Garlic** is a potent antiviral against herpes and other viruses.

- **Liu et al:** Experimental study on the prevention and treatment of murine cytomegalovirus hepatitis by using allitridin. Antiviral Res 2004 Feb;61(2):125-8
- **Shu et al:** An experimental study on the effect of allitridin on inhibiting the expression of HCMV immediate-early antigens in vitro. Zhongguo Zhong Yao Za Zhi 2003 Oct;28(10):967-70
Ginger is a potent antiviral.


Grapefruit – the Upside – inhibits the Hep C virus – but it cannot be eaten by anyone taking medication of any kind – even a one-a-day aspirin.

*Nahmias et al: Apolipoprotein B-dependent hepatitis C virus secretion is inhibited by the grapefruit flavonoid naringenin. Hepatol 2008 May;47(5):1437-45

Herbal combinations are more effective at inhibiting various viral infections than drugs even for children.


Hep C Herbal anti-virals include: Boswellia, Caraway, Clove, Gum arabic.


Homeopathics are safer for children with ear infections and superior to conventional treatment. They are also effective against the flu and warts.


**Honey** is effective in treating herpes and other viral lesions but the honey must be non-pasteurized or Manuka since the typical grocery store honey does not possess any medicinally healing properties. (see more under Antibiotics)


*Molan: Why honey is effective as a medicine: The scientific explanation of its effects. Bee World 2001;82(1):22-40


**Hops** is a calming herb used in the brewing industry but it also has antiviral activity.


**HPV (human papillomavirus)**

- Aloe, Propolis, B-complex with Interferon is an effective combination for treating women with cervical lesions.

- Artemisinin derivatives (found in such herbs as wormwood) strongly inhibit HPV-induced tumor formation including those that have progressed to the neoplastic state.
  *Disbrow et al: Dihydroartemisinin is cytotoxic to papillomavirus-expressing epithelial cells in vitro and in vivo. Cancer Res 2005 Dec 1;65(23):10854-61

- B12 and B9 decrease the risk of infection.
  *Piyathilake et al: Indian women with higher serum concentrations of folate and vitamin B12 are significantly less likely to be infected with carcinogenic or high-risk (HR) types of human papillomaviruses (HPVs). Int J Women Health 2010;2:7-12


- Carrageenan is extracted from seaweed (Irish moss) for use in food preparation as a vegan alternative to gelatin. It is a potent inhibitor of the virus.


- Colostrum (Lactoferrin) is a potent inhibitor of the HPV virus.

- Curcumin inhibits cervical cancer cells that are associated with HPV infection.
  *Divya & Pillai: Antitumor action of curcumin in human papillomavirus associated cells involves downregulation of viral oncogenes, prevention of NFκB and AP-1 translocation, and modulation of apoptosis. Mol Carcinog 2006 May;45(5):320-32

- Dietary Supplements reduce the risk of contracting the virus and the resulting cervical cancer [PLEASE, do not go out and buy Centrum-type vitamins and think you are safe. Synthetics of any kind are toxins and do not help prevent anything].
  *Hwang et al: Dietary supplements reduce the risk of cervical intraepithelial neoplasia. Int J Gynecol Cancer 2010 Apr;20(3):398-403

- Lycopene is a potent carotenoid that protects against the virus.

- Tea tree oil (melaleuca) is a safe and effective external treatment for HPV warts.

- Usnic acid (derived from several lichen species) and Zinc improve post surgical time for healing.

- Vitamins A and E protect against the virus.

**Japanese Plum** inhibits the influenza A virus.

**Kiwifruit** is an antioxidant with anti-HIV properties.

**Lecithin** (a phospholipid) inhibits HIV-1 replication and works synergistically with anti-retroviral medications.

**Licorice root** is effective against several viruses.
Maitake mushrooms have antiviral activity.


Mango is a potent antiviral especially against influenza and herpes viruses.


Mangosteen is a potent anti-viral fruit that generally protects all cells from toxic effects.

* Ngawhirunpat et al: Antioxidant, free radical-scavenging activity and cytotoxicity of different solvent extracts and their phenolic constituents from the fruit hull of mangosteen (Garcinia mangostana). Pharm Biol 2010 Jan;48(1):55-62

Mangosteen and Licorice provide resistance to rotoviruses.

* Shaneyfelt et al: Natural products that reduce rotavirus infectivity identified by a cell-based moderate-throughput screening assay. Virol J 2006 Sep 1;3:68

Melissa (Lemonbalm) oil is effective for topically treating herpes simplex labialis and internally for inhibiting the HSV-2 virus.


Melissa, Basil, Perilla, Selfheal and Savory have anti-HIV effects.


Milk Thistle is an herb long-used to improve liver function but it also has strong anti-viral properties. It is effective in reducing iron levels in those with Hep C who do not respond to medications.

* El-Kamary et al: A randomized controlled trial to assess the safety and efficacy of silymarin on symptoms, signs and biomarkers of acute hepatitis. Phytomed 2009 May;16(5):391-400
Milk Thistle, vitamin E, and Phosphatidyl complexes improve Hep C conditions by reducing iron stores.


Mint plants exhibit strong antiviral properties.

*Geuenich et al: Aqueous extracts from peppermint, sage and lemon balm leaves display potent anti-HIV-1 activity by increasing the virion density. Retrovirology 2008 Mar 20;5:27

Murill mushrooms normalize liver function in those with chronic Hep B.


Neem has antiviral activity including HIV.

*Tiwari et al: In vitro antiviral activity of neem (Azadirachta indica L.) bark extract against herpes simplex virus type-1 infection. Phytother Res 2009 Dec 29
*Udeinya et al: An antimalarial extract from neem leaves is antiretroviral. Toxicol In Vitro 2009 Mar;23(2):251-8

Nettle may have a role in combatting HIV.

*Balzarini et al: Carbohydrate-binding agents cause deletions of highly conserved glycosylation sites in HIV GP120: a new therapeutic concept to hit the achilles heel of HIV. J Biol Chem 2005 Dec 9;280(49):41005-14

Nightshade Family extracts (Solosodine rhamnosyl glycosides [SRGs]) are not only proving to kill various cancers but may have a similar effect on the HSV-1 virus. SRGs are found in such plants as Eggplant.


Noni fruit inhibits the Epstein-Barr and HIV viruses.


Noni fruit and Wrightia tinctoria have antiviral activity against Hep C.


Olive leaf extract has broad anti-viral activity including HIV.

*Zhao et al: Antiviral efficacy against hepatitis B virus replication of oleuropein isolated from Jasminum officinale L. var. grandiflorum. J Ethnopharmacol 2009 Sep 7;125(2):265-8

**Policosanol**, a pine bark extract, is a potent antiviral.

**Pomegranate** has a broad range of antiviral activity and acts synergistically with some anti-viral medications.
*Haidari et al: Pomegranate (Punica granatum) purified polyphenol extract inhibits influenza virus and has a synergistic effect with oseltamivir. Phytomed 2009 Jul 6
*Kotwal: Genetic diversity-independent neutralization of pandemic viruses (e.g. HIV), potentially pandemic (e.g. H5N1 strain of influenza) and carcinogenic (e.g. HBV and HCV) viruses and possible agents of bioterrorism (variola) by enveloped virus neutralizing compounds (EVNCs). Vaccine 2008 Jun 6;26(24):3055-8
*Su et al: Time-dependent effects of pomegranate juice and pomegranate polyphenols on foodborne viral reduction. Foodborne Pathog Dis 2011 Jul 21

**Probiotics** lower the number and severity of various viral infections, internally and externally.
*Pregliasco et al: A new chance of preventing winter diseases by the administration of synbiotic formulations. Carcinogen 2008 May;29(5):1049-56
*Vrese et al: Probiotic bacteria reduced duration and severity but not the incidence of common cold episodes in a double blind, randomized, controlled trial. Vaccine 2006 Nov 10;24(44-46):6670-4

**Quassia** is an herb family that exhibits antiviral properties against a wide variety of viruses.
Reishi mushroom improves the recovery time of those with herpes genitalis and labialis; reduces the pain from postherpetic neuralgia caused by the varicella zoster virus; and inhibits HIV and Epstein-Barr.


Resveratrol is a potent antioxidant found in the skins of blueberries and red grapes. It has antiviral effects especially against the herpes viruses.


Rooibos Tea is native to South Africa and has numerous health benefits including that of anti-HIV properties. It is safe enough for babies to drink.


Seaweeds have profound antiviral and antiretroviral effects.

* Paskaleva et al: Sargassum fusiforme fraction is a potent and specific inhibitor of HIV-1 fusion and reverse transcriptase. Virol J 2008;5:8
* Paskaleva et al: Inhibition of highly productive HIV-1 infection in T cells, primary human macrophages, microglia, and astrocytes by Sargassum fusiforme. AIDS Res Ther 2006;3:15
* Sekine et al: The inhibitory effect of the crude extract from a seaweed of Dygenea simplex C. Agardh on the in vitro cytopathic activity of HIV-1 and it’s antigen production. Chem Pharm Bull (Tokyo) 1995 Sep;43(9):1580-4

Selenium deficiency is linked to a susceptibility to several viral infections including HIV.
Nature’s Pharmacy: Evidence-Based Alternatives to Drugs

Selenium, Milk Thistle and Alpha lipoic acid is an effective treatment combination for Hep C patients.


Shiitake mushroom, alone or with Rice bran, inhibits HIV.

*Ngai & Ng: Lentin, a novel and potent antifungal protein from shitake mushroom with inhibitory effects on activity of human immunodeficiency virus-1 reverse transcriptase and proliferation of leukemia cells. Life Sci 2003 Nov 14;73(26):3363-74

Spirulina is a blue-green algae derived from aquatic cyanobacteria: Arthrospira platensis (Africa, Asia, South America), Arthrospira pacifica (Hawaiian Islands) or Arthrospira maxima (Central America). It has long been used for its many health benefits including its significant antiviral, anticancer, and antifungal activity.

*Spirulina platensis (Africa, Asia, South America), Arthrospira pacifica (Hawaiian Islands) or Arthrospira maxima (Central America). It has long been used for its many health benefits including its significant antiviral, anticancer, and antifungal activity.

St. John’s Wort has antiviral activity especially against the herpes viruses.


Stevia is an herb that is some 200 times sweeter than table sugar. It has anti-diabetic, antioxidant, antibacterial and antiviral effects.

*Shukla et al: Antioxidant ability and total phenolic content of aqueous leaf extract of Stevia rebaudiana Bert. Exp Toxicol Pathol 2011 Mar 4

Valerian root is often used to promote sleep but it also contains a compound that has anti-HIV activity.
Vitamins B and C inhibit various viruses and have therapeutic effects for Hep A patients.


Vitamin D deficiency increases risk of viral infections.


Vitamin E decreases the effects of a viral infection including HIV.

*Wang et al: Modulation of immune function and cytokine production by various levels of vitamin E supplementation during murine AIDS. Immunopharma 1995 Apr;29(3):225-33

Zinc has antiviral effects against several viruses including the herpes viruses.


**Anxiety**

**Common Examples:**

**Benzodiazepines**
- alprazolam – Xanax
- chlordiazepoxide – Librium, Libritabs
- clonazepam – Klonopin
- clorazepate – Tranxene
- diazepam – Valium
- lorazepam – Ativan
- oxazepam – Serax
- ... and others

**Deplete:**
- B9, D, K, calcium, melatonin

**Suggested Alternatives:**

Aromatherapy using Essential oils or Bach flowers reduce anxiety. Essential oils include Bergamot, Lavender, Rose, Rosemary and Ylang ylang.

Carob has anti-anxiety effects, acting similar to benzodiazepines. Carob has long been used as a chocolate substitute, although the taste is not similar but it does have numerous health benefits of its own, as does raw chocolate (cacao).

Chamomile is an herb long-used for its calming effects and therefore valuable in reducing anxiety.

Chinese Skullcap has anti-anxiety effects similar to benzodiazepines but without the side effects.

Curcumin is the main active component of the cooking spice Turmeric. Curcumin has numerous health benefits including anti-anxiety properties.

Damiana is an herb that has traditional uses to relieve anxiety and now scientists are proving this effect.

Echinacea has long been used as an immune-booster during the cold and flu season but it also has anti-anxiety properties.

GABA (gamma butyric acid) is a brain chemical that regulates the anti-anxiety part of the brain. Benzodiazepines target GABA receptors in the brain, making them effective for reducing anxiety. However, these drugs are addictive and discontinuing their use can be more difficult than withdrawing from heroin.
Gotu Kola is an herb long used to improve the memory but it also has value in treating anxiety disorders.

*Gotu kola. U Maryland Medical Center online

Herbs are comparable to benzodiazepines for effect but without the dangerous side effects.


Holy Basil is an herb often used to improve anxiety and mood.


Homeopathic Gelsemium sempervirens improves anxious behaviour. Outcomes in areas of anxiety, depression, and irritable bowel proved to be more than 75% positive. Homeopathics can also help with primary insomnia.

*Bellavite et al: Homeopathic doses of Gelsemium sempervirens improve the behavior of mice in response to novel environments. Evid Based Complement Alternat Med 2009 Sep 14

Kava kava is an herb that is a safe and effective treatment for anxiety, even though it is not allowed in Canada.

*Boerner et al: Kava-Kava extract LI 150 is as effective as ozipramol and busiprone in generalised anxiety disorder--an 8-week randomized, double-blind multi-centre clinical trial in 129 out-patients. Phytomeds 2003;10 Suppl 4:38-49
*Sarris et al: The ava Anxiety Depression Spectrum Study (KADSS): a randomized, placebo-controlled crossover trial using an aqueous extract of Piper methysticum. Psychopharmacology (Berl) 2009 Aug;205(3):399-407


**Lemon balm** reduces anxiety.


**Melatonin** and **Motherwort** (herb) help relieve anxiety while protecting the retina of the eye during anxiety attacks.


**NAC** (N-acetyl-cysteine) is an amino acid that is an effective treatment for nail-biting disorder.


**Neem** is an antimicrobial herb that also has other health benefits including being comparable to diazepam for reducing anxiety but safer.


**Noni** fruit reduces anxiety as a result of its natural relationship with the GABA receptors in the brain.


**Passionflower** is an herb that reduces anxiety without producing sedation.

*Dhawan: Drug/substance reversal effects of a novel tri-substituted benzoflavone moiety (BZF) isolated from Passiflora incarnata Linn.—a brief perspective. Addict Biol 2003 Dec;8(4):379-86


**Probiotics** adjusts emotional behaviour by regulating the function of the body’s second brain found in the gut.

*Bravo et al: Ingestion of Lactobacillus strain regulates emotional behavior and central GABA receptor expression in a mouse via the vagus nerve. Proc Natl Acad Sci USA 2011 Sep 20;108(38):16050-5


**Relora** is a combination of two herbs, Magnolia and Phellodendron. Both reduce symptoms of stress and anxiety and thereby, contribute to the reduction of belly fat, a known side effect of stress.
Rhodiola rosea is an herb useful in addressing stress and which significantly decreases anxiety.

Saffron is a common food spice that has anti-anxiety properties.

Skullcap is a family of herbs that have similar actions as benzodiazepines but without the side-effects.

Tart Cherry Juice can help overcome insomnia and improve sleep duration and quality.

Theanine is a derivative of green tea that works well with midazolam in reducing anxiety.

Valerian is an herb often used to promote sleep but it also helps relieve anxiety, with or without Lemon balm (Melissa).
ANTI-ARRHYTHMICS/CARDIAC REGULATORS

(Used to treat abnormal heart rhythms)

COMMON EXAMPLES:

Group I
- moricizine – Ethmozine and others

Group IA
- disopyramide – Norpace and others
- procainamide – Procan and others
- quinidine – Quinalan and others

Group IB
- lidocaine – Xylocaine and others
- mexiletine – Mexitil
- phenytoin – Dilantin and others

Group IC
- flecainide – Tambocar
- propafenone – Rhythmol

Group II
- acebutolol – Sectral
- esmolol – Brevibloc
- propranolol – Inderal and others

Group III
- amiodarone – Cordarone and others
- bretylium – Bretylol
- ibutilide – Corvert

Group IV
- diltiazem – Cardizem and others
- verapamil – Calan and others

Others
- adenosine - Adenocard
- atropine – Atro-Pen and others
- digitalis – Foxglove
digoxin – Lanoxin
edrophonium – Reversol and others

**Deplete:**

**A, B1, C, E, calcium, magnesium, phosphorus, potassium, CoQ10**

⚠️ **Do not take the following within 2 hours of these medications:** large amounts of aloe vera, licorice root, quinine (tonic water), or fiber (psyllium).

⚠️ **Do not take the following herbs** at all if on any of these heart medications since they have the same effect: Foxglove, Hawthorn, and Siberian ginseng.

**Bisphosphonates** (Osteoporosis drugs) are linked to a significant increase in the risk of serious atrial fibrillation in postmenopausal women.


**Blood thinners** such as Warfarin are contraindicated because they increase the risk of stroke in those with atrial fibrillation.


**Digoxin** may aggravate arrhythmias.


**Ibuprofen use** may cause arrhythmias.


**Kidney function** affects heart rhythm.


**Low Cholesterol levels** are associated with an increased risk of arrhythmias.


**Steroids** increase the risk of atrial fibrillation.

Testosterone deficiency is linked to atrial fibrillation in men.

Vitamin E reduces lung toxicity caused by Group III in particular.

Suggested Alternatives:

Antioxidants (Spirulina, Mega-doses of B9, CoQ10, Alpha-lipoic acid, NAC, and Cocoa flavanols) improve cardiac remodeling and atrial fibrillation.

Astragalus significantly improves heart function, especially in those with CHF (congestive heart failure).

Bacopa, Amla, Licorice, Indian mango, and Clove protect the heart and kidneys.

Bee Propolis decreases the effects of digoxin toxicity.

Berberine-containing plants (Barberry, Goldenseal, Goldenthread, Oregon grape) improve the conditions of those with arrhythmias and/or heart failure.

Carnitine is an amino acid that has significant anti-arrhythmia activity.

Chili peppers contain capsaicin which strengthens the heart, regulates the beat, and improves its function.
CoQ10 is a vital antioxidant needed by every cell in the body to make energy but it has a special leaning towards the heart muscle. The ubiquinol form has better absorption than the cheaper ubiquinone form.

*Schmelzer et al: The reduced form of coenzyme Q10 mediates distinct effects on cholesterol metabolism at the transcriptional and metabolite level in SAMP1 mice. IUBMB Life 2010 Nov 17

CoQ10, Carnitine, and Taurine is a combination found in a formula called MyoVive which proved to be an effective treatment for left ventricular dysfunction.

*Jeejeebhoy et al: Nutritional supplementation with MyoVive repletes essential cardiac myocyte nutrients and reduces left ventricular size in patients with left ventricular dysfunction. J Biol Regul Homeost Agents 2009 Apr-Jun;23(2):119-24

Cordyceps mushrooms have anti-arrhythmic effects.


Green Tea may be a beneficial treatment for atrial fibrillation.

*Zeng et al: Green tea may be benefit to the therapy of atrial fibrillation. J Cell Biochem 2011 Mar 4

Diet rich in fruits and vegetables plays a significant role in preventing and reversing various cardiovascular disorders along with a benefit of reduced mortality from all causes.


Hawthorn (alone or in combination) is an herb that is especially good for strengthening the heart.

*Dengenring et al: A randomised double blind placebo controlled clinical trial of a standardised extract of fresh Crataegus berries (Crataegisan) in the treatment of patients with congestive heart failure NYHA II. JAMA 2007 Sep 26;298(12):1420-8
Honey (non-pasteurized) has some cardiac and nerve benefits.

Licorice root reduces risk of arrhythmias in hemodialysis patients.

Magnesium helps prevent arrhythmias and is superior to verapamil in treating them. It also converts ibutilide into a safer and more effective agent.

Motherwort is an herb with a traditional use for addressing women’s issues but it also has anti-arrhythmic effects.

Omega-3 fatty acids prevent and reverse atrial fibrillation. Omega-3 fatty acids are found in abundance in fish and flaxseed oils and sacha inchi seeds.


*Mariscalco et al: Preoperative n-3 polyunsaturated fatty acids are associated with a decrease in the incidence of early atrial fibrillation following cardiac surgery. Angiology 2010 Oct;61(7):643-50


*Zhang et al: n-3 polyunsaturated fatty acids prevents atrial fibrillation by inhibiting inflammation in a canine sterile pericarditis model. Int J Cardiol 2010 Sep 8

**Pterocarpus** (Kino tree) is a herb that has similar effects as digoxin.


**Red Sage** protects against sudden cardiac death caused by lethal arrhythmias.


**Resveratrol** is a potent antioxidant that strengthens the heart thereby reducing the risk of arrhythmias


**Rhodiola** is an herb that has significant cardioprotective and antiarrhythmic effects.


*Song et al: Imbalance between pro- and anti-inflammatory cytokines, and between Th1 and Th2 cytokines in depressed patients: the effect of electroacupuncture or fluoxetine treatment. Pharmacopsych 2009 Sep;42(5):182-8

**Strauss Heart Drops** is an excellent combination of bilberry, cayenne, garlic, hawthorn, mistletoe, motherwort, and white willow. It has a long history of privately proven results for strengthening and regulating the heart as well as for removing arterial plaque.
Vitamin C protects and strengthens the heart muscle.


Vitamin D3 reduces the risk of adverse cardiovascular problems.


Zinc and Copper levels are low in those with congestive heart failure and atrial fibrillation which are reversed when these minerals are supplemented.

Blood Pressure/Anti-hypertensives

(Used to lower blood pressure)

Common examples:

ACE Inhibitors (angiotensin converting enzyme – any of the prils)
- benazepril – Lotensin
- captopril – Capoten
- enalapril – Vasotec
- quinapril – Accupril
- ramipril – Altace
- ... and others

Adrenergics
- clonidine – Catapres
- methyldopa – Aldomet, and others

Anti-adrenergics
- doxazosin – Cardura
- prazosin - Minipress
- ... and others

ARBs (angiotensin receptor blockers – any of the sartans)
- losartan – Cozaar
- valsartan – Diovan
- ... and others

Beta-adrenergic Blockers (any of the olols)
- acebutolol - Monitan and others
- atenolol – Tenormin
- metoprolol - Lopressor
- timolol - Timoptic drops
- ... and others

Calcium-channel Blockers
- amlodipine – Norvasc
- diltiazem – Cardizem and others
- felodipine – Plendil
- nifedipine – Aldalat, Procardia, and others
- verapamil – Calan, Isoptin, and others
**Vasodilators**
- diazoxide – Hyperstat, Proglycem
- hydralazine – Apo-Hydralazine, Apresoline, Novo-Hylazin, Nu-Hydral
- minoxidil – Apo-Gain, Minox and others
- nitroprusside – Nipride, Nitropress
  
  ... and others

**Deplete:**

B1, B2, B3, B6, B9, B12, C, D, calcium, copper, iron, magnesium, potassium, selenium, sodium, zinc, CoQ10, DHEA, quercetin, melatonin

Avoid *salt substitutes* as they can increase blood potassium levels to potentially life-threatening levels.


**Beta Blockers**, in particular, rapidly decrease CoQ10 levels (as do Statin drugs for Cholesterol) – which has been known for over 30 years. CoQ10 is needed to make energy in every cell in the body but the heart needs it the most. Therefore it is vital that CoQ10 supplementation take place if on medications.


**Beta Blockers** affect exercise capacity and blood flow in the lungs in those with moderate to severe hypertension.


**Caffeine** increases blood pressure; therefore, do not take your blood pressure with, or just after, drinking a caffeinated beverage.


**Calcium channel blockers** increase the risk of heart failure and when used with *Diruetics*, increase the risk of heart attacks more than any other two medication-combinations.


**Fructose consumption** contributes to night-time hypertension, diabetes, and obesity. Scientists often use fructose to induce hypertension, diabetes, and increased cholesterol levels in animal models.

*Damiano et al: Impaired response to insulin associated with protein kinase c in chronic fructose-

Goldenseal is an anti-microbial herb that contains a substance called hydrastine which can constrict blood vessels, thereby increasing blood pressure levels.
*Goldenseal. U Maryland Medical Center online

Metoprolol is associated with an increased risk of diabetes in heart failure patients.

Pesticides (DDT, simazine, lindane and some of their active constituents) have long been associated with a significant increases in cancers as well as numerous other dangerous health conditions including hypertension and cardiovascular diseases.

**SUGGESTED ALTERNATIVES:**

Adzuki beans have compounds that help decrease blood pressure.

Allspice has hypotensive effects.

Alpha-linolenic acid is a plant-based omega-3 fatty acid that helps lower blood pressure.
**Alpha-lipoic acid** reduces blood pressure and increases insulin sensitivity.


**Amaranth** is an ancient grain that has similar ACE-inhibiting action as pharmaceuticals but without the side effects.

*Vecchi & Añón: ACE inhibitory tetrapeptides from Amaranthus hypochondriacus 11S globulin. Phytochem 2009 May 12

**Antioxidant deficiency** contributes to hypertension and is associated with the likelihood of abdominal aneurysms.


**Arginine** (an amino acid) is comparable to Calcium Channel Blockers without the side effects, and safe to take during pregnancy.


*Li et al: Comparative effects of calcium channel blockers and L-arginine on chronic intermittent hypoxic pulmonary hypertension in rats. Zhonghua Jie He He Xi Za Zhi 1994 Dec;17(6):372-4, 385


*Orozco-Gutiérrez et al: Effect of L-arginine or L-citrulline oral supplementation on blood pressure and right ventricular function in heart failure patients with preserved ejection fraction. Cardiol J 2010;17(6):612-8

**Arginine** and **NAC** (N-acetylcysteine) are amino acids that can improve blood pressure.

**Astaxanthin** is a powerful antioxidant that has significant health benefits including the improvement of arterial condition and blood pressure.


**Astragalus** and **Angelica** are herbs that improve conditions of those being treated with ACE inhibitors.


**B** vitamin (6,9,12) deficiency contributes to increased levels of **homocysteine** which lead to cardiovascular disease, bone fractures, and Alzheimer’s. Supplementation of these nutrients (plus a total B-complex to avoid creating a deficiency in one or more of the family members) and **Betaine hydrochloric acid**, helps prevent such disorders.


*Spence et al: Understanding the complexity of homocysteine lowering with vitamins. JAMA 2011;306(23):2610-11


**B6** has a positive effect on systolic blood pressure.


**Bee Propolis** has antihypertensive effects.


**Beetroot** improves blood pressure and keeps the blood vessels healthy.

*Webb et al: Acute blood pressure lowering, vasoprotective, and antiplatelet properties of dietary nitrate via bioconversion to nitrite. Hypertens 2008 Mar;51(3):784-90

**Blueberries** improve blood pressure.


**Bromelain** is an enzyme derived from pineapples that protects the heart.


**Butterbur** is an herb that has the same effect as Calcium-channel blockers.

*Wang et al: Calcium-antagonizing activity of S-petasin, a hypotensive sesquiterpene from Petasites formosanus, on inotropic and chronotropic responses in isolated rat atria and cardiac myocytes. Naunyn Schmiedebergs Arch Pharmacol 2004 Mar;369(3):322-9
Calcium supplementation reduces pre-eclampsia.
* Calcium supplementation during pregnancy for preventing hypertensive disorders and related problems. Cochrane Database Syst Rev 2010(8):CD001059

Capsaicin is a substance found in hot peppers that strengthens the cardiovascular system and ultimately reduces hypertension.

Cardamom seeds help lower blood pressure.

Citrulline, an amino acid, helps to lower blood pressure.

Coconut has many proven health benefits including helping to reduce high blood pressure levels.

Concord grape juice reduces blood pressure.
* Park et al: Changes in antioxidant status, blood pressure, and lymphocyte DNA damage from grape juice supplementation. Ann NY Acad Sci 2009 Aug;1171:385-90

CoQ10 is a safe and effective treatment for hypertension, including pre-eclampsia in pregnancy. The ubiquinol form functions better than ubiquinone.
**Burke et al:** Randomized, double-blind, placebo-controlled trial of coenzyme Q10 in isolated systolic hypertension. Appl Psychophysiol Biofeedback 2009 Jun;34(2):71-91

**Maroz et al:** Reactivity of ubiquinone and ubiquinol with superoxide and the hydroperoxyl radical: implications for in vivo antioxidant activity. Free Radic Biol Med 2009 Jan;46(1):105-9


**Schmelzer et al:** The reduced form of coenzyme Q10 mediates distinct effects on cholesterol metabolism at the transcriptional and metabolite level in SAMP1 mice. IUBMB Life 2010 Nov 17

**Teran et al:** Coenzyme Q10 supplementation during pregnancy reduces the risk of pre-eclampsia. Int J Gynaecol Obstet 2009 Apr;105(1):43-5

**Cordyceps mushrooms** effectively treat pulmonary and portal hypertension as well as having anti-stress, anti-fatigue, and anti-aging properties.

- **Gao et al:** Cordyceps sinensis extract suppresses hypoxia-induced proliferation of rat pulmonary artery smooth muscle cells. Saudi Med J 2010 Sep;31(9):974-9
- **Koh et al:** Antifatigue and antistress effect of the hot-water fraction from mycelia of Cordyceps sinensis. Biol Pharm Bull 2003 May;26(5):691-4
- **Wang et al:** Cordyceps mycelia extract decreases portal hypertension in rats with dimethylnitrosamine-induced liver cirrhosis: a study on its histological basis. Zhong Xi Yi Jie He Xue Bao 2008 Nov;3(11):1136-44

**Coriander seeds** have hypotensive effects.

- **Jabeen et al:** Coriander fruit exhibits gut modulatory, blood pressure lowering and diuretic activities. J Ethnopharmacol 2009 Feb;25(122)(1):123-30

**Curcumin** improves pulmonary hypertension.

- **Lin et al:** Effect of curcumin on pulmonary hypertension and wall collagen of pulmonary arterioles of chronic hypoxic hypercapnic rats. Zhongguo Ying Yong Sheng Li Xue Za Zhi 2006 Aug;22(3):257-61

**Eggplant** inhibits key enzymes associated with the development of diabetes and hypertension.

- **Kwon et al:** In vitro studies of eggplant (Solanum melongena) phenolics as inhibitors of key enzymes relevant for type 2 diabetes and hypertension. Bioresour Technol 2008 May;99(8):2981-8

**Eugenol,** found in the essential oils of Basil, Bay leaf, Cinnamon, Clove, and Nutmeg, has hypotensive effects.


**Fermented milk** and **whey** help lower blood pressure.

- **Beaulieu et al:** Regulatory function of a malleable protein matrix as a novel fermented whey product on features defining the metabolic syndrome. J Med Food 2010 Jun;13(3):509-19
- **Kawase et al:** Effect of administration of fermented milk containing whey protein concentrate to rats and healthy men on serum lipids and blood pressure. J Dairy Sci 2000 Feb;83(2):255-63

**Fiber-rich diet** helps to lower blood pressure, including preeclampsia in pregnancy.

- **He et al:** Effect of dietary fiber intake on blood pressure: a randomized, double-blind, placebo-controlled trial. J Hypertens 2004 Jan;22(1):73-80
Flavanols (found in a variety of foods including dark, raw cacao) have hypotensive effects but sugared or sugar-free cocoa had no effect.


*Berry et al: Impact of cocoa flavanol consumption on blood pressure responsiveness to exercise. Br J Nutr 2010 May;103(10):1480-4


Flaxseed oil, which is high in omega-3 fatty acids, helps lower blood pressure.


Folate (B9) in high doses for a short time helps lower blood pressure.


Folic acid (B9) and D-ribose help prevent right ventricular hypertrophy resulting from hypertension. Ribose is a non-sweet medicinal sugar important for ATP (energy) production.


Fruits and Vegetables improve blood flow and cardiovascular health.


*McCall et al: Dietary intake of fruits and vegetables improves microvascular function in hypertensive subjects in a dose-dependent manner. Circulation 2009 Apr 28;119(16):2153-60

Goji berries/Wolfberry decrease blood pressure, strengthen the immune system, improve the eyesight, and generally offers a sense of well-being.


Blood pressure/Anti-hypertensives

Nature’s Pharmacy: Evidence-Based Alternatives to Drugs


**Grapes** and **Apples** help prevent atherosclerosis and reduce blood pressure, even in pregnant women (preeclampsia), but only use **organic** as both that are conventionally grown are high on the list of foods containing large numbers of pesticides.


*No authors listed: Phenolics from purple grape, apple, purple grape juice and apple juice prevent early atherosclerosis induced by an atherogenic diet in hamsters. Mol Nutr Food Res 2008 Apr;52(4):400-7


**Grapefruit – the Upside** – helps reduce blood pressure but it still cannot be eaten by those on any kind of medication including the one-a-day aspirin.

*Diaz-Juárez et al: Effect of Citrus paradisi extract and juice on arterial pressure both in vitro and in vivo. Phytother Res 2009 Jul;23(7):948-54

**Green Coffee** reduces blood pressure but not once it is roasted.


**Hawthorn** reduces blood pressure.


**Licorice** helps prevent and reverse hypertension, diabetes and belly-fat.


**Magnesium deficiency** contributes to hypertension in particular and cardiovascular problems in general as well as diabetes.


*Guerrero-Romero & Rodríguez-Morán: The effect of lowering blood pressure by magnesium supplementation in diabetic hypertensive adults with low serum magnesium levels: a randomized, double-blind, placebo-controlled clinical trial. J Hum Hypertens 2009 Apr;23(4):245-51


**Maitake mushrooms** possess anti-hypertensive effects.


**Mediterranean Diet** improves overall cardiovascular health. The Mediterranean Diet is based on foods and drinks consumed by people in countries surrounding the Mediterranean Sea.


Mediterranean diet: Choose this heart-healthy diet option. Mayo Clinic online

Zelman: The Mediterranean Diet; A total diet and lifestyle approach continues to be one of the best prescriptions for a long, healthy life. WebMD online

**Melatonin** alone or with **Pycnogenol** improves endothelial function. A dysfunction occurs through an imbalance of the cells lining blood vessels which leads to any number of disorders including cardiovascular. Melatonin is often used as a sleep aid while Pycnogenol, an extract from pine trees, is a potent antioxidant (see more below).


**Niacin (B3)** improves arterial health and lessens the symptoms of chronic kidney failure.


**Olive leaf** and **Olive oil** help prevent hypertension and are just as effective as ACE inhibitors but without the dangerous side effects.


Blood pressure/Anti-hypertensives

Nature's Pharmacy: Evidence-Based Alternatives to Drugs

Scheffler et al: Olea europaea leaf extract exerts L-type Ca(2+) channel antagonistic effects. J Ethnopharmacol 2008 Nov 20;120(2):233-40

Suslitt et al: Olive (Olea europaea) leaf extract effective in patients with stage-1 hypertension: comparison with Captopril. Phytomed 2010 Oct 29

**Olive oil** and **Onions** improve blood pressure and other conditions.


**Omega-3 fatty acids**, found in such foods as fish and flaxseed oil and sacha inchi seeds, lower blood pressure and increase cardiovascular health.

- Duda et al: Fish oil, but not flaxseed oil, decreases inflammation and prevents pressure overload-induced cardiac dysfunction. Immunopharmacol Immunotoxicol 2009;31(2):209-13
- Grassi et al: Blood pressure is reduced and insulin sensitivity increased in glucose-intolerant, hypertensive subjects after 15 days of consuming high-polyphenol dark chocolate. J Nutr 2008 Sep;138(9):1671-6

**Orange** and **Black currant juices** improve inflammation markers in those with peripheral arterial disease.


**Papaya** reduces blood pressure more effectively than hydralazine. Papaya has anti-oxidant activity similar to vitamin E.


**Phellodendron** and **Citrus peel** improve blood pressure, cholesterol and blood sugar levels.


**Pomegranates** reduce blood pressure and LDL oxygenation and prevent the formation of arterial plaque.

Pamela Duff, RN, CSNC

**Pumpkin seed oil** improves the effects of ACE-inhibitors and Calcium-Channel Blockers.


**Pycnogenol** improves diabetes and hypertension and prevents microcirculation damage from medications, often allowing the dosage to be reduced.


**Quercetin** is a citrus bioflavonoid that reduces blood pressure and cholesterol levels.


**Red Sage** is as effective as benazepril in treating heart attacks.

*He et al: Comparison of cardioprotective effects of salvianolic acid B and benazepril on large myocardial infarction in rats. Pharmacol Rep 2008 May-Jun;60(3):369-81

*He et al: Comparison of cardioprotective effects using salvianolic acid B and benazepril for the treatment of chronic myocardial infarction in rats. Naunyn Schmiedebergs Arch Pharmacol 2008 Sep;378(3):311-22

**Red Yeast Rice** improves arterial health and reduces all-cause mortality. Red Yeast Rice is produced from fermented rice with an added yeast (Monascus purpurus), which gives it a reddish hue. RYR is also effective for lowering cholesterol levels since its action is the same as statins but much safer.

*Li et al: Xuezhikang, an extract of cholestin, decreases plasma inflammatory markers and endothelin-1, improve exercise-induced ischemia and subjective feelings in patients with cardiac syndrome X. Int J Cardiol 2007 Oct 31;122(1):82-4


**Stevia**, an herb that is 200 times sweeter than table sugar, is often used by diabetics and non-diabetics alike because of its health benefits and no calories. One of the health benefits is that it helps lower blood pressure.

Vitamin D3 deficiency contributes to hypertension.

Watermelon improves aortic blood pressure in those with prehypertension.
Blood Thinners/
Anti-coagulants/Anti-platelets

(Used to prevent blood clots, thrombosis, embolisms, and strokes)

Common examples:

aspirin (see Analgesics for more Depletions)
dipyridamole – Persantine and others
heparin
warfarin – Coumadin and others
antiplatelets
  abciximab – ReoPro
cilostazol - Pletal
thrombolytics
  alteplase – Activase, Cathflo

Deplete:

K, iron, zinc, digestive enzymes, CoQ10

Herbs and Nutrients with Blood Thinning Properties:

Alfalfa
Aniseed
Arnica
Asafoetida
Cayenne
Chamomile
Clove
Feverfew
Garlic
Ginger
Ginkgo
Ginseng
Horse chestnut
Licorice root
Papain
Red clover
St John’s wort
White willow bark (aspirin)

**HERBS AND NUTRIENTS THAT THICKEN THE BLOOD (HEMOSTATIC):**

Bayberry
Beet root
Blackberry
Burdock
Devil’s claw
Horsetail
Mullein
Nettle
Quinine
Shepherd’s Purse
Vitamins A, C, and K
Yarrow

рин Even though blood thinners deplete vitamin K, a supplement should not be taken without your doctor’s approval. That said, the following study does show that a vitamin K supplement improves anti-coagulant therapy and reduces its side effects.


phin Echinacea can significantly reduce blood levels of warfarin without affecting warfarin’s action, platelet aggregation or baseline clotting status in healthy subjects.


phin Goji berries (Wolfberry), Noni fruit, and Pomegranates are nourishing fruits that provide numerous health benefits but they may interact with warfarin.

*Komperda: Potential interaction between pomegranate juice and warfarin. Pharmacotherapy 2009 Aug;29(8):1002-6

phin Statin drugs alter platelet function.

Blood thinners (Warfarin) should not be used for those with atrial fibrillation because they increase the risk of stroke.


Suggested alternatives:

Apigenin, a flavonoid found in a variety of foods, has anti-platelet effects. When platelets clump together (aggregation), this action can restrict blood flow.


Arnica, a pain-relieving homeopathic remedy, is safe to use if on blood thinners.


Beetroot has anti-platelet activity.

- Webb et al: Acute blood pressure lowering, vasoprotective, and antiplatelet properties of dietary nitrate via bioconversion to nitrite. Hyperten 2008 Mar;51(3):784-90

Bromelain is an enzyme derived from Pineapple that has anti-inflammatory effects as well as anti-platelet properties.


Carrot extract inhibits platelet aggregation (clumping).


Clove are safer and more effective than heparin or aspirin as a blood thinner.

- Srivastava: Antiplatelet principles from a food spice clove (Syzygium aromaticum L) [corrected]. Prostaglandins Leukot Essent Fatty Acids 1993 May;48(5):363-72

Coleus forskohlii is an Ayurvedic plant that has several health benefits including anti-platelet activity, especially on tumour-induced platelet aggregation.


Cordyceps mushrooms have anti-platelet activity.


Cumin seed and Turmeric inhibit platelet aggregation
*Srivastava: Extracts from two frequently consumed spices--cumin (Cuminum cyminum) and turmeric (Curcuma longa)--inhibit platelet aggregation and alter eicosanoid biosynthesis in human blood platelets. Prostaglandins Leukot Essent Fatty Acids 1989 Jul;37(1):57-64

**Dark Chocolate** is a rich source of flavonoids that inhibits negative platelet activity.

**Essential oils** [Lavender, Fennel or a topical Wintergreen] reduce platelet aggregation.

**Ginkgo biloba** enhances the effects of cilostazol without it affecting bleeding time.

**Grapes** have significant antioxidant content and effect, inhibiting platelet aggregation. Grape juice was proven to be significantly higher in a particular polyphenol than either red wine or non-alcoholic wine. Buy only organically grown grapes as conventionally grown grapes are high on the list of foods that contain large numbers of pesticides.
* Bub et al: Malvidin-3-glucoside bioavailability in humans after ingestion of red wine, dealcoholized red wine and red grape juice. Eur J Nutr 40(3):113-120
* Keevil et al: Grape juice, but not orange juice or grapefruit juice, inhibits human platelet aggregation. J Nutr 2000;130:53-56

**Japanese Apricots** improve blood flow without the need of blood thinners.

**Kiwifruit** reduces platelet aggregation and blood triglycerides.

**Melatonin** may be effective in treating severe bleeding associated with low platelets that occur for no apparent reason.
Blood Thinners / Anti-coagulants/Anti-platelets

Nattokinase is an enzyme that decreases blood levels of fibrinogen (which plays a central role in platelet aggregation).


Olive leaf has anti-platelet activity.


Onions and Olive oil (in a Mediterranean diet) improve blood flow and general cardio health.


Parsley may inhibit platelet aggregation (clumping together) but it also prolongs bleeding time, an important factor for those taking blood thinners.


Policosanol (20 mg) is as effective as 100 mg of aspirin a day. It is superior to Lipitor (for Cholesterol) for improving blood lipid profiles and inhibiting platelet aggregation.


Prickly Pear prevents platelets from clumping together.


Probiotics protect the bowel from aspirin-induced injury.


Pycnogenol (pine bark extract) reduces platelet aggregation as effectively as aspirin with far less prolonged bleeding time.

**Resveratrol** is a potent antioxidant found in the skins of red grapes that has anti-platelet activity. Contrary to popular belief, there are only miniscule amounts of resveratrol in red wine.


**Rutaecarpine**, a substance found in the Evodia rutaecarpa herb, has anti-platelet action.


**Sea Buckthorn** (noted for its rare Omega-7 content) has anti-platelet effects.


**Sesame oil** has anti-platelet activity.


**Shiitake mushrooms** have anti-platelet effects.


**Spices** (Tarragon, Savory, Marjoram) have anti-platelet activity.


**Wasabi root** (cabbage family) inhibits platelet aggregation.


**Yucca** is a flowering desert plant that has anti-platelet activity stronger than Resveratrol.

BRONCHODILATORS

(USED TO TREAT ASTHMA OR COPD)

COMMON EXAMPLES:

- **albuterol** – Asmol, Proventil, Ventolin, and others
- **aminophylline** – Truphylline
- **bitolterol** – Tornalate
- **diphylline** – Lufyllin
- **ephedrine**
- **epinephrine** – Bronkaid, EpiPen, and others
- **fluticasone** (steroid) – Flonase, Flovent
- **ipratropium** – Apo-Ipravent, Atrovent, and others
- **isoproterenol** – Isuprel
- **levalbuterol** – Xopenex
- **metaproterenol** – Alupent
- **montelukast** – Singulair
- **oxtriphylline** – Choledyl SA
- **pirbuterol** – Maxair
- **salmeterol** – Serevent
- **terbutaline** – Brethine, Brethair and others
- **theophylline** – Slobid, Theo-Dur, Theo24, Theolair, and others

DEPLETE:

**B1, B6, B9, C, iodine, magnesium, potassium, selenium, and most other minerals**

♀ **Antibiotics** have no effect on childhood bronchiolitis, a common upper respiratory illness caused by a virus. In fact, antibiotics end up severely disrupting the immune and digestive systems.


♀ **Stimulants** should never be taken with bronchodilators or any other type of medication. The combination can increase the heart rate to dangerous levels. Stimulants include cafffeinated herbs or beverages, cough and cold medications, ginsengs, licorice root, bitter orange, grilled meats, sugar, and alcohol.

*Cohen, 2011:43
**Suggested Alternatives:**

**Angelica** and **Rehmannia**, a Chinese herbal formula, improves COPD (chronic obstructive pulmonary disease) symptoms.


**Antioxidants** improve COPD and strengthen the lungs which help prevent pneumonia, especially in children.


**Apigenin**, a flavonoid found in leafy plants, protects against asthma.

- Choi et al: Apigenin protects ovalbumin-induced asthma through the regulation of GATA-3 gene. Int Immunopharmacol 2009 Jul;9(7-8):918-24

**Arginine**, an amino acid, helps prevent airway inflammation common in asthma.


**Asian Pear pectins** suppresses allergic breathing reactions.


**Astragalus** is an herb often used for adrenal support and its stress-reducing properties also inhibits hypoxic pulmonary hypertension.


**Bamboo extract** reduces airway inflammation often seen in breathing problems.


**B6** significantly improves bronchial asthma in children. (see Appendix for a list of B vitamins according to name and number)


**Bayberry** inhibits hypersensitive reactions.


**Black Cumin seed** extract proves superior to fluticasone in treating asthma.

Borage oil, known for its high GLA content, helps treat asthma.


Boswellia (Frankincense) significantly improves bronchial asthma.


Bromelain decreases airway inflammation in asthmatics.


Brown Rice extract suppresses airway inflammation.


Butterbur is a safe and effective anti-inflammatory herb that helps treat asthma.


Capsaicin (found in chili peppers) significantly reduces sinus polyps which can affect breathing ability.


Carotenoids have anti-pulmonary fibrosis effects.


Catnip offers support to the airway as an antispasmodic and anti-inflammatory.


Cat’s Claw is an herb often used to support the immune system but it also helps reduce lung inflammation.

**Chinese Skullcap** improves asthmatic conditions.

* Huang et al: Primary study on mechanism of baikalin on the Th1/Th2 response in murine model of asthma. Zhong Yao Cai 2009 Sep;32(9):1407-10

**Cordyceps mushrooms** reduce airway inflammation and improve lung function even in such conditions as cystic fibrosis.


**Creatine** is a supplement well known to body builders but it also has other qualities important to those with muscular diseases or neurotoxic disorders including Parkinson’s or Huntington’s. In addition, Creatine is proving to be a useful treatment for those with COPD and safely taken by diabetics and those on dialysis.


**Creatine, Carnitine, and Amino acids** improve the conditions of those with COPD.


**Curcumin** (the active part of Turmeric) slows the development of inflammation and allergic reactions.

* Oh et al: Curcumin attenuates allergic airway inflammation and hyper-responsiveness in mice through NF-κB inhibition. J Ethnopharmacol 2010 Jul 17

**Dandelion** has lung-protective properties.

**Diet** plays a significant role in developing and reversing asthma and other breathing problems such as pulmonary fibrosis (lung scarring) and COPD. A diet rich in fruits, vegetables, and fiber is the key.

*Spector & Surette: Diet and asthma: has the role of dietary lipids been overlooked in the management of asthma. Ann Allergy Asthma Immunol 2003 Apr;90(4):371-7;quiz 377-8,421

**Essential oils** improve breathing and, as antimicrobials, also kill any virus or bacteria that may be the cause. Particularly effective are Eucalyptus, Peppermint, Pine, Rose, Spruce, Wintergreen, Raven, and RC.

*Boskabady et al: Relaxant effects of Rosa damascena on guinea pig tracheal chains and its possible mechanism(s). J Ethnopharmacol 2006 Jul 19;106(3):377-82
*Higley 2010:460-61

**Fish oil** (alone or with **Vitamin C** and **Zinc**) is as effective as montelukast in reducing the severity of airway constriction. The combination is especially beneficial to children.


**Genistein** (a soy isoflavone) reduces airway inflammation.


**Ginkgo, Vitamin C and Astaxanthin** prove better than ibuprofen for reducing respiratory inflammation.

*Haines et al: Summative interaction between astaxanthin, Ginkgo biloba extract (EGb761) and vitamin C in suppression of respiratory inflammation: a comparison with ibuprofen. Phytother Res 2011 Jan;25(1):128-36
*No authors listed: In vitro effects of astaxanthin combined with ginkgolide B on T lymphocyte activation in peripheral blood mononuclear cells from asthmatic subjects. J Pharmacol Sci 2004 Feb;94(2):129-36

**Green mussel extract** has anti-inflammatory effects that benefit asthmatics.

**Bronchodilators**

*Ivy leaf* and *Thyme* are helpful in treating acute bronchitis.

*Kemmerich et al: Efficacy and tolerability of a fluid extract combination of thyme herb and ivy leaves and matched placebo in adults suffering from acute bronchitis with productive cough. A prospective, double-blind, placebo-controlled clinical trial. Arzneimittelforschung 2006;56(9):652-60*

**Kaempferol** (a flavonoid found in a variety of foods) is a potent anti-inflammatory especially for reducing airway constriction.

*Medeiros et al: Preventive and curative glycoside kaempferol treatments attenuate the TH2-driven allergic airway disease. Int Immunopharmacol 2009 Sep 12*

*Kava kava* is a potent anti-inflammatory but not available in Canada despite its beneficial health properties.


**Loquat leaf extract** improves chronic bronchitis.


**Lycopene** is beneficial to asthmatics.


**Magnesium** improves airway function during bronchial spasms in adults and children. Magnesium can also improve the function of such steroids as fluticasone, which, ironically, depletes this mineral.


**Moringa oleifera** (The Miracle Tree) seed extract is effective in treating asthma.


**Mugwort** is an herb long been used to treat upper respiratory conditions.

*Khan & Gilani: Antispasmodic and bronchodilator activities of Artemisia vulgaris are mediated through dual blockade of muscarinic receptors and calcium influx. J Ethnopharmacol 2009 Sep 12*
Mullein has a long history of treating lung disorders.


Myrica sapida is used in Ayurvedic medicine as a bronchodilator.


Nasturtium and Horseradish are effective for treating upper respiratory conditions.

- Goos et al: Efficacy and safety profile of a herbal drug containing nasturtium herb and horseradish root in acute sinusitis, acute bronchitis and acute urinary tract infection in comparison with other treatments in the daily practice/results of a prospective cohort study. Arzneimittelforschung 2006;56(3):249-57

Olive oil consumption during pregnancy is associated with decreased wheezing during the first year of an infant’s life.


Osha root contains alkaloids that are beneficial to airway health.


Palm (and Coconut) oil lowers rates of respiratory distress.


Passionflower has anti-asthmatic effects.


Passion fruit peel is a safe option for reducing symptoms of asthma.


Perilla oil is a plant-based oil that has anti-asthmatic effects.


Probiotics help treat allergy symptoms, asthma, and a host of other conditions.

- Karimi et al: Lactobacillus reuteri-induced regulatory T cells protect against an allergic airway response in mice. Am J Respir Crit Care Med 2008 Nov 21
**Purslane** is a salad herb that is an effective bronchodilator.


**Pycnogenol** (from pine bark) is a potent antioxidant that helps manage childhood asthma.


**Quercetin** (a bioflavonoid that is a natural antihistamine) proves superior to a COPD-Asthma trial drug.


**Raw milk** benefits asthmatics but “boiled” or pasteurized milk increases breathing difficulties.


**Resveratrol** is superior to steroids for COPD.


**Resveratrol** and **Pterostilbene** (which is related to Resveratrol and found in blueberries and grapes) are potent antioxidants that decrease the risk of developing asthma.

*Daniells: Pterostilbene may protect against asthma. Nutraingredients.com June 20, 2011

**Rooibos tea** is effective in treating upper respiratory conditions.

*Khan & Gilani: Selective bronchodilatory effect of Rooibos tea (Aspalathus linearis) and its flavonoid, chrysoeriol. Eur J Nutr 2006 Dec;45(8):463-9

**Selenium** (alone or with **Inositol (B8)** and vitamin E) improves the effects of medication in those with chronic asthma. It also manages other upper respiratory conditions.

*Biniwale & Ehrenkranz: The role of nutrition in the prevention and management of bronchopulmonary dysplasia. Int J Toxicol 2010 Oct 19

**Serrapeptase** (an enzyme) is helpful in treating chronic breathing problems.


**Thyme** helps improve upper respiratory conditions including asthma and COPD.


**Umcka** is a product that has long been used as an effective remedy for upper respiratory conditions in adults and children. The main ingredient in Umcka is identified in studies as Pelargonium sidoides (EPs 7630).
**Mariage**

Valerian root helps calm the upper respiratory tract.

**Vitamin D deficiency** contributes to the development of bronchitis and childhood asthma. Supplementation improves these conditions and prevents the side effects of steroids that are often prescribed for breathing difficulties.

**Vitamin E** is superior to pentoxifylline (used for Circulation) in preventing pulmonary fibrosis.

**Wobenzymes** helps treat obstructive bronchitis in children.
**Caffeine**

**Common examples:**

**Prescription examples:**
- Aqua Ban, Apectol, butalbital compounds [Barbiturates — dozens of them], Cafegrot, Esgic, Fiorinal, Migral, Milgralam, Norgesic, Permathene H2O Off, Soma and Darvon [propoxyphene] Compounds, Triaminacin with Codeine, and many others

**Over-the-counter examples:**
- Anacin, Caffedrine, Dristan, Ephedra, Excedrin, No Doz, Midol, Pain Reliever, Triaminicin, Vanquish, Vivarin, and many others

**Weight loss product examples:**
- Appredrine, Dexatrim, Dietrac, 4Ever Fit, WestPharm, Hydro-Lean, and many others

**Chocolate, Coffee, Tea, Maté, Guarana, Ma huang (ephedra)**

**Soft drink examples:**
- Mello Yello, Mountain Dew, Sunkist Orange, Dr. Pepper, Pepsi, Diet Pepsi, Coke and many others

**Energy drink examples:**
- Red Bull, 5150 Semi Sweet, and a whole host of others

**Deplete:**

B1, B2, B3, B5, B6, B7, B8, B9, B12, C, D, K, choline, chromium, calcium, iron, magnesium, potassium, zinc, calcitonin, PABA

- **PABA** is an important part of the B9 molecule.
- **Calcitonin**, a hormone secreted mainly by the thyroid gland, is necessary for calcium and phosphorus metabolism.
- **Caffeine** interferes with the absorption of minerals and increases their elimination, leaving a person mineral deficient. For instance, iron availability is often reduced by 50% leaving a person at high risk for iron-deficiency anemia.

Caffeine:

- is a drug therefore, when it is stopped, causes withdrawal symptoms in everyone from a fetus to an adult.

- has the same effect as amphetamines.

- contributes to mood disorders.
  *Roca et al: Chronic caffeine or theophylline exposure reduces gamma-aminobutyric acid/benzodiazepine receptor site interactions. Mole Pharmacol May;33(5):481-85

- affects the brain.

- increases blood pressure and heart arrythmias.
  *James: Critical review of dietary caffeine and blood pressure: a relationship that should be taken more seriously. Psychosom Med 2004;66:63-71
  *Lane et al: Caffeine affects cardiovascular and neuroendocrine activation at work and home. Psychosom Med 2002;64(4):595-603

- contributes to eating disorders.

- reduces insulin sensitivity that leads to diabetes.
  *MacKenzie et al: Metabolic and hormonal effects of caffeine: randomized, double-blind, placebo-
controlled crossover trial. Metabol 2007 Dec;56(12):1694-8

- worsens tics in Tourette syndrome.

- increases the production of toxic stress hormones.

- increases infertility and the risk of miscarriages and stillbirths.

- significantly increases the risk of cardiac arrhythmias.

- reduces bone mass, thereby increasing the risk of fractures.

 관한Upside, topical caffeine can prevent and reduce cellulite.
Caffeine intake during pregnancy can take up to three times longer than usual to detoxify from the mother’s body and can remain in the developing fetus up to a year after birth as well as in the mother’s breast milk.


Caffeine, Nicotine, and Alcohol consumption significantly increases the risk of pancreatic disease and ultimately, diabetes.


Coffee (caffeinated and non-caffeinated), Alcohol, and Smoking during pregnancy affects fetal breathing rates, movement, development, defects, and birth weight.


Smoking (Nicotine) increases the body’s need for caffeine, which is why the two often go together.

Strassnig et al: Increased caffeine and nicotine consumption in community-dwelling patients with schizophrenia. Schiz Res 2006 Sept;86(1-3):269-75

SUGGESTED ALTERNATIVES:

There are a large number of coffee and tea substitutes on the market today – many of them even taste good! I have listed only a few here but did not include any of the herb teas.

**Carob** is an excellent rehydration drink for adults or children, especially after bouts of diarrhea; it also has a calming effect and inhibits the growth of cancer cells.

- Avallone et al: Extraction and purification from Ceratonia siliqua of compounds acting on central and peripheral benzodiazepine receptors. Fitoterapia 2002 Aug;73(5):390-6
- Corsi et al: Antiproliferative effects of Ceratonia siliqua L. on mouse hepatocellular carcinoma cell line. Fitoterapia 2002 Dec;73(7-8):674-84

**Chicory** has long been a favourite roasted drink that is often combined with dandelion or other roots. Chicory protects the liver and improves mineral absorption, unlike coffee which depletes minerals.


**Green tea** has a little caffeine but it is a safer and healthier alternative to coffee. EGCG is an extract from Green Tea which acts as a proton-pump inhibitor (see Acid Blockers).

**Rooibos tea** is a healthier beverage choice that is also safe for babies. The flavour is similar to black tea.


*Khan & Gilani: Selective bronchodilatory effect of Rooibos tea (Aspalathus linearis) and its flavonoid, chrysoeriol. Eur J Nutr 2006 Dec;45(8):463-9


Teeccino coffee and tea substitutes have excellent flavours that offer energy boosts from nutrients rather than stimulants.

*teeccino.com/
CANCER

(Used to inhibit various types of cancer cells)

COMMON EXAMPLES:

- actinomycin D – Cosmegan
- aldesleukin – Proleukin
- aminoglutethimide – Cytadren
- anastrozole – Arimidex
- cisplatin – Platinol
- cyclophosphamide/cytophosphane – Endoxan, Cytoxan, Neosar, Procytox, Revimmune
- docetaxel – Taxotere
- doxorubicin – Adriamycin, Rubex
- epirubicin – Ellence, Pharmorubicin RDF
- exemestane – Aromasin
- fluorouracil – Adrucil, 5-FU
- gemcitabine – Gemzar
- methotrexate – Folex, Maxtrex, and others
- mitomycin – Mutamycin, Mytozytrex
- paclitaxel – Taxol, Onxal
- procarbazine – Matulane
- tamoxifen – Nolvadex-D, Tamofen, and others
- trastuzumab – Herceptin and others
- ... and many more

DEPLETE:

A, B1, B2, B6, B9, B12, C, E, choline, calcium, magnesium, potassium, selenium, zinc, L-carnitine, L-glutamine, glutathione/NAC, melatonin, essential fatty acids, CoQ10

Ironically, many of these nutrients are needed for reducing chemo side effects and for preventing cancer in the first place.

Artificial Sweeteners significantly increase the risk of cancers in adults and children born to mothers consuming such products. These sweeteners
contribute to neurotoxicity which is common in various diseases including diabetes and cancer. Some commonly used artificial sweeteners include: Aspartame (NutraSweet, Equal); Sucralose (Splenda); Saccharin (Sweet’N Low); Acesulfame-K (Sunette, Sweet One); Sugar Alcohols (Glycerol, Mannitol, Methanol, Sorbitol, Xylitol). In packaged food, many will be listed as an “E” followed by a number.

*Belpoggi et al: Results of long-term carcinogenicity bioassay on Sprague-Dawley rats exposed to aspartame administered in feed. Ann N Y Acad Sci 2006 Sep;1076:559-77
Barley, Wheat, and Rye help form carcinogens.

Behavioural changes (insomnia, depression, fatigue) are high in chemotherapy-treated breast cancer survivors.

Cow’s milk consumption increases the risk of cancers.

Cholesterol levels, a little on the high side, actually protect against cancer, especially in older people, while low cholesterol levels increase mortality.

Chronic use of NSAIDS (Analgesics) has been linked to a two-fold increased risk of blood cancers (leukemia, lymphoma, multiple myeloma).

Mammograms appear to be causing more harm than good. Studies over the past 20 years confirm that the low-radiation of mammograms may actually increase the risk of cancer. Despite an increase in this screening, breast cancer has also increased accordingly. False positives are estimated to be more than 63%, which calls for more screening and ultimately one or two mastectomies “just to be sure”. According to one study,

“By attending screening with mammography some women will avoid dying from breast cancer or receive less aggressive treatment. But many more women will be overdiagnosed, receive needless treatment, have a false-positive result, or live more years as a patient with breast cancer. Systematic reviews of the randomized trials have shown that for every 2000 women invited for mammography screening throughout 10 years, only 1 will have her life prolonged.” (Brodersen 2010)
*Autier et al: Breast cancer mortality in neighbouring European countries with different levels of screening but similar access to treatment: trend analysis of WHO mortality database. BMJ 2011;343:d4411
*Brodersen et al: The benefits and harms of screening for cancer with a focus on breast screening. Pol Arch Med Wewn 2010 Mar;120(3):89-94
*Colin & Foray: DNA damage induced by mammography in high family risk patients: Only one single view in screening. Breast 2011 Dec 31
*de González & Reeves: Mammographic screening before age 50 years in the UK: comparison of the radiation risks with the mortality benefits. Br J Cancer 2005 Sep 5;93(5):590-6
*Frankenberg et al: Enhanced neoplastic transformation by mammography X rays relative to 200 kVp X rays: indication for a strong dependence on photon energy of the RBE(M) for various end points. Radiat Res 2002 Jan;157(1):99-105
*Gomolka et al: Measurement of the initial levels of DNA damage in human lymphocytes induced by 29 kV X rays (mammography X rays) relative to 220 kV X rays and gamma rays. Radiat Res 2005 May;163(5):510-9
Mineral oil increases cancer risk, likely because it is a petroleum-based product.

Over diagnosing cancers is big business for many but it is a heart-wrenching ordeal for millions of people who are subjected to unnecessary treatments. This 2010 study revealed that 25% of all mammographies, 50% of lung cancer tests, and a whopping 60% of the PSA tests for prostate cancer were false.

Parabens are preservatives used in thousands of cosmetic, food and pharmaceutical products. These chemicals end up in breast tumors (which men can also develop) and influence fertility. According to one source, parabens are not as toxic as estradiols (HRTs), “Concerning the biological activity, parabens are 8,000-900,000-fold less estrogenic than estradiol, the most estrogenic one being the aromatic compound benzylparaben.” (Bazin). Still, when you compare wolves to lions, it is reasonable to assume both should be avoided.
**Pesticides** (organochlorine compounds, DDT, simazine, lindane and some of their active constituents) have long been associated with a significant increase in cancers as well as the risk for diabetes, thyroid diseases, hypertension, and reproductive problems.

- Band et al: Prostate cancer risk and exposure to pesticides in British Columbia farmers. Prostate 2010 Aug 26
- Landsman: The legalized killing of every person on earth (with pesticides). NaturalNews 2012 Mar 8
Retroviral vaccines may contribute to infections in prostate cancer.

Smoking not only causes a myriad of diseases but can render chemotherapy drugs ineffective.

Teriparatide, a drug used to treat osteoporosis, causes an increase in bone cancer especially those treated for the disease or at a high risk for developing it.

Watch out for the media. They often give misleading information, especially regarding nutrition. For example, take note of this headline: “Vitamin E Tied to Prostate Cancer Risk, Finds Study”, published on Fox News (and other media) October 12, 2011. The actual study states quite clearly that “There were statistically nonsignificant increased risks of prostate cancer in the vitamin E group”. See more studies listed below under Vitamin E that show vitamin E does prevent prostate cancer.

Suggested alternatives:

Aloe vera kills cancer cells and increases the effects of chemotherapy drugs. Aloe also protects against possible organ damage from petroleum products. It may, however, decrease the effect of cisplatin.
Aloe and Honey kill cancer cells. It is advisable to use only non-pasteurized honey as there are no healing properties to be found in grocery store honey.

- Tomasin et al: Oral administration of Aloe vera and honey reduces Walker tumour growth by decreasing cell proliferation and increasing apoptosis in tumour tissue. Phytother Res 2010 Sep 13

Andrographis (an herb from India known as the “king of bitters”) is more effective than doxorubicin for lymphoma.


Angelica sinensis (Dong quai) inhibits various cancer cells including cervical, colon, and brain – BUT, it still should not be taken by those with breast cancer. It also protects against radiation-induced pulmonary fibrosis and promotes blood cell formation if taken with Astragalus.

Antioxidant deficiencies increase the risk of breast cancer and abnormal cervical cells. An added benefit is that antioxidants significantly decrease chemotherapy side effects.

**Antioxidants**:


Anthocyanins, substances found in Grape skins, Red Rice and Black raspberries, have anti-tumor properties.


Apigenin and Luteolin are antioxidant flavonoids found together in a variety of fresh vegetables, which have anti-cancer properties. Apigenin also enhances the effects of the drug gemcitabine.


Apple, Apple Cider Vinegar, and Apple pectin have antitumor effects against various cancer cells. But do yourself a bigger favour and use only organically grown apples as the chemicals used to grow conventional ones significantly increase cancer risks. Apples are #1 on the pesticide list.


*Apples worst for pesticides on produce list. CBC News, Jun 14, 2011


**Apples** and **Curcumin** inhibit breast cancer cell processes that are resistant to chemotherapy. Curcumin is the active part of the food spice, Turmeric.


**Apricots** protect the male testes from low-dose radiation.


**Apricots** and **Beta carotene** have a potent protective effect against methotrexate-induced intestinal damage.

Arnica is a homeopathic pain remedy that also exhibits anti-cancer activity.


Artemisinin (found in such herbs as wormwood) inhibits tumor formation.


Asparagus contains a steroidal phytochemical which kills various cancer cells.


Astragalus is an herb that protects the body from the effects of stress. It also helps manage cancer-related anorexia, chronic fatigue and proves to be a beneficial complimentary treatment, even in children with leukemia.

*Astragalus. U Maryland Medical Center online

Avocado has anti-cancer properties.

Bananas regulate the immune system and inhibit HIV virus and cancer cells.

B vitamins significantly lower the risk of cancers while a deficiency increases the risk. Folic acid (B9) protects against methotrexate side effects and Inositol (B8) stimulates natural killer cells. (see Appendix for a list of B vitamins according to name and number)

Bee Propolis kills various cancer cells.

Beetroot significantly reduces tumor formation.
**Berberine**, a compound found in such plants as Barberry, Goldenseal, Goldenthread, and Oregon grape, has anti-cancer effects.

- *Hamsa & Kuttan*: Berberine inhibits pulmonary metastasis through down-regulation of MMP in metastatic B16F-10 melanoma cells. Phytother Res 2011 Sep 26
- *Serafin et al*: Different concentrations of berberine result in distinct cellular localization patterns and cell cycle effects in a melanoma cell line. Canc Chemother Pharmacol 2008 May;61(6):1007-18

**Berries** contain ellagic acid which inhibits estrogen growth and protects against the formation of various cancers and non-cancerous cells such as hemangioma.


**Beta glucans** are polysaccharides derived from oats, mushrooms, or yeasts. Beta glucans are safe and effectively used to inhibit various cancer cells, enhance bone marrow formation, prevent chemo-induced hair loss, prolong longevity, reduce the toxic effects of cancer medications, and generally improve the quality of life.

- *Burikhanov et al*: Suppressive effect of active hexose correlated compound (AHCC) on thymic apoptosis induced by dexamethasone in the rat. Geburtshilfe Frauenheilkd 1996 May;56(5):221-5


*Ito et al: Maitake beta-glucan enhances granulopoiesis and mobilization of granulocytes by increasing G-CSF production and modulating CXCR4/SDF-1 expression. Int Immunopharmacol 2009 Jun 30


*Lin et al: Maitake beta-glucan promotes recovery of leukocytes and myeloid cell function in peripheral blood from paclitaxel hematotoxicity. Cancer Immunol Immunother 2010 Feb 6


*Masuda et al: Maitake beta-glucan enhances therapeutic effect and reduces myelosuppression and nephrotoxicity of cisplatin in mice. Int Immunopharmacol 2009 May;9(5):620-6


*Matsushita et al: Combination therapy of active hexose correlated compound plus UFT significantly reduces the metastasis of rat mammary adenocarcinoma. Anticancer Drugs 1998;9:343-50


*Patchen & McVittie: Stimulated hemopoiesis and enhanced survival following glucan treatment in sublethally and lethally irradiated mice. Int J Immunopharmac 1985;7:923-32


Beta-sitosterol, one of many plant sterols, reduces the proliferation of various cancer cells; prevents an enlarged prostate; and reduces high cholesterol levels.

Black cumin seed is comparable and safer than 5-fluorouracil and the oil inhibits colon cancer without any side effects.

Black Cohosh has long been used to treat menopausal symptoms. Although there has been some concern that it contributes to breast cancer because of its phytoestrogen content, studies show the opposite; that it inhibits breast and prostate cancer cells. It can, however, interfere with such cancer treatments as radiation and chemotherapy.
Bromelain from Pineapple has anti-cancer properties that are superior to 5-fluorouracil.


**Burdock root** has anti-leukemia properties.


**Burzynski, MD** is the controversial head of a clinic that has a very high success rate in reversing various cancers. Read more about him and his battle to keep people well.

- www.burzynskimovie.com/
- www.burzynskiclinic.com/
- Adams: Burzynski documentary reveals true agenda of FDA and cancer industry to destroy cancer cures that really work. NaturalNews, July 14, 2011

**Calcium, Vitamin D and B9** prevent the proliferation of cancer cells.

- Richter et al: Inhibition of Western-diet induced hyperproliferation and hyperplasia in mouse colon by two sources of calcium. Carcinogen 1995 Nov;16(11):2685-9
**Calendula** is more effective than trolamine for skin healing after radiation.


**Capsaicin**, a substance in hot peppers, reduces pain and inhibits pancreatic cancer cells.


**Carnitine** is a substance made in the body from two amino acids, lysine and methionine. Carnitine is effective for treating fatigue and chemo-induced peripheral neuropathy.


**Carob** inhibits the growth of various cancer cells.

- Corsi et al: Antiproliferative effects of Ceratonia siliqua L. on mouse hepatocellular carcinoma cell line. Fitoterapia 2002 Dec;73(7-8):674-84

**Carvacrol** (from Oregano oil) significantly increases liver regeneration after partial hepatectomy. Synthetic carvacrol is toxic and should be avoided. It is found in such products as Lysol, Pinesol, and Listerine.


**Cat’s Claw** is an herb often used to boost the immune system but it also has anticancer activity against a variety of cancer cells, helps repair cells, and enhances recovery.

- Giménez et al: Cytotoxic effect of the pentacyclic oxindole alkaloid mitraphylline isolated from Uncaria tomentosa bark on human Ewing’s sarcoma and breast cancer cell lines. Planta Med 2009 Sep 1
**Cayenne pepper** reduces pain associated with metastatic cancer.


**Chaga mushrooms** have anti-cancer properties against various types of cells.


**Chinese plums** inhibit the development of breast cancer.


**Cinnamon** suppresses tumor growth.


**Clove** encourages cancer cell deaths.


**Coconut** and **Palm** oils significantly decrease various cancer cells.


Selvadurai et al: Palm tocotrienols inhibit proliferation of murine mammary cancer cells and induce expression of interleukin-24 mRNA. J Interferon Cytokine Res 2010 Dec;30(12):909-16

Coleus forskohlii is an Ayurvedic plant that has several health benefits including killing stomach cancer cells and preventing tumour-induced platelet aggregation (clumping).

- Xing et al: Inhibition of tumor cell proliferation by Coleon C. J Chemother 2008 Apr;20(2):238-45

CoQ10, Riboflavin (B2), and Niacin (B3) improve conditions of those undergoing tamoxifen therapy.


Cordyceps mushrooms have potent anti-cancer activity against a variety of cells; decrease the side effects of radiation; and the effects of bleomycin-induced conditions. Bleomycin is an antibiotic given to cancer patients receiving chemotherapy.


Cranberry kills ovarian cancer cells.


Creatine is a supplement well known to body builders but it also has other qualities important to those with muscular diseases or neurotoxic disorders including Parkinson’s or Huntington’s. Creatine is also proving to be a useful treatment for children who are undergoing chemotherapy for leukemia in that it reduces the side effect of body-fat accumulation caused by the treatment. It is safe for diabetics and those on dialysis.

Cruciferous vegetables have antitumour as well as antibacterial and antifungal properties.


Curcumin inhibits various cancer cells; works synergistically with paclitaxel to inhibit breast cancer; and reverses multidrug resistant osteosarcoma cells.


Cruciferous vegetables


Curcumin

*Chan et al: Inhibition of growth and sensitization to cisplatin-mediated killing of ovarian cancer cells by polyphenolic chemopreventive agents. Carcinogen 1982;3(11):1331-8


Curcumin-induced apoptosis in ovarian carcinoma cells is p53-independent and involves p38 mitogen-activated protein kinase activation and downregulation of Bcl-2 and survivin expression and Akt signaling. Mol Carcinog 2010 Jan;49(1):13-24

Curcumin induces G2/M arrest and apoptosis in cisplatin-resistant human ovarian cancer cells by modulating Akt and p38 MAPK. Canc Biol Ther 2007 Feb;6(2):178-84


Dandelion has many cleansing and anti-cancer effects, especially breast and prostate.


Vegetable and fruit intake and pancreatic cancer in a population-based case-control study in the San Francisco bay area. Cancer Epidemiol Biomarkers Prev 2005 Sep;14(9):2033-7


Giacomo Castelvetro’s salads. Anti-HER2 oncogene nutraceuticals since the 17th century? Clin Transl Oncol 2008 Jan;10(1):30-4


*Hamdi & Castellon: Oleuropein, a non-toxic olive iridoid, is an anti-tumor agent and cytoskeleton disruptor. Biochem Biophys Res Commun 2005 Sep 2;334(3):769-78


*Platt et al: Fruits and vegetables protect against the genotoxicity of heterocyclic aromatic amines activated by human xenobiotic-metabolizing enzymes expressed in immortal mammalian cells. Mutat Res 2010 Aug 14


EGCG, a potent extract from Green Tea, has anti-cancer properties.


Ji et al: Inhibition of proliferation and induction of apoptosis by EGCG in human osteogenic sarcoma (HOS) cells. Inflamm Bowel Dis 2000 May;6(2):77-84

Enzyme therapy improves the quality of life by reducing disease symptoms as well as side effects of cancer treatments. **Wobenzym** is a combination of plant-based and pancreatic enzymes that help treat various cancers.


Essential oils have proven anti-cancer benefits. A massage, using Lavender oil in a little carrier oil, is helpful for inducing sleep especially for those in hospice care. Oils studied include Artemisia, Clove, Citronella, Curcumin, Garlic, Geranium, Ginger, Lemon, Lemon balm (mellissa), Lime, Sandalwood, Thyme, and Verbena.


Dudai et al: Citral is a new inducer of caspase-3 in tumor cell lines. Planta Med 2005 May;71(5):484-8


Lim et al: Curcuma wenyujin extract induces apoptosis and inhibits proliferation of human cervical cancer cells in vitro and in vivo. Integr Canc Ther 2010 Feb 11


Essiac Tea has long been used as an alternative cancer treatment which is attributed to its potent antioxidant content and DNA-protective action. It contains 4 herbs:

- Burdock root (*Arctium lappa*)
- Slippery elm inner bark (*Ulmus fulva*)
- Sheep Sorrel (*Rumex acetosella*)
- Indian Rhubarb Root (*Rheum officinale*)


Eugenol (found in Cloves and some Honey) kills colon cancer cells.


Fennel has anti-tumor and antioxidant effects.


Fermented Papaya decreases toxic and oxidative damage of cells that could develop into cancer.


Fermented Wheat Germ, Fermented Soy (isoflavones) and Miso (another fermented food) have anti-cancer properties. Do not use non-fermented or GMO soy as these do not have the protective effects but rather can be hormone-disrupting at the very least.

Flaxseed contains lignans that have anti-cancer properties, especially for breast and prostate. It also protects the lungs against radiation-induced damage. Flaxseed can be safely taken with tamoxifen to reduce breast tumours and when taken with soy isoflavones, reduces the tumor-stimulating effects of non-fermented soy. ‘Secoisolariciresinol diglucoside’ is an antioxidant substance in flax as well as sunflower, pumpkin, and sesame seeds.
French beans have antitumor, antifungal, and anti-HIV effects.

GLA (gamma-linolenic acid is the “good” part of omega-6 fatty acids) suppresses bone cancer cell growth. GLA is found in such oils as borage, evening primrose, and black currant seeds.

Garlic has significant health properties including anti-cancer effects.

Ginkgo biloba (alone or with UV light and antioxidants) helps prevent cancer and protects the kidneys against damage from medications.

Ginger induces cancer cell death.

Goji berries/Wolfberry inhibit the growth of various cancers; increase platelets and white blood cells after radiation or chemotherapy; and generally boost the sense of wellbeing.
Grapes program the deaths of various cancer cells. Buy only organic grapes as they are #7 on the list of foods that are highest in pesticides which are known carcinogens.

Grapefruit – the Upside – inhibits various cancers and protects against radiation-induced bone marrow instability. However, it still cannot be eaten by anyone on medication – even a one-a-day aspirin.

Grapeseed, Blackseed, and Curcumin inhibit tumor growth and decrease liver damage caused by tamoxifen.

Graviola is a plant native to the Amazon forest and proves to be 10,000 times more effective than doxorubicin as an anti-cancer agent.

Greek Raisins prevent gastric cancers.

Green Tea helps prevent cancer while caffeinated drinks increase the risk.
Green Tea and Medicinal mushrooms reduce the risk of breast cancer.

Greens contain chlorophyll which enhances overall health and play a significant role in cancer prevention. Greens include various grass juices (alfalfa, barley, wheat etc), chlorella, kelp and other sea vegetables.

Grifola umbellata mushroom proves superior to mitomycin in preventing postoperative bladder cancer.

Guggul is an herb often recommended for cholesterol but it also has anti-tumor effects especially for bone cancer.

Haplamine, extracted from the plant Haplophyllum perforatum, is more potent than gemcitabine for treating pancreatic cancers.

Hazelnuts prevent cataract formation caused by doxorubicin.

Herbal combinations (Maral root, Rhodiola, Siberian ginseng and Schisandra) and (Geranium, mushroom, ginseng, and Dong quai) improve overall conditions of patients during chemo/radiation therapy.

Herbs versus Drugs – Herbs prove safer, better tolerated, and just as effective as the drugs. In this study, the herbal combination was Channel Flow by Health Concerns. The drugs that Channel Flow was compared to were estradiol (HRT), medroxyprogesterone (HRT), sulindac (Analgesic), and actinomycin D (Cancer).
Hibiscus is another herb that induces leukemia cell deaths.


Homeopathics are safe and effectively used in treating various cancers, chemotherapy-induced conditions, and menopausal symptoms in breast cancer survivors.


Honey is rich in flavonoids (raw, non-pasteurized or Manuka) which act as chemosensitizers in multi-drug resistant cancers as well as preventing chemo-induced neutropenia. Do not depend on grocery-store honey for medicinal help as these do not contain the health benefits.


* Jaganathan: Can flavonoids from honey alter multidrug resistance? Med Hypotheses 2011 Jan 17


Hops is a familiar calming herb used in the brewing industry but it also has the ability to induce the deaths of cancer cells and prohibit the growth and migration of liver cancer cells.


I-3 C (Indole-3 carbinol) regulates estrogen levels and reverses multidrug-resistant melanoma.

* Christensen & LeBlanc: Reversal of multidrug resistance in vivo by dietary administration of the phytochemical indole-3-carbinol. Cancer Res 1996 Feb 1;56(3):574-81

**Integrated Cancer Clinics** are highly recommended as they offer the best of all worlds – conventional and alternative. Find one in your area.

**Isoliquiritigenin** (a flavonoid found in such foods as licorice and soybeans) has antitumor effects against prostate cancer.


**Japanese apricots** inhibit growth of various cancer cells.


**Kaempferol** is a flavonoid found in certain fruits and vegetables which are known fighters of various types of cancer. When it was combined with **Quercetin**, another bioflavonoid known for its natural antihistamine effects, success rates increased even further.

* de Vrie et al: Consumption of quercetin and kaempferol in free-living subjects eating a variety of diets. Canc Lett 1997 Mar;114(1-2):141-44
**King trumpet mushroom** induces the death of leukemia cells.


**Kiwi fruit** has antioxidant properties that specifically prohibits the growth of cancer cells.

*Deters et al: Kiwi fruit (Actinidia chinensis L) polysaccharides exert stimulating effects on cell proliferation via enhanced growth factor receptors, energy production, and collagen synthesis of human keratinocytes, fibroblasts, and skin equivalents. Cell Biol Toxicol 2010 Aug 1

**Licorice root** is 10 times more potent than aminoglutethimide.


**Lion’s Mane mushroom** not only stimulates nerve regeneration but has anti-cancer properties as well.


**Liv52** (an Ayurvedic herbal combination) reduces radiation-induced bone marrow damage.

*Jagetia & Ganapathi: Treatment of mice with a herbal preparation (Liv. 52) reduces the frequency of radiation-induced chromosome damage in bone marrow. Mutat Res. 1991 Oct;253(2):123-6. PMID: 1922138

**Lycopene** from tomatoes decreases the risk of pancreatic cancer. Watermelon juice increases blood concentrations of lycopene and beta-carotene.

*Jian et al: Do dietary lycopene and other carotenoids protect against prostate cancer? Int J Cancer 2005 Mar 1;113(6):1010-4

**Maitake** and **Murill mushrooms** stimulate natural killer cell activity and improve the quality of life in those undergoing chemotherapy. Maitake also reduces immunosuppression by mitomycin-C.

Mango contains compounds that program the cell deaths of prostate and lymph node carcinomas.

*Prasad et al: Induction of apoptosis by lupeol and mango extract in mouse prostate and LNCaP cells. Nutr Cancer 2008;60:120-30

Mangosteen fruit has potent antioxidant properties that protect against cisplatin-induced kidney toxicity and cancer cell proliferation as well as preventing aromatase activity. Aromatase is an enzyme involved in the synthesis of estrogen.

*Du & Francis: Anthocyanins of Mangosteen (Garcinia mangostana). J Food Sc 1997;42:1667-1668
**Pamela Duff, RN, CSNC**


**Medicinal mushrooms** (Crimini, Maitake, Oyster, Portabella, White button) prevent breast cancer proliferation.


**Melatonin** inhibits various cancer cells (breast, cervical, colorectal, endometrial, leukemia, liver, pituitary, prostate, pancreatic, vaginal); decreases toxicity while increasing the effects of chemotherapy; protects against radiation-induced cataract formation; and reduces the risk of death due to cancer. **Vitamin B6** increases melatonin production.


*Girgert et al: Signal transduction of the melatonin receptor MT1 is disrupted in breast cancer cells by electromagnetic fields. Bioelectromagnat 2010 Apr;31(3):237-45


Melatonin and Vitamins C and E protect the kidneys against insecticide damage that often leads to cancer.

*Multekin et al: In vivo changes in antioxidant systems and protective role of melatonin and a combination of vitamin C and vitamin E on oxidative damage in erythrocytes induced by chlorpyrifos-ethyl in rats. Arch Toxicol 2001 Apr;75(2):88-96


Milk Thistle is a well-known herb used to strengthen the liver but it has other health benefits including preventing the formation of lung cancer cells.

*Tyagi et al: Silibinin modulates TNF-α and IFN-γ mediated signaling to regulate COX2 and iNOS expression in tumorigenic mouse lung epithelial LM2 cells. Wiley Online Lib 31 AUG 2011; Mol Carcinog 2011 Aug 31

Mistletoe extract is superior to gemcitabine in advanced pancreatic cancer and it prolongs the survival of ovarian cancer patients.

*Grossarth-Maticke & Ziegler: Prospective controlled cohort studies on long-term therapy of ovarian cancer patients with mistletoe (Viscum album L.) extracts iscador. Arzneimittel-Forsch 2007;57(10):665-78

Murrill mushrooms inhibit the growth of various cancer cells.


NAC (N-acetylcysteine) and Inositol (B8) inhibit cancer cells. NAC is an amino acid with antioxidant properties.


Natural Substances have proven to prevent various kinds of cancers. There are some 568 listed on GreenMedInfo.com with studies backing each one. Some are included in this section on cancer but for more, take a look and see why we should be looking at natural alternatives first rather than drugs.

- www.greenmedinfo.com/disease/cancers-all

Neem has anti-cancer compounds against several types of cancer. It also prevents tumor formation from such carcinogens as benzopyrenes (found in cigarette and wood smoke and in such burned foods as coffee). In addition, Neem enhances the effects of cyclophosphamide.

- Kumar et al: Nimbolide a limonoid from Azadirachta indica inhibits proliferation and induces apoptosis of human choriocarcinoma (BeWo) cells. Invest New Drugs 2009 Jun;27(3):246-52

Nettle has a positive effect on prostate cancer.


Niacin (B3), in high doses (along with a B-complex to avoid creating a deficiency of one or more of the other B-family members), decreases chromosome translocation frequency which plays a key role in the development of cancers. Niacin is also
vital for DNA repair, immune system function and decreasing the side effects of chemotherapy.

*Yong & Petersen: High dietary niacin intake is associated with decreased chromosome translocation frequency in airline pilots. Br J Nutr 2010 Oct 8;1-9

**Nightshade Family extracts** called Solasodine rhamnosyl glycosides (SRGs) significantly improve skin cancers, which researchers are calling them a “safe therapy for basal cell carcinoma”. They also appear to kill other cancer cells including breast, liver, lung, and leukemia while improving the effects of conventional cancer-drugs and may have a similar effect on the HSV-1 virus.

*Cham: Topical solasodine rhamnosyl glycosides derived from the eggplant treats large skin cancers: two case reports. Intern J Clin Med 2011 Sept;2(4):473-77
*Stunning New Way to Flush Away Skin Cancer. Mercola online, Dec 10, 2011

**Noni fruit** is a safe antioxidant food that reduces cancer risk in smokers; works synergistically with doxorubicin to inhibit breast cancer growth; displays anti-tumor potential in several cancers; protects the liver from chemotoxicity; and has a potent
detoxifying activity that is 40 times better than sulforaphane, an anti-cancer substance found in broccoli.

*Furusawa et al: Antitumour potential of a polysaccharide-rich substance from the fruit juice of Morinda citrifolia (Noni) on sarcoma 180 ascites tumour in mice. Phytother Res 2003 Dec;17(10):1158-64
*Lin et al: Activation of p38 MAPK by damnacanthal mediates apoptosis in SKHep 1 cells through the DR5/TRA1 and TNFR1/TNF-α and p53 pathways. Eur J Pharmacol 2010 Oct 14
*Samoylenko et al: New constituents from noni (Morinda citrifolia) fruit juice. J Agric Food Chem 2006;54(17):6398-6402
*West et al: Mineral variability among 177 commercial noni juices. Int J Food Sc Nutr 2006;57(7-8):556-8
**Nux-vomica** (homeopathic) stops the growth of human multiple myeloma cells.


**Olive leaf** and **Olive oil** prevent the formation of cancer cells with both having radioprotective properties.


*Andreadou et al: Acute doxorubicin cardiotoxicity is successfully treated with the phytochemical oleuropein through suppression of oxidative and nitrosative stress. J Mol Cell Cardiol 2007 Mar;42(3):549-58


*Menendez et al: Olive oil’s bitter principle reverses acquired autorestance to trastuzumab (Herceptin) in HER2-overexpressing breast cancer cells. BMC Cancer 2007;7:80


*Sirinanni et al: Oleuropein and hydroxytyrosol inhibit MCF-7 breast cancer cell proliferation interfering with ERK1/2 activation. Mol Nutr Food Res 2009 Dec 10


**Omega-3 fatty acids** halt cancer cell formation. Omega-3 is found in fish and flax-seed oils and sacha inchi seeds.


**Oranges** are full of flavonoids which inhibit tumor formation.


Oyster mushrooms inhibit various cancer cells; protect the liver from chemically-induced side effects; and guard all organs against oxidative damage.

Palm Oil is a good saturated fat that has numerous health benefits.

Papaya prevents many degenerative disease conditions including cancer. Even its seeds, which are known anti-parasitics, have anti-leukemia properties. Its antioxidant activity is similar to vitamin E and can safely be eaten by anyone, unless allergic.
Peaches work synergistically with cisplatin in treating solid tumors. Be sure to get organically-grown peaches as they are #4 on conventionally grown peaches are on the list of foods containing the most pesticides which are known carcinogens.

Peppermint reduces risk of lung cancer formation.

Phosphatidylcholine and Curcumin is a combination that has better damage-reducing effects for cancer or chemical exposure than Curcumin alone.

Piperine (found in black pepper) reduces DNA damage in lung cancer.

Plums (unripened) induce liver cancer cell death.

Plums and FOS (fructooligosaccharide – a prebiotic) reverses bone loss caused by removal of the ovaries.

Pomegranates contain four compounds (ellagic acid, caffeic acid, punicic acid, lut- eolin) which inhibit the growth of various cancer cells and protect leukocytes from radiation damage. Unlike tamoxifen and estradiol, pomegranates do not have side effects when exerting selective estrogen receptor modulator activity.
**Probiotics** help decrease some cancers and chemo-induced diarrhea.

- Chen et al: Saccharomyces boulardii inhibits EGF receptor signaling and intestinal tumor growth in Apc(min) mice. Gastroenterol 2009 Sep;137(3):914-23
- Ohara et al: Pre- and probiotics increase host-cell immunological competence, improve bowel movement, and prevent the onset of colon cancer—an analysis based on movements of intestinal microbiota. Rinsho Byori 2009 Jun;57(6):533-41

**Progesterone** has anti-cancer activity on breast, ovarian, and prostate cells.


**Quercetin** is a bioflavonoid that has anti-cancer effects.

**Red Sage** has anti-cancer properties.

**Red Yeast Rice** inhibits tumor growth and cell proliferation of various cancers even better than lovastatin (used to treat high cholesterol). Red Yeast Rice is produced from fermented rice with an added yeast (*Monascus purpurus*), which gives it a reddish colour.
*Yoon et al: Antioxidative and antimutagenic activities of 70% ethanolic extracts from four fungal mycelia-fermented specialty rices. J Radiol Prot 2009 Sep;29(3):429-43

**Reishi mushroom** inhibits various cancer cells; reverses chemo-drug resistance; protects the liver from chemically-induced damage; and generally increase longevity. It also appears to strongly draw out resveratrol and piceatannol in foods moreso than chemical formulas. Piceatannol is a natural analog of resveratrol.
*Dudhgaonkar et al: Suppression of the inflammatory response by triterpenes isolated from the mushroom Ganoderma lucidum. Int Immunopharmacol 2009 Aug 3
Reishi mushroom, Dong quai, Dang shen, and Geranium oil is a combination that improves the overall condition of those undergoing chemo or radiation treatments.

Resveratrol and Pterostilbene (which is related to Resveratrol and found in blueberries and red grape skins) are potent antioxidants that help prevent cancer as well as other diseases.

Resveratrol (alone or with Cinnamon and Piperine) is a potent antioxidant with anti-cancer properties and the combination appears to increase effects.
*Li et al: Resveratrol inhibits proliferation and promotes apoptosis of osteosarcoma cells. Eur J Pharmacol 2009 May 1;609(1-3):13-8
*No authors listed: Resveratrol induces senescence-like growth inhibition of U-2 OS cells associated with the instability of telomeric DNA and upregulation of BRCA1. Mech Ageing Dev 2009 Aug;130(8):528-37

Rooibos, Honeybush, and Green Tea prevent cancer cell formation.

Ruta graveolens (Rue), either in herbal or homeopathic form, inhibits colon, breast and prostate cancer cells.

Saffron possesses some anti-cancer properties.
*Aung et al: Crocin from Crocus sativus possesses significant anti-proliferation effects on human colorectal cancer cells. Exp Oncol 2007 Sep;29(3):175-80

SAMe (S-adenosylmethionine) is both a chemo-preventative and a treatment for liver cancer.

Seaweed, alone or with Fermented Rice bran, prevents the growth of breast and cervical cancer cells.
*Yuan et al: Extracts from dulse (Palmaria palmata) are effective antioxidants and inhibitors of cell proliferation in vitro. Food Chem Toxicol 2005 Jul;43(7):1073-81
Senna contains a compound that inhibits cancer cell formation.


Sesame seeds contain compounds that stop the growth of a wide variety of tumor cells including leukemia, multiple myeloma, and cancers of the colon, prostate, breast, pancreas, and lung.


Shiitake mushrooms inhibit the formation of various cancer cells and with Rice Bran, programs the death of leukemia cells.

*Ngai & Ng: Lentin, a novel and potent antifungal protein from shiitake mushroom with inhibitory effects on activity of human immunodeficiency virus-1 reverse transcriptase and proliferation of leukemia cells. Life Sci 2003 Nov 14;73(26):3363-74

Spirulina not only enhances the immune system but has significant anticancer, antiviral, and antifungal activity.


Stevia, an herb that is 200 times sweeter than table sugar, is often used by diabetics and non-diabetics alike because of its sweetness with no calories. It does have additional health benefits including inhibiting the formation of skin cancer.


Sulforaphane is a cancer-fighting compound found in cruciferous vegetables, especially broccoli sprouts.

*Chung et al: Chemoprevention of colonic aberrant crypt foci in Fischer rats by sulforaphane and phenethyl isothiocyanate. Carcinogen 2000;21(12):2287-91
Tart Cherries inhibit intestinal and colon cancer.


Theanine is a substance found in green tea that is often used to relieve stress but it also improves the function of anti-cancer drugs.

- Sugiyama & Sadzuka: Theanine and glutamate transporter inhibitors enhance the antitumor efficacy of chemotherapeutic agents. Biochim Biophys Acta 2003 Dec 5;1653(2):47-59

Tomato seed extract significantly inhibits leukemia cell proliferation.


Vitamin supplementation (natural sources only and not synthetically produced supplements as these can be toxic to the body) during breast cancer treatment is not only beneficial but helps to increase survival and lessen the chance of recurrence. The conclusion states: “Our results do not support the current recommendation that breast cancer patients should avoid use of vitamin supplements.”


Vitamin C inhibits cancer cell growth and fresh fruit and vegetables high in vitamins lower the risk of developing cancers.

Vitamin C, EGCG (from Green Tea), Lysine and Proline (amino acids) combination has strong anti-cancer activity.


Vitamin D3 prevents at least 16 types of cancers and decreases mortality rates (but not D2). Winter sunlight provides little protection (Webb) therefore, supplementation is a must, especially if you live in northern latitudes. A deficiency is linked to muscle pain in breast cancer survivors. There are hundreds of studies but just a few are listed here.

*Adams, Mike: New research shows vitamin D slashes risk of cancers by 77 percent; cancer industry refuses to support cancer prevention. NaturalNews, Friday, June 08, 2007 www.naturalnews.com/021892_vitamin_D_American_Cancer_Society.html


*Chlebowski et al: Calcium plus vitamin D supplementation and the risk of breast cancer. J Natl Cancer Inst 2008 Nov 19;100(22):1581-91


*Grant: 826 Highly Cited and Recent Papers on UVB and/or Vitamin D and Cancer (pdf online)

*Grant: Geographic variation of prostate cancer mortality rates in the USA; implications for prostate cancer risk related to vitamin D. Int J Canc 2004;111:470-1


*Grant: An estimate of premature cancer mortality in the United States due to inadequate doses of solar ultraviolet-B radiation, Cancer 2002b;94:1867-75


Nature’s Pharmacy: Evidence-Based Alternatives to Drugs

- Sears, Al MD and Herring, John. Your Best Health Under the Sun. 2007
- Sorensen, Marc MD. ABC Denver Ch 7 interview online: www.youtube.com/watch?v=JyOT8UcGhhg
- Tuohimaa et al: Both high and low levels of blood vitamin D are associated with a higher prostate cancer risk: a longitudinal, nested case-control study in the Nordic countries. Int J Canc 2004;108:104-8

Vitamin E, particularly gamma-enriched, helps prevent prostate and other cancers (contrary to media hype that says the opposite). The best vitamin E supplement is one that has all 4 tocopherols and 4 tocotrienols.

- Ju et al: Cancer-preventive activities of tocopherols and tocotrienols. Carcinogen 2009 Sep 11
- Luk et al: Gamma-tocotrienol as an effective agent in targeting prostate cancer stem cell-like population. Int J Canc 2010 Jul 8
- Watters et al: Associations between alpha-tocopherol, beta-carotene, and retinol and prostate cancer survival. Cancer Res 2009 May 1;69(9):3833-41
**Vitamin E, Green tea (EGCG), and Genistein** work synergistically with the chemotherapy drug Taxol (paclitaxel) to kill prostate cancer cells.

*Ping et al: Taxol synergizes with antioxidants in inhibiting normal refractory prostate cancer cell growth. Urol Oncol 2008 Sep 23*

**Vitex/Chasteberry** is often used to prevent menopausal symptoms in women and osteoporosis in men but it does have anti-cancer effects as well.


**White Button mushrooms** inhibit various cancers; stimulate natural killer cells; and contain significant quantities of bioavailable vitamin B12.

*Carrizo et al: The antineoplastic lectin of the common edible mushroom (Agaricus bisporus) has two binding sites, each specific for a different configuration at a single epimeric hydroxyl. J Biol Chem 2005 Mar 18;280(11):10614-23
*Wu et al: Dietary supplementation with white button mushroom enhances natural killer cell activity in C57BL/6 mice. Child Dev 2007 May-Jun;78(3):927-37

**Wormwood** is an herb used mainly to get rid of parasites but it does have anti-cancer effects as well.


**Zyflamend** by New Chapter kills various cancer cells and suppresses tumor growth in the prostate.


CHOLESTEROL- (LIPID-) LOWERING

(USED TO REDUCE CHOLESTEROL AND/OR TRIGLYCERIDE LEVELS)

COMMON EXAMPLES:

Bile Acid Sequestrants
cholestyramine – Questran and others
colestipol – Colestid

Fibrates
clofibrate – Atromid-S
fenofibrate – Tricor
gemfibrozil – Lopid

... and others

Statins (HMG-CoA reductase inhibitors)
atorvastatin – Lipitor
lovastatin – Mevacor
pravastatin – Pravachol, Selektine
rosuvastatin – Crestor
simvastatin – Zocor

... and others

DEPLETE:

A, beta carotene, B1, B3, B9, B12, D, E, K, calcium, copper, iron, magnesium, potassium, phosphorus, zinc and other minerals, essential fatty acids, CoQ10

Cholesterol-lowering drugs increase the risk of post-operative death.


Statins rapidly deplete CoQ10. Within two weeks, body stores of CoQ10 have decreased by 50% but this loss can be reversed with supplementation which goes on to improve congestive heart failure, brain function, myopathies and more.

*Diebold et al: Influences of lovastatin administration on the respiratory burst of leukocytes and the phosphorylation potential of mitochondria in guinea pigs. Biochim Biophys Acta 1994 Jul 6;1200(2):100-8
*Folkers et al: Lovastatin decreases coenzyme Q levels in humans. Proc Natl Acad Sci USA 1990 Nov;87(22):8931-4
*Galli & Iuliano: Do statins cause myopathy by lowering vitamin E levels? Med Hypotheses 2009 Nov 5
*Kucharská et al: Simvastatin decreased coenzyme Q in the left ventricle and skeletal muscle but not in the brain and liver in L-NAME-induced hypertension. Physiol Res 2007;56 Suppl 2:S49-54
*Silver et al: Effect of atorvastatin on left ventricular diastolic function and ability of coenzyme Q10 to reverse that dysfunction. Am J Cardiol 2004 Nov 15;94(10):1306-10

Statins are not the only medications that deplete CoQ10. It is estimated that there are some 200 medications that rob the body of CoQ10 including acid blockers, antacids, allergies, antiarrhythmics, antibiotics, antidepressants, blood thinners, blood pressures, cancers, cholesterol-lowering, diabetes, anti-retrovirals, and psychiatric meds.

*Cohen, 2011:126-129

Statins are associated with over 70 physical and mental conditions. Even the FDA admits that statin use contributes to hearing loss, muscle disease and diabetes. Despite more than 900 studies proving adverse effects, they still remain on the market with young children now being encouraged to take them.

*www.greenmedinfo.com/toxic-ingredient/statin-drugs
*Alberton et al: Adverse events associated with individual statin treatments for cardiovascular disease: an indirect comparison meta-analysis. QJM 2011 Sep 14
**Statins** induce testicular pain, insomnia, adverse behavior, multi-organ failure, and myopathies including **rhabdomyolysis** (destruction of the skeletal muscle tissue which can be fatal). The incidence of statin-induced
Rhabdomyolysis is higher in clinical practice than in controlled trials because high-risk subjects are usually excluded from studies (Antons). Statin toxicity also mimics other disorders including Guillain-Barré and viral hepatitis.

*Diebold et al: Influences of lovastatin administration on the respiratory burst of leukocytes and the phosphorylation potential of mitochondria in guinea pigs. Biochim Biophys Acta 1994 Jul 6;1200(2):100-8
*Frudakis et al: CYP2D6 polymorphism is associated with statin-induced muscle effects. Pharmacogenomics 2007, Sept;17(9):695-707
*Jamil & Iqbal: Rhabdomyolysis induced by a single dose of a statin has been reported. Heart 2004 Jan;90(1):e3
*Kiernan et al: Simvastatin induced rhabdomyolysis and an important clinical link with hypothyroidism. Int J Cardiol 2007 Jul 16;119(3):374-6
*Rabkin & Kong: Lovastatin-induced cardiac toxicity involves both oncotic and apoptotic cell death...
with the apoptotic component blunted by both caspase-2 and caspase-3 inhibitors. Toxicol Appl Pharmacol 2003 Dec 15;193(3):346–55


\[\textbf{Statins} \textit{alter platelet function and \underline{increase} LDL oxidation which is corrected with CoQ10 and Vitamin E.}\]


\[\textbf{Statins} \textit{increase numerous dysfunctions that range from mild to very serious including liver dysfunction, acute renal failure, and cataracts. Liver dysfunction is the highest with fluvastatin. This was found in studies of over 2,000,000 people in England and Wales.}\]


\[\textbf{Shocking, but true}, \textit{is the the fact that Lipitor is the number one selling drug of all time in any drug category worldwide.}\]

*www.reuters.com/article/2010/04/13/roche-avastin-drugs-idUSLDE63C0BC20100413

*www.forbes.com/2006/03/21/pfizer-merck-amgen-cx_mh_pk_0321topdrugs.html

*www.medindia.net/health_statistics/health_facts/top-ten-selling-drugs.htm

\[\textbf{High cholesterol does not} \textit{reduce risk of death or other coronary heart diseases. This 1992 study states in its conclusion that “Lowering serum cholesterol concentrations does not reduce mortality and is unlikely to prevent coronary heart disease. Claims of the opposite are based on preferential citation of supportive trials.”}\]


\[\textbf{Cholesterol levels, a little on the high side, actually protect against cancer, especially in older people. Low cholesterol levels increase mortality.}\]

*Al-Mallah et al: Low admission LDL-cholesterol is associated with increased 3-year all-cause mortality in patients with non ST segment elevation myocardial infarction. Canc 1995 Dec 15;76(12):2491–6

*Traissac et al: Significance of cholesterol levels in patients 75 years or older. Presse Med 2005 Nov
Cholesterol-lowering drugs contribute to skin disorders.


Meat: Irradiation and microwave cooking increase cell oxidation which causes irregularities in cholesterol and triglyceride levels and could lead to cancer.


Caution: There is a severe decrease in HDL cholesterol when taking the diabetes drug rosiglitazone together with fenofibrate.

*Schwing et al: Paradoxical severe decrease in high-density lipoprotein cholesterol due to rosiglitazone-fenofibrate interaction. Endocr Pract 2010 May-Jun;16(3):382-8

Suggested alternatives:

Açaí fruit is a potent antioxidant that improves cholesterol levels and prevents damage to regions of the brain and elsewhere in the body.


Alfalfa reduces high cholesterol levels and prevents plaque buildup in the arteries.


Alpha lipoic acid and Vitamin C (ascorbate form, not ascorbic) prevent LDL oxidation.

Almonds reduce biomarkers for lipid (fat) oxidation.


Apples and Pears have a significantly positive effect on blood lipid levels thereby decreasing the risk of atherosclerosis. But do yourself a favour, eat only organic fruit as apples are the number one food that contains pesticides, many of which cause cancer.

*Apples worst for pesticides on produce list. CBC News, Jun 14, 2011


*Setorki et al: Effects of apple juice on risk factors of lipid profile, inflammation and coagulation, endothelial markers and atherosclerotic lesions in high cholesterolemic rabbits. Lipids Health Dis 2009;8:39

*Shabecoff: 100 Chemicals for Apples Add Up to Enigma on Safety. NY Times Feb 5, 1989

Arginine (in the L-form) is an amino acid that improves arterial function in those with high cholesterol.


*Nematbakhsh et al: The prevention of endothelial dysfunction through endothelial cell apoptosis inhibition in a hypercholesterolemic rabbit model: the effect of L-arginine supplementation. Lipids Health Dis 2008;7:27

Ashwaganda significantly lowers cholesterol while regulating blood lipids.


Astaxanthin is one of many antioxidants which help regulate cholesterol levels.


Astragalus protects against homocysteine-induced injury to arteries.


Bamboo extract lowers cholesterol and blood lipids.

**Bananas** have an antioxidant effect thus preventing lipid oxidation.

**Barley grass** reduces LDL oxidation and improves overall health.
*Barley Grass. Drugs.com

**Basil oil** inhibits cholesterol synthesis. Basil oil can be made at home by placing the herb into extra-virgin olive oil and letting it stand at room temperature for a couple of weeks.
*Bravo et al: Ocimum basilicum ethanolic extract decreases cholesterol synthesis and lipid accumulation in human macrophages. J Carcinog 2005 Sep 2;4:15

**Bay leaves** improve blood sugar and fat levels in diabetics.

**Beans** help lower and regulate cholesterol levels. Beans are a better sustainable and healthier protein choice than meat.

**Beetroot** significantly reduces LDL cholesterol while raising HDL levels.

**Berberine-containing plants** (Barberry, Goldenseal, Oregon grape, Goldenthread) are known as strong anti-microbials that also help regulate cholesterol levels.
*Wu et al: Regulation of hepatic cholesterol biosynthesis by berberine during hyperhomocysteinemia. Am J Physiol Regul Integr Comp Physiol 2010 Dec 22

**Black Cumin** improves cholesterol levels.
**Black Raspberry Oil** significantly lowers triglycerides while regulating cholesterol levels.


**Black and Brown Rice** have cardio-protective properties that prevent arterial plaque formation.


**Buckwheat Sprouts** help regulate cholesterol levels while increasing antioxidant effects.


**Carnitine** lowers cholesterol in diabetics better than simvastatin. Carnitine is made in the body by two amino acids, lysine and methionine.

*Solfrizzi et al: Efficacy and tolerability of combined treatment with L-carnitine and simvastatin in lowering lipoprotein(a) serum levels in patients with type 2 diabetes mellitus. Atherosclerosis. 2006 Oct;188(2):455-61

**Carnosine** and **Histidine** (amino acids) delay diabetic deterioration and protect LDL cholesterol from being oxidized.

*Lee et al: Histidine and carnosine delay diabetic deterioration in mice and protect human low density lipoprotein against oxidation and glycation. Cont Lens Anterior Eye 2008 Jun;31(3):141-6; quiz 170

**Celery, Chicory leaves** and **Barley** protect the liver in those with high cholesterol levels.


**Chickpeas/Garbanzo beans** have cholesterol-lowering effects.

*Pittaway et al: Dietary supplementation with chickpeas for at least 5 weeks results in small but significant reductions in serum total and low-density lipoprotein cholesterols in adult women and men. Ann Nutr Metab 2006;50(6):512-8

**Cherries** are potent anitoxidants that protect cholesterol levels.


**Cinnamon** significantly improves blood lipid profiles.


**Cocoa** (dark unsweetened) reduces blood cholesterol levels but not sweetened milk chocolate.
**Baba et al:** Continuous intake of polyphenolic compounds containing cocoa powder reduces LDL oxidative susceptibility and has beneficial effects on plasma HDL-cholesterol concentrations in humans. Proc Natl Acad Sci USA 2009 Jun 2;106(22):9033-8

**Hirano et al:** Antioxidant effects of polyphenols in chocolate on low-density lipoprotein both in vitro and ex vivo. Mutat Res 1999 Apr 6;440(2):181-8


**Mellor et al:** High-cocoa polyphenol-rich chocolate improves HDL cholesterol in Type 2 diabetes patients. Diabet Med 2010 Nov;27(11):1318-21

**Mursu et al:** Dark chocolate consumption increases HDL cholesterol concentration and cholate fatty acids may inhibit lipid peroxidation in healthy humans. Food Chem Toxicol 2008 Dec;46(12):3586-92

**No authors listed:** Effects of cocoa powder and dark chocolate on LDL oxidative susceptibility and prostaglandin concentrations in humans. Am J Clin Nutr 2001 Nov;74(5):596-602


**Wan et al:** Effects of cocoa powder and dark chocolate on LDL oxidative susceptibility and prostaglandin concentrations in humans. Am J Clin Nutr 2001 Nov;74(5):596-602

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**Coconut (and Palm) Oil, Coconut Water, Coconut Milk and Coconut Protein** contain MCTs (medium chain triglycerides) which lower LDL cholesterol and triglycerides while increasing HDL cholesterol, similar to statins but without the side effects. They also have multi-system protective actions.

**Assunção et al:** Effects of dietary coconut oil on the biochemical and anthropometric profiles of women presenting abdominal obesity. Lipids 2009 Jul;44(7):593-601

**Bester et al:** Dietary red palm oil supplementation reduces myocardial infarct size in an isolated perfused rat heart model. J Clin Endocrinol Metab 2002 Mar;87(3):1010-4

**Engelbrecht et al:** The effect of dietary red palm oil on the functional recovery of the ischaemic/reperfused isolated rat heart: the involvement of the PI3-kinase signaling pathway. Lipids Health Dis 2009;8:18

**Feranil et al:** Coconut oil is associated with a beneficial lipid profile in pre-menopausal women in the Philippines. Asia Pac J Clin Nutr 2011;20(2):190-5

**Hargrave et al:** Dietary coconut oil increases conjugated linoleic acid-induced body fat loss in mice independent of essential fatty acid deficiency. Biochim Biophys Acta 2005 Oct;1737(1):52-60

**Kruger et al:** Dietary red palm oil reduces ischaemia-reperfusion injury in rats fed a hypercholesterolaemic diet. Br J Nutr 2007 Apr;97(4):653-60

**McNamara:** Palm oil and health: a case of manipulated perception and misuse of science. J Am Coll Nutr 2010 Jun;29(3 Suppl):24OS-244S


**Nair et al:** Coconut kernel protein modifies the effect of coconut oil on serum lipids. Plant Foods Hum Nutr 1999;53(2):133-44

**Narang et al:** Dietary palm olein oil augments cardiac antioxidant enzymes and protects against isoproterenol-induced myocardial necrosis in rats. J Med Assoc Thai 2008 Mar;91(3):400-7

**Narang et al:** Effect of dietary palm olein oil on oxidative stress associated with ischemic-reperfusion injury in isolated rat heart. BMC Pharmacol 2004 Nov 9;4:29

**Nevin & Rajamohan:** Wet and dry extraction of coconut oil: impact on lipid metabolic and antioxidant status in cholesterol coadministered rats. Can J Physiol Pharmacol 2009 Aug;87(8):610-6

**Nevin & Rajamohan:** Beneficial effects of virgin coconut oil on lipid parameters and in vitro LDL oxidation. Clin Biochem 2004 Sep;37(3):830-5


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CoQ10 is a vital part of every cell in the body for ATP (energy) production. It helps vitamin E function better and is necessary in overcoming symptoms caused by statin drugs. The ubiquinol form is better absorbed than the cheaper ubiquinone form.

CoQ10

Coriander seeds have cholesterol-lowering effects.

Cranberries reduce cholesterol oxidation.
**Cruciferous Vegetables** contain a substance called **Sulforaphane** which has a beneficial effect on HDL cholesterol.


**Curcumin** (a potent part of the food spice **Turmeric**) has cholesterol-lowering properties and can prevent in-stent restenosis after angioplasty.

* Feng et al: Curcumin inhibits cholesterol uptake in Caco-2 cells by down-regulation of NPC1L1 expression. Lipids Health Dis 2010;9:40
* Kang & Chen: Curcumin eliminates oxidized LDL roles in activating hepatic stellate cells by suppressing gene expression of lectin-like oxidized LDL receptor-1. Lab Invest 2009 Nov;89(11):1275-90
* Mahfouz et al: Curcumin prevents the oxidation and lipid modification of LDL and its inhibition of prostacyclin generation by endothelial cells in culture. Prostaglandins Other Lipid Mediat 2009 Nov;90(1-2):13-20
* Quiles et al: Curcuma longa extract supplementation reduces oxidative stress and attenuates aortic fatty streak development in rabbits. Arterioscler Thromb Vasc Biol 2002 Jul 1;22(7):1225-31

**Curcumin, Capsaicin** (found in hot peppers), and **Garlic** keep cholesterol levels in check.

Dandelion lowers lipid levels and prevents the formation of kidney and bladder stones.

Dates, although high in natural sugars, do not have detrimental effects on blood sugar or cholesterol levels.

Diet rich in fruit, vegetables, and fiber reduce abdominal fat as well as cholesterol levels which significantly reduces the risk of coronary heart disease.
**Dill weed** helps regulate blood lipid levels.


**Eggplant** has a positive effect on blood lipid levels.


**Essential Oils** (Lemon, Oregano, Thyme) prevent LDL oxidation.


**Fiber** (barley, flaxseed, oats, psyllium, konjac root) improves cholesterol levels, prevents diabetes, and helps with weight loss.

* Queenan et al: Concentrated oat beta-glucan, a fermentable fiber, lowers serum cholesterol in hypercholesterolemic adults in a randomized controlled trial. Nutr J 2007;6:6
**Cholesterol-(Lipid-) Lowering**

Pamela Duff, RN, CSNC


**Fish oil** and **Coconut fat** taken during pregnancy prevents stress-induced changes in early post-delivery development of the infant.


**Flavonoids** increase antioxidant effects.


**Flaxseed** reduces circulating total and LDL-cholesterol levels and with **Pumpkin seeds**, protects the arteries and liver. Flaxseed is also more protective than soy protein against increasing triglyceride levels and fatty liver.


**Folic acid** (**B9**) prevents LDL oxidation. Do not take one B vitamin without a B-complex as it will increase the likelihood of a deficiency in one or more of the other B-family members.


**Fo-Ti root** protects arteries.


**Fruit-enriched diet** lowers LDL-cholesterol levels better than a fruit-free diet and helps the obese, with high cholesterol levels, lose weight.


**Garlic** has antioxidant activity that improves blood lipid metabolism.


**Garlic (aged), B-complex** and **Arginine** prevent atherosclerosis.

* Budoff et al: Aged garlic extract supplemented with B vitamins, folic acid and L-arginine retards the progression of subclinical atherosclerosis: a randomized clinical trial. Breast Cancer Res Treat 2004 Feb;83(3):221-31
Ginger has significant cholesterol management effects.

Goji berries/Wolfberry have neuroprotective properties against homocysteine-induced toxicity and are comparable to lovastatin but without the side-effects.

Goldenseal is a natural LDL-lowering herb.

Grape polyphenol protects against non-alcoholic fatty liver disease.

Grapes and Grapeseed extract have potent antioxidant effects that protect against LDL oxidation and coronary artery disease in general. Buy only organic grapes as non-organic grapes are high on the list of foods containing a good number of pesticides.
  *Day et al: Effect of concentrated red grape juice consumption on serum antioxidant capacity and low-density lipoprotein oxidation. Ann Nutr Metab 1997;41:353-357
  *Miyagi et al: Inhibition of human low-density lipoprotein oxidation by flavonoids in red wine and grape juice. Am J Cardio 1997, Dec;80(12):1627-31
  *Shafiee et al: Grape and grape seed extract capacities at protecting LDL against oxidation generated by Cu2+, AAPH or SIN-1 and at decreasing superoxide THP-1 cell production. A comparison to other extracts or compounds. Free Radic Res 2003 May;37(5):573-84
  *Stein et al: Purple grape juice improves endothelial function and reduces the susceptibility of LDL cholesterol to oxidation in patients with coronary artery disease. Circ 1999;100:1050-1055

Grapefruit – the Upside – even though it cannot be taken with medications, grapefruit does have many health benefits, including normalizing triglyceride levels, but only for those not on any medication (including the once-a-day aspirin).
Cholesterol-lowering


**Grapefruit seed extract** lowers cholesterol and blood sugar levels.


**Green Tea** reduces LDL blood levels.


**Guggulipid** (extract of guggul gum) inhibits LDL oxidation and lowers blood fats.


**Gymnema**, an herb usually sold for improving blood sugar levels, also improves serum cholesterol and triglyceride levels.


**Hawthorn** and **Kiwi fruit** are superior to statins in lowering cholesterol levels and without the side effects.


**Hibiscus** improves blood pressure and cholesterol levels in diabetics.


**High fructose corn syrup (HFCS)** and **Fructose** are added to processed foods. They significantly increase the risk factors for cardiovascular disease.


*Stanhope et al: Consumption of fructose and high fructose corn syrup increase postprandial triglycerides, LDL-cholesterol, and apolipoprotein-B in young men and women. J Clin Endocrinol Metab 2011 Aug 17

**Honokiol**, a Magnolia extract, prevents LDL oxidation.


**Horehound**, an herb noted for its lung-cleansing effects during colds, also has antioxidant properties that prevent LDL oxidation.


**Kale juice** significantly improves blood cholesterol levels.

**Kiwifruit** reduces blood triglycerides as well as having anti-platelet effects.


**Lecithin**, a phospholipid, helps restore cholesterol to normal levels.


**Licorice root** contains a substance called Glabridin which prevents LDL oxidation.


**Lycopene** is another antioxidant that prevents LDL oxidation.

* Fuhrman et al: Lycopene synergistically inhibits LDL oxidation in combination with vitamin E, glabridin, rosmarinic acid, carnosic acid, or garlic. Antioxid Redox Signal 2000 Fall;2(3):491-506

**Magnesium** reduces high cholesterol and triglyceride levels by functioning in a safer statin-like manner.


**Medicinal mushrooms** (Cordyceps, Oyster, Shiitake) normalize blood lipid levels and prevent the formation of atherosclerosis.

* Bobek, S Galbavý: The oyster mushroom (Pleurotus ostreatus) effectively prevents the development of atherosclerosis in rabbits. Ceska Slov Farm 1999 Sep;48(5):226-30

**Melatonin** prevents free radical fatty acid damage to the liver caused by exposure to the chemical toxin benzene.

* Sharma & Rana: Melatonin inhibits benzene-induced lipid peroxidation in rat liver. Arh Hig Rada Toksikol 2010 Mar;61(1):11-8

**Milk Thistle** is an herb long-used to improve liver function and does not interact with statins.


**Moringa oleifera** (Miracle Tree) has a cholesterol lowering effects.
**Niacin (B3) but not Niacinamide** raises HDL cholesterol while lowering phosphate levels in dialysis patients.

*Harririkshnan et al: Efficacy and safety of combination of extended release niacin and atorvastatin in patients with low levels of high density lipoprotein cholesterol. Indian Heart J 2008 May-Jun;60(3):215-22
*Murray, 2009:143-146
*Sampathkumar: Niacin and analogs for phosphate control in dialysis--perspective from a developing country. Int Urol Nephrol 2008 Nov 27

**Noni fruit, leaves, and root extracts** help regulate cholesterol levels. The juice is safe to take even at almost a litre a day.


**Nutmeg** has some LDL-protective properties.

*Kwon et al: Low-density lipoprotein (LDL)-antioxidant lignans from Myristica fragrans seeds. Explore (NY) 2007 Nov-Dec;3(6):573-84

**Nuts** (macadamias, pecans, pine nuts, pistachios) and **Seeds** (flaxseed, hempseed, sesame) improve cholesterol levels.

Oats contains beta-glucans which significantly lower LDL while improving HDL cholesterol.

Oats and Amaranth help maintain good cholesterol levels.

Olive leaf and Olive oil help prevent arterial damage by reducing LDL oxidation while increasing HDL levels. Hydroxytyrosol and Oleuropein are the antioxidants found in good quality extra-virgin olive oils.
Omega fatty acids (flax, pumpkin seeds, krill oil) have antioxidant effects.

*Fabiani et al: Oxidative DNA damage is prevented by extracts of olive oil, hydroxytyrosol, and other olive phenolic compounds in human blood mononuclear cells and HL60 cells. J Nutr 2008 Aug;138(8):1411-6
*Moreno et al: Effect of phenolic compounds of virgin olive oil on LDL oxidation resistance. Med Clin (Barc) 2003 Feb 8;120(4):128-31

Orange juice improves blood lipid levels.


Oyster mushrooms reduce the production and secretion of LDL cholesterol.


Peanuts help regulate cholesterol levels. Eat only organically grown peanuts as others often contain molds that cause other health issues.

*O’Byrne et al: Low fat-monounsaturated rich diets containing high-oleic peanuts improve serum lipoprotein profiles. Lipids 1997 Jul;32(7):687-95

Persimmon leaves improve cholesterol levels.


Phellodendron and Citrus peel improve blood pressure, cholesterol and blood sugar levels.
**Nature’s Pharmacy: Evidence-Based Alternatives to Drugs**


**Pineapple leaf extract** has cholesterol-controlling effects similar to statins but does not have the side effects attributed to statin drugs.


**Plant Sterols** are cholesterol-like compounds found in vegetable oils, nuts, and legumes. Alone, they are required by every cell membrane. Together with Sytrinol (a citrus bioflavonoid combination), plant sterols are notably more effective in regulating cholesterol levels.

* Abumweis et al: Plant sterols/stanols as cholesterol lowering agents: A meta-analysis of randomized controlled trials. Food Nutr Res 2008;52. doi: 10.3402/fnr.v52i0.1811
* Murray, 2009:146-147

**Policosanol** is a potent antioxidant that is superior to statins and fibrates.

* Nikitin et al: Results of the multicenter controlled study of the hypolipidemic drug policosanol in Russia. Ter Arkh 2000;72(12):7-10

**Pomegranates** reduce blood pressure and LDL oxidation and improve metabolism of the obese. BUT, like grapefruit, pomegranates should not be eaten if taking medications.

* Sorokin et al: Rhabdomyolysis associated with pomegranate juice consumption. Am J Cardiol 2006 Sept;98(5):705-6

**Probiotics** help medications function better and assist in manufacturing some of the nutrients lost by the medications, especially some of the B vitamins.
Psyllium has significant effect in lowering LDL cholesterol in both men and women.

Psyllium and Oat Bran is an effective combination for lowering LDL cholesterol.

Quercetin (a bioflavonoid) reduces LDL oxidation and improves blood pressure.

Red Beets significantly lower LDL while increasing HDL cholesterol.

Red Yeast Rice (produced from fermented rice with an added yeast, Monascus purpurus, which gives it a reddish hue) is proving to be more effective than statins and much safer — even for children with high cholesterol. RYR has strong antioxidant activity and suppresses the development of fat cells.
Red Yeast Rice and Omega-3 have similar actions to statins but much safer.


Red Yeast Rice, Berberine and Policosanol lower lipid levels and increase insulin sensitivity in those with high cholesterol.

* Affuso et al: Effects of a nutraceutical combination (berberine, red yeast rice and policosanols) on lipid levels and endothelial function randomized, double-blind, placebo-controlled study. Nutr Metab Cardiovasc Dis 2009 Aug 19

Red Yeast Rice and Nattokinase (but not nattokinase alone) have potent effects on blood lipid levels.

* Yang et al: Combined nattokinase with red yeast rice but not nattokinase alone has potent effects on blood lipids in human subjects with hyperlipidemia. Asia Pac J Clin Nutr 2009;18(3):310-7

Resveratrol (found in grape skins) is a potent antioxidant that protects LDL cholesterol from oxidation.

* Lin et al: Resveratrol protects against oxidized LDL-induced breakage of the blood-brain barrier by lessening disruption of tight junctions and apoptotic insults to mouse cerebrovascular endothelial cells. J Nutr 2010 Dec;140(12):2187-92
* Rocha et al: Weekend ethanol consumption and high-sucrose diet: resveratrol effects on energy expenditure, substrate oxidation, lipid profile, oxidative stress and hepatic energy metabolism. Alcohol Alcohol 2011 Jan-Feb;46(1):10-6

**Schisandra** decreases LDL oxidation.


**Sea Buckthorn** (omega-7) prevents LDL oxidation.


**Strawberries** have cholesterol-lowering effects. Be sure to buy **organic** or you will be exposed to many added chemicals that would prevent them from being a healthy alternative.

*Apples Worst for Pesticides on Produce List. CBC News June 14, 2011
*Evans: Strawberries are About to Become More Toxic. NaturalNews June 23, 2010

**Tart Cherries** alter abdominal fat and inflammation in the obese.


**Vitamin C** (ascorbate forms are best) protects smooth muscle cells against death from oxidation.


**Vitamin D deficiency**, caused by statins, is associated with myositis-myalgia.

*Ahmed et al: Low serum 25 (OH) vitamin D levels (<32 ng/mL) are associated with reversible myositis-myalgia in statin-treated patients. Transl Res 2009 Jan;153(1):11-6

**Vitamin E** (tocopherols) decreases LDL oxidation – but only the natural d-form and not the synthetic dl-form. **Tocotrienols** are similar in structure to Vitamin E toco-pherols. Both are powerful antioxidants that help lower triglyceride levels. The best vitamin E supplement is one that contains all 4 tocopherols and 4 tocotrienols.


**White button mushrooms** lower blood sugar and cholesterol.

CIRCULATION

(Used to treat intermittent claudication/peripheral artery disease)

Common examples:

- pentoxifylline – Flexital, Pentox, Pentoxil, Trental
- cilostazol – Pletal
- ticlopidine – Ticlid

Deplete: E

Suggested alternatives:

Amino Acids (Arginine, Carnitine, Taurine) improve symptoms of intermittent claudication (burning, crampy legs) caused by poor circulation.


Antioxidants (A [carotenoids], C, E), along with Fiber and Omega fatty acids and no smoking, prevent intermittent claudication.

* Törnwall et al: High intakes of antioxidant vitamins may be protective against intermittent claudication. Am J Epidemiol 2000 May;151(9):892-901

Exercise and Massage improve circulation and physical capacity.

* Sefton et al: Therapeutic massage of the neck and shoulders produces changes in peripheral blood flow when assessed with dynamic infrared thermography. J Altern Complement Med 2010 Jul;16(7):723-32
Black currant and Orange juices improve peripheral artery disease and thus circulation. Likely the reason vitamin E did not respond as well in this study is because they only used 15 mg.

*Dalgård et al: Supplementation with orange and blackcurrant juice, but not vitamin E, improves inflammatory markers in patients with peripheral arterial disease. Br J Nutr 2009 Jan;101(2):263-9

Garlic (and other blood thinning herbs) improve circulation.


Ginkgo biloba improves circulation, which is why it often works to improve memory.


Grapes help prevent coronary artery disease. Buy only organic grapes as non-organic grapes are #7 on the list of foods that are highest in pesticides which are known carcinogens.


Herbal combination called Padma, a long-established Tibetan formula manufactured in Switzerland, is well tolerated and effective for intermittent claudication.


Japanese Apricots improve blood flow and inhibit the development of cardiovascular disease.


Lemon juice is an antioxidant with cardioprotective properties that act by suppressing blood adhesion molecules.


Medicinal mushrooms help prevent a number of diseases including atherosclerosis.

*Mori et al: Antiatherosclerotic effect of the edible mushrooms Pleurotus eryngii (Eringi), Grifola frondosa (Maitake), and Hypsizygus marmoreus (Burashimeji) in apolipoprotein E-deficient mice. Nutr Res 2008 May;28(5):335-42

Noni fruit improves the growth of new blood vessels, thereby increasing blood flow which results in better cognitive function and a decrease in the risk of ischemic attacks (strokes).

*Hornick et al: Inhibition of angiogenic initiation and disruption of newly established human vascular networks by juice from Morinda citrifolia (noni). Angiog 6(2):143-149


*Muto et al: Morinda citrifolia fruit reduces stress-induced impairment of cognitive function accompanied by vasculature improvement in mice. Physiol Behav 2010 Sep 1;101(2):211-7

*Samoylenko et al: New constituents from noni (Morinda citrifolia) fruit juice. J Agric Food Chem 2006;54(17):6398-6402


**Omega fatty acids** help protect the arteries from developing peripheral disorders involving circulation.

*Leng et al: A combination of GLA and EPA may have therapeutic value in peripheral arterial disease. Clin Nutr 1998 Dec;17(6):265-71

*Madden et al: Fish oil induced increase in walking distance, but not ankle brachial pressure index, in peripheral arterial disease is dependent on both body mass index and inflammatory genotype. Prostaglan Leukot Ess Fat Acids 2007 Jun;76(6):331-40

**Policosanol** is a potent antioxidant that is superior to ticlopidine, statins, and aspirin for improving blood flow and preventing arterial disease.


**Rosemary** is an herb that improves blood circulation.

*Sagorchev et al: Investigations into the specific effects of rosemary oil at the receptor level. Phytomed 2009 Dec 22

**Vitamin E** is superior to pentoxifylline in preventing pulmonary fibrosis.

DIABETES

(Used to control blood sugar levels)

COMMON EXAMPLES:

**Sulfonylureas**
- acetohexamide – Dymelor
- chlorpropamide – Diabinese and others
- glimepiride – Amaryl
- glipizide – Glucotrol
- glyburide – DiaBeta, Glynase, Micronase and others
- tolazamide – Tolinate
- tolbutilamide – Apo-Tolbutamide, Novo-Butamide

**Others**
- diazoxide – Proglycem
- exenatide – Byetta
- Insulins – Humulin, Humalog, Novolin, PenFill and others
- metformin – Glucophage, Glumetza, Fortamet and others
- metformin combinations – Actoplus Met, Avandamet, GlucoVance and others
- miglitol – Glyset
- nateglinide – Starlix
- pioglitazone – Actos
- repaglinide – Prandin
- rosiglitazone – Avandia

DEPLETE:

B1, B3, B6, B9, B12, magnesium, glucosamine, CoQ10, DHEA

🌳 **Hyperglycemic herbs (increase) blood sugar levels:** Celery seed, Gotu kola, Rosemary

🌿 **Hypoglycemic herbs (reduce) blood sugar levels:** Alfalfa, Aloe vera, Banaba, Bilberry leaves, Bitter melon, Burdock root, Cinnamon, Curcumin, Dandelion root, Fenugreek seeds, Ginseng (Siberian and Panax), Goldenseal, Gymnema, Holy basil, Myrrh, Marshmallow root, Onions, Prickly pear fruit, Stinging nettle
Artificial Sweeteners can increase diabetic and cancer conditions as well as cause a host of other diseases and disorders. These sweeteners contribute to neurotoxicity (destruction of the nervous system) which is common in various diseases including diabetes and cancer. Some commonly used artificial sweeteners include: Aspartame (NutraSweet, Equal); Sucralose (Splenda); Saccharin (Sweet’N Low); Acesulfame-K (Sunette, Sweet One); Sugar Alcohols (Glycerol, Mannitol, Methanol, Sorbitol, Xylitol). In packaged food, many will be listed as an “E” followed by a number.

*Aston-Mourney et al: Too much of a good thing: why it is bad to stimulate the beta cell to secrete insulin. Diabetologia 2008 Apr;51(4):540-5
*Soh et al: Fate of sucralose through environmental and water treatment processes and impact on plant indicator species. Environ Sci Technol 2011 Jan 14 [ahead of print]

Aspirin stimulates insulin and glucagon secretion thus increasing glucose tolerance in both diabetics and non-diabetics alike.


Caffeine and Smoking increase the risk of diabetes.

*No authors listed: Caffeine May Hamper Blood Sugar Control; Caffeine at Mealtime May Cause Problems for People With Type 2 Diabetes. WebMD Health News July 26, 2004

Diabetic medications increase the risk of cancer-related mortality, congestive heart failure, and coronary artery disease.
Metformin, in particular, depletes the body of B12 (and the intrinsic factor needed to absorb it) along with folic acid (B9), and CoQ10 (also needed by the heart) (Cass 2007:45). Deficiencies of B12 and B9 increase the risk of certain anemias and raise homocysteine levels which lead to heart disease. Metformin, Glyburide and Sulphonylureas increase the risk of cardiovascular mortality and hypothyroidism.

Microwave cooked Carrots (as an example of just one food) increases blood glucose and insulin levels; reduces the feeling of being full; and depletes the vitamin A (beta carotene) content as opposed to raw food.

Neuropathy is often a painful side effect of diabetes and made worse by other causes including gluten sensitivity and the antibiotic isoniazid.

Pesticides (organochlorine compounds, DDT, simazine, lindane and some of their active constituents) have long been associated with cancer development but they have also been linked to numerous other dangerous health conditions including diabetes and a higher than normal rate of neuropathies.

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*Lee et al: Association of organochlorine pesticides with peripheral neuropathy in patients with diabetes or impaired fasting glucose. Diabetes 2008 Nov;57(1):3108-11

**Rosiglitazone** (Avandia) decreases bone mass and strength and increases the risk of heart failure.

**Sulfonylureas** and **Insulins** increase the risk of cancer-related mortality and cardiovascular events.
*Bowker et al: Increased cancer-related mortality for patients with type 2 diabetes who use sulfonylureas or insulin. Diabet Care 2006 Feb;29(2):254-8

**Suggested alternatives:**

**Acerola fruit**, which is high in vitamin C, lowers blood sugar levels.

**Agrimony** lowers blood sugar levels.
*Cehn et al: Studies on the lowering blood sugar substances from agrimony (I)]. Zhong Yao Cai 2010 May;33(5):724-6

**Agrimony, Alfalfa, Coriander, Eucalyptus** and **Juniper** prevent streptozotocin-induced diabetes. Streptozotocin is often used in cancer treatments.
**Alfalfa** reduces blood sugar while controlling insulin release.


**Almonds** eaten at mealtime help control blood sugar levels.

*Cohen & Johnston: Almond ingestion at mealtime reduces postprandial glycemia and chronic ingestion reduces hemoglobin A(1c) in individuals with well-controlled type 2 diabetes mellitus. Metabol 2011 Apr 11

**Aloe vera** reduces blood sugar levels and increases the healing of burns as well as diabetic ulcers (in combination with other ingredients). Mepentol Leche is a milky emulsion consisting of hyperoxigenated fatty acids, aloe vera and a Mimosa bark.


**Aloe, Sea buckthorn,** and **Turmeric** have significant wound-healing abilities for chronic diabetic ulcers.


**Alpha-linolenic acid** (an essential fatty acid found in plant-based oils) helps lower blood pressure while increasing insulin sensitivity.


**Alpha-lipoic acid** reduces blood pressure and increases insulin sensitivity. It is also effective in treating diabetic neuropathy and reducing risk of cardiovascular events in diabetics. The R form appears to be more bioavailable to the body than the typical L-form.


**Alpha-lipoic acid** and **GLA** (gamma-linolenic acid) improves all forms of neuropathy.


**Alpha-lipoic acid** and **Benfortiamine** (a fat-soluble form of B1) normalizes blood sugar levels and inhibits oxidative stress in type 2 diabetes.
Amaranth is an ancient grain that corrects blood sugar levels and prevents diabetic complications.


*Stirban et al: Benfotiamine prevents macro- and microvascular endothelial dysfunction and oxidative stress following a meal rich in advanced glycation end products in individuals with type 2 diabetes. Diabetes Care 2006 Sep;29(9):2064-71

**Amaranth** is an ancient grain that corrects blood sugar levels and prevents diabetic complications.


**Antioxidant Vitamins** (C, E) reduce memory deficits in diabetics.


**Apples**, as opposed to many other fruits, improve blood sugar and fat levels. It is advisable to use only *organically* grown apples as the chemicals used to grow non-organic apples significantly increase cancer risks. Apples are #1 on the pesticide list.

*Apples worst for pesticides on produce list. CBC News, Jun 14, 2011


**Arginine, Methionine,** and **NAC** (N-acetyl-cysteine) are all amino acids that have several beneficial effects for obese diabetics.


*Piatti et al: Long-term oral L-arginine administration improves peripheral and hepatic insulin sensitivity in type 2 diabetic patients. Diabet Care 2001 May;24(5):875-80
**Artemisia princeps** is an herb that is superior to the drug rosiglitazone for improving the function of fats in diabetics.


**Arugula seed oil** decreases diabetic symptoms and oxidative stress.


**Ashwaganda** is an herb often used to support the stress organs (adrenal glands) which can also significantly improve insulin sensitivity.


**Astaxanthin** is a potent antioxidant that compares favourably to the drugs captopril and pioglitazone in lowering blood pressure and blood sugar.


*No authors listed: Astaxanthin protects beta-cells against glucose toxicity in diabetic db/db mice. Redox Rep 2002;7(3):290-3


**Astragalus** is an adaptogenic herb that strengthens the immune system which can help decrease insulin resistance and glucose intolerance. Plus, it has anti-aging effects and decreases the autoimmune destruction of pancreatic cells in diabetics.

*Astragalus. U Maryland Medical Center online


*Hsu & Chiang: Stimulating effects of Bacillus subtilis natto-fermented Radix astragali on hyaluronic acid production in human skin cells. J Ethnopharmacol 2009 Jul 17

*Lau et al: Radix astragali and Radix rehmanniae, the principal components of two antiabetic foot ulcer herbal formulae, elicit viability-promoting effects on primary fibroblasts cultured from diabetic foot ulcer tissues. Phytother Res 2009 Jun;23(6):809-15


*Wang et al: The two isomers of HDTIC compounds from Astragali Radix slow down telomere shortening rate via attenuating oxidative stress and increasing DNA repair ability in human fetal lung diploid fibroblast cells. DNA Cell Biol 2010 Jan;29(1):33-9

*Xu et al: Selective elevation of adiponectin production by the natural compounds derived from a medicinal herb alleviates insulin resistance and glucose intolerance in obese mice. Endocrin 2009 Feb;150(2):625-33

**Astragalus, Dang shen** (similar to Panax ginseng), and **Lychee** have antidiabetic and antioxidant properties.


**Avocado seed oil** has blood sugar-lowering effects while the flesh effectively contributes to wound healing when applied to diabetic ulcers.


**Bamboo extract** may prevent fat cells from increasing in those with type 2 diabetes.


**Banaba** is an herb long used in the Philippines to control blood sugar.


**Banana starch, root, fruit, flowers, and leaves** have anti-diabetic effects with the starch helping the obese to lose weight.


**Barley grass** improves overall health in diabetics.

*Barley Grass. Drugs.com
Bay leaves improve blood sugar and fat levels in diabetics.


Bee Propolis helps with diabetic neuropathy and insulin resistance.


Berberine, alone or with Cinnamon, Kudzu, Red Yeast Rice, or Policosanol, has potent anti-diabetic properties with beneficial effects on fat metabolism that are better than the drug metformin. Berberine-containing plants include Barberry, Goldenseal, Goldenthread, and Oregon grape which are also strong anti-microbials.

*Affuso et al: Effects of a nutraceutical combination (berberine, red yeast rice and policosanols) on lipid levels and endothelial function randomized, double-blind, placebo-controlled study. Nutr Metab Cardiovasc Dis 2009 Aug 19
*Chen et al: Berberine improves free-fatty-acid-induced insulin resistance in L6 myotubes through inhibiting peroxisome proliferator-activated receptor gamma and fatty acid transferase expressions. Metabol 2009 Dec;58(12):1694-702
*Zhang et al: Berberine lowers blood glucose in type 2 diabetes mellitus patients through increasing insulin receptor expression. Evid Based Complement Alternat Med 2009 Oct 6

Berries contain anthocyanins which reduce abdominal fat and help prevent metabolic syndrome which refers to a group of risk factors that lead to coronary artery disease, stroke, and type 2 diabetes. (A.D.A.M. Medical Encyclopedia; PubMed)
**Beta glucans** are polysaccharides derived from oats, mushrooms, or yeasts. They are safe and effectively used to prevent various diseases including diabetes. They also posses wound-healing properties.

*Tsuda: Regulation of adipocyte function by anthocyanins; possibility of preventing the metabolic syndrome. J Agric Food Chem 2008 Feb 13;56(3):642-6


**Biotin** (B7) and **Chromium** (a mineral) have blood sugar-lowering properites.


**Bitter melon** is superior to rosiglitazone in controlling blood sugar levels. Both Bitter Melon and **Maitake mushrooms** possess alpha-glucosidase inhibitors.


*Inayat-ur-Rahman et al: Serum sialic acid changes in non-insulin-depamdant diabetes mellitus (NIDDM) patients following bitter melon (Momordica charantia) and rosiglitazone (Avandia) treatment. Phytomed 2009 May;16(5):401-5


*Matsuur et al: Alpha-glucosidase inhibitor from the seeds of balsam pear (Momordica charantia) and the fruit bodies of Grifola frondosa. Biosci Biotechnol Biochem 2002 Jul;66(7):1576-8


*Shih et al: Momordica charantia extract on insulin resistance and the skeletal muscle GLUT4 protein in fructose-fed rats. Antioxid Redox Signal 2005 Nov-Dec;7(11-12):1612-20


**Bitter melon, Jambul, Gymnema** and **Fenugreek** have anti-diabetic properties.


**Black cumin seed, Myrrh, Boswellia (Frankincense), Asafoetida, and Aloe** have blood sugar-lowering properties.


**Black pepper** and **Periwinkle** protect against alloxan-induced diabetes. Alloxan is a chemical used to whiten flour and as an agent to induce diabetes in lab rats. Paring it with **Aspartame** causes multi-organ damage.


**Blueberries** (fruit and leaves) have anti-diabetic effects.


**Buckwheat** (which is not related to wheat) has blood sugar-lowering effects.


**Calamus plants** prove to scientists their traditional use for diabetes control.


**Calcium** reverses vitamin B12 malabsorption caused by metformin.

*Bauman et al: Increased intake of calcium reverses vitamin B12 malabsorption induced by metformin. Diabetes Care 2000 Sep;23(9):1227-31

**Calendula** is a safe and effective healing herb for venus leg ulcers.

**Capsaicin** (found in hot peppers) helps regulate blood sugar levels.


**Carnitine** (made in the body from the amino acids lysine and methionine) lowers cholesterol in diabetics better than simvastatin and reduces painful neuropathy.

* Solfrizzi et al: Efficacy and tolerability of combined treatment with L-carnitine and simvastatin in lowering lipoprotein(a) serum levels in patients with type 2 diabetes mellitus. Atheroscler 2006 Oct;188(2):455-61

**Citrus fruits** reduce oxidative stress that contributes to diabetes and thyroid irregularities.

* Parmar & Kar: Medicinal values of fruit peels from Citrus sinensis, Punica granatum, and Musa paradisiaca with respect to alterations in tissue lipid peroxidation and serum concentration of glucose, insulin, and thyroid hormones. J Med Food 2008 Jun;11(2):376-81

**Clove** has potent insulin-like activity. Clove, Jamaican allspice and Cinnamon exhibited the most effective results out of the 24 herbs and spices tested.


**Coconut oil** has a long history of traditional use for healing wounds and burns.


**CoQ10**, depleted by many medications, improves diabetic myopathy (a weakening of muscle tissues).


**Corn silk** has long been used as a diuretic but it also has blood-sugar-lowering properites.


**Cranberries** reduce cholesterol in Type 2 diabetics.


**Creatine** has long been used by body builders but it is a supplement that is safely taken for overall improvement in muscle quality for the diabetic, those on hemodialysis or suffering from dystrophies, the aged as well as the athlete. It enhances muscle endurance and reduces muscle cramping but it also improves insulin sensitivity.
Cumin seed is more effective than glibenclamide for blood sugar control.

Curcumin lowers cholesterol in diabetics.

Dates, although high in natural sugars, do not have detrimental effects on blood sugar or cholesterol levels.

Diet low in carbohydrates reduces abdominal fat and adverse changes in blood lipids especially in diabetics.

Echinacea contains chicoric acid which has anti-diabetic action.

Eggplant inhibits key enzymes associated with the development of diabetes and hypertension.

Fiber decreases weight gain and enhances insulin sensitivity.

Fish Oil and Moroccan Argan oil display insulin resistance and glucose intolerance.

Fructose consumption increases risk of diabetes. The small amounts found in fresh fruits and vegetables are not necessarily the problem. It is the commercially-made fructose added to processed foods, especially HFCS (high fructose corn syrup), that becomes a significant liability for diabetics and non-diabetics alike. It is on the list of Obesogens – chemicals that cause weight gain.
*Suzuki: Programmed to be Fat. CBC Nature of Things aired January 12, 2012

**Fruit and Vegetable** consumption reduces AGEs (advanced glycation end products) which lead to various age-related diseases including cardiovascular, cataracts, diabetes, and Alzheimer’s. They also protect against cancer cell formation.

*Platt et al: Fruits and vegetables protect against the genotoxicity of heterocyclic aromatic amines activated by human xenobiotic-metabolizing enzymes expressed in immortal mammalian cells. Mutat Res 2010 Aug 14

**Garlic** lowers blood sugar and blood pressure.


**Goji berries/Wolfberry** are potent antioxidants that improve diabetic retinopathy and other eyesight diseases.

*Potterat: Goji (Lycium barbarum and L. chinense): Phytochemistry, pharmacology and safety in the perspective of traditional uses and recent popularity. Planta Med 2010;76(1);7-19
*Song et al: Lycium barbarum (Goji Berry) extracts and its taurine component inhibit PPAR-γ-dependent gene transcription in human retinal pigment epithelial cells: Possible implications for diabetic retinopathy treatment. Biochem Pharmacol 2011 Nov 1;82(9);1209-18

**Grape pumace** (waste product of the wine industry) has anti-inflammatory and anti-hyperglycemic effects.

*Hogan et al: Antioxidant rich grape pomace extract suppresses postprandial hyperglycemia in diabetic mice by specifically inhibiting alpha-glucosidase. Nutr Metab (Lond) 2010;7:71

**Grape skins** have wound-healing properites.


**Grapefruit seed extract** is comparable to metformin without the side effects.


**Guava leaf extract** has anti-diabetic effects.

Hibiscus improves blood pressure and cholesterol levels in diabetics.


High fiber, low sodium, low fat diet is superior to metoprolol (Blood Pressure) in hypertensive type 2 diabetics.


Holy Basil reduces painful neuropathy.


Honey is safe and effective for healing diabetic foot ulcers but use only Manuka honey or a raw unpasteurized honey. The average “grocery store honey” does not have any healing components.

* Gethin & Cowman: Manuka honey vs. hydrogel--a prospective, open label, multicentre, randomised controlled trial to compare desloughing efficacy and healing outcomes in venous ulcers. J Clin Nurs 2009 Feb;18(3):466-74

Inositol (B8) deficiency and high blood sugar levels are found in those with POS (polycystic ovary syndrome). With inositol supplementation, blood sugar levels were reduced and ovary function improved. A good food source of inositol is found in buckwheat.

Lignans from Flaxseed improve type 2 diabetic conditions and conditions involving the kidneys.


Lion’s Mane mushroom stimulates nerve regeneration.


Magnesium-deficiency contributes to diabetes and hypertension.


Mango may help treat painful neuropathy.

- Garrido-Suárez et al: A Mangifera indica L. extract could be used to treat neuropathic pain and implication of mangiferin. Molecules 2010;15(12):9035-45

Mangosteen has anti-diabetic and anti-inflammatory properties.


Medicinal mushrooms (Cordyceps, Maitake, Oyster, Shiitake) reduce glucose and cholesterol levels in diabetics and may even prevent the conditions in the first place.

Muscadine grapes improve overall health in diabetics and non-diabetics alike.

Myrrh, Frankincense, Aloe, Asafoetida combination lowers blood sugar levels.

Nettle reduces blood sugar levels.

Noni fruit is a safe remedy for improving glucose function; protecting the liver; and preventing neural damage. The leaves increase wound-healing.

Oats is one of only a few grains that have therapeutic effects for diabetics mainly because it contains Beta glucans which are polysaccharides derived from oats, mushrooms or yeasts. Beta glucans are valuable in controlling diabetes and cholesterol as well as for Cancer and the immune system as a whole.
Nature’s Pharmacy: Evidence-Based Alternatives to Drugs

Olive leaf and Olive oil are superior to glibenclamide in helping with painful neuropathy.


Omega-3 fatty acids help lower high blood sugar levels.

*Grassi et al: Blood pressure is reduced and insulin sensitivity increased in glucose-intolerant, hypertensive subjects after 15 days of consuming high-polyphenol dark chocolate. J Nutr 2008 Sep;138(9):1671-6

Papaya has significant wound-healing and anti-bacterial properties. It has even been used successfully on children who have been burned.


Persimmons have anti-diabetic effects.


Phellodendron and Citrus peel improve blood pressure, cholesterol and blood sugar levels.


Pineapple leaf extract has anti-diabetic effects.


Polyphenols (plant antioxidants) have therapeutic value in a variety of diseases, increasing a potentially reduced lifespan because of diabetes, obesity, and hypertension.
**Pomegranates** regulate blood sugar; improve learning memory in diabetics; contribute to weight loss; speed wound healing; and increase the effects of tolbutamide.


*Hidaka et al: Effects of pomegranate juice on human cytochrome p450 3A (CYP3A) and carbamazepine pharmacokinetics in rats. Drug Metab Dispos 2005 May; 33(5):644-8


**Potato fiber** decreases diabetic symptoms.


**Psyllium** is a soluble fiber that reduces blood sugar.


**Pycnogenol** improves diabetic and hypertensive conditions.


**Red Yeast Rice** significantly lowers all-cause mortality in type 2 diabetics with heart disease.


**Resveratrol and Pterostilbene** (which is related to Resveratrol and found in blueberries and red grapes) are potent antioxidants that help lower blood sugar and cholesterol. Pterostilbene is proving to be more effective than ciprofibrate in lowering cholesterol in diabetics.

*Braslavsky: Blueberries May Be King of the Hill for Those Over the Hill. WebMD Med News Sept 16, 1999

*DeNoon: Blueberries May Lower Blood Fat/Cholesterol. WebMD Aug 23, 2004

Rooibos tea improves glucose tolerance and insulin secretion.


Royal Jelly helps decrease insulin resistance.


Sage has metformin-like effects making it an effective treatment for diabetes.


Sesame oil can help painful neuropathy.


Spirulina or any Chlorophyll-containing (green) food can significantly lower the blood sugar even to dangerous levels if taken with diabetic medication.

* Cohen 2011;46

Stevia is an herb that is some 200 times sweeter than table sugar. It possesses anti-diabetic, antioxidant, antiviral effects. Stevia improves beta-cell function and prevents diabetes-associated kidney changes that often occur with artificial sweeteners. Although it can have some effect on blood sugar levels (any sweetener can), it does not cause the potential health hazards associated with artificial sweeteners.


* Dyrskog et al: Preventive effects of a soy-based diet supplemented with stevioside on the development of the metabolic syndrome and type 2 diabetes in Zucker diabetic fatty rats. Metabol 2005 Sep;54(9):1181-8


Tart Cherries reduce oxidative stress and several other abnormalities associated with diabetes.


Vitamin B12 proves to be better than the drug nortriptyline in treating diabetic neuropathy.


Vitamin C plus a daily intake of fresh fruit and vegetables lower the risk of diabetes.


Vitamin D is crucial in preventing and treating diabetes. Since it becomes a hormone in the body, it can greatly improve insulin sensitivity.

- *Cohen, 2011:46

Vitamin D, Quercetin and ascorbyl palmitate (a fat-soluble form of Vitamin C) is a safe and effective combination for diabetic neuropathy.


Watermelon reduces metabolic syndrome symptoms in obese diabetics and increases some amino acid levels.


White button mushrooms lower cholesterol and blood sugar in diabetics.


Yacon is a tuber, with significant antioxidant activity. It is related to the sunflower and Jerusalem artichoke. Yacon root speeds transit time through the bowel and,
because it has blood-sugar-lowering capacity, it is particularly good for diabetics. It is more effective when combined with Maca and Milk Thistle. Pre-menopausal women with insulin resistance also benefit from yacon.


Diuretics

(Used to treat water retention [edema], heart failure, and prenatal hypertension [preeclampsia])

Common examples:

Loop
- bumetanide – Bumex and others
- furosemide – Lasix and others
- torsemide – Demadex

Osmotics
- mannitol – Osmitrol, Resectisol
- urea – Ureaphil

Potassium-sparing
- amiloride – Midamor
- spironolactone – Aldactone, Novo-spiroton
- triamterene – Maxzide, Dyazide, Dyrenium

Thiazides
- chlorothiazide – Diuril
- chlorthalidone – Hygroton, Thalitone, Uridon and others
- hydrochlorothiazide (HCTZ) – Microzide and others
- indapamide – Lozide, Lozol
- metolazone – Zaroxolyn

Others
- acetazolamide – Acetazolam and others

Deplete:
A, B1, B2, B3, B6, B9, C, D, calcium, chloride, iron, magnesium, potassium, sodium, zinc, CoQ10

Diuretics used in combination with Calcium channel blockers (Blood Pressure) increases the risk of heart failure and heart attacks more than any other two medication-combinations.

Loop Diuretics decrease bone density thereby increasing the risk of fractures.

- Rejnmark et al: Loop diuretics increase bone turnover and decrease BMD in osteopenic postmenopausal women: results from randomized controlled study with bumetanide. J Bone Miner Res 2006 Jan;21(1):163-70

Suggested alternatives:

Arginine (an amino acid) is a safe and efficient treatment for preeclampsia, improving fetal growth and increasing endurance in heart failure patients.


Arginine and Citrulline (amino acids) improve heart failure.

- Orozco-Gutiérrez et al: Effect of L-arginine or L-citrulline oral supplementation on blood pressure and right ventricular function in heart failure patients with preserved ejection fraction. Cardiol J 2010;17(6):612-8

Arjuna is an Ayurvedic herb with an ancient history of improving the conditions of those with severe heart failure.


Astragalus has a diuretic effect while improving heart function.

**B-complex deficiency** is common in heart failure patients and a **B1 deficiency** plays an important role in the deterioration of heart function.


**Bromelain** is an enzyme derived from Pineapple and often used as an anti-inflammatory but it is also an effective treatment for swelling after dental surgery.


**Buckwheat herb tea** improves leg edema in those with chronic venous insufficiency.


**Calcium** reduces risk of preeclampsia and fetal mortality.


**Carnitine** (an amino acid), alone or with **CoQ10**, is a vital treatment for heart failure.


**Chlorella** (sea algae) reduces the risk of anemia, proteinuria and edema in pregnant women.


**CoQ10** is a vital nutrient for heart health, especially congestive heart failure.

*Mortensen et al: Long-term coenzyme Q10 therapy: a major advance in the management of resistant
**Curcumin** improves cardiac function in heart failure and may prevent heart attacks.

- Epstein: Currying favor for the heart. Lab Invest 2009 Oct 19

**D-Ribose** is a cellular “sugar” necessary for energy production which, in turn, improves cardiac function.


**Dandelion** has long been used for its blood-cleansing and diuretic effects.


**Folic acid (B9)** reduces the risk of preeclampsia. Take with a B-complex as taking just one B vitamin can increase the risk of deficiency in one or more of the other family members.


**Ginseng** is an ancient herb used for its overall health effects which includes an improvement in strengthening the heart and overcoming congestive heart failure.


**Ginseng** and **Berberine-containing plants** (Barberry, Goldenseal, Goldenthread, Oregon grape) improve the conditions of those with heart failure.


**Gotu Kola** improves venous insufficiency, lowering the risk of edema.

- Soja & Moretensen: Treatment of congestive heart failure with coenzyme Q10 illuminated by meta-analyses of clinical trials. Mol Aspects Med 1997;18 Suppl:S159-68

*Soja & Moretensen: Treatment of congestive heart failure with coenzyme Q10 illuminated by meta-analyses of clinical trials. Mol Aspects Med 1997;18 Suppl:S159-68*
Hawthorn improves strength and endurance in those with heart failure.

- Degenring et al: A randomised double blind placebo controlled clinical trial of a standardised extract of fresh Crataegus berries (Crataegisan) in the treatment of patients with congestive heart failure NYHA II. JAMA 2007 Sep 26;298(12):1420-8

Herbal Diuretics include: apple cider vinegar, artichoke, asparagus, celery seeds, cornsilk, cranberry juice (unsweetened), cucumber, dandelion leaf, fennel, golden-seal, green tea, hawthorn, parsley, stinging nettle, watermelon, watercress.

Horny Goat Weed is an herb used to improve circulation and shown to improve left ventricular dysfunction and cardiac remodeling in those with congestive heart failure.


Magnesium plays an important role in heart health.


Minerals (Calcium, Copper, Magnesium, Potassium, Selenium, Sodium, Zinc) are important in preventing or reversing edema as well as treating heart failure and atrial fibrillation. Diuretics often worsen edema or heart problems simply by depleting the very minerals needed to prevent the condition in the first place. Instead of avoiding salt, which is often the first suggested protocol, doing the opposite usually obtains better results. A full mineral sea salt is suggested – one that is coloured and not white even if it says “Sea salt”. This provides a good balance of minerals whereas white salt is only sodium with no other minerals that compensate for the imbalance that sodium, by itself, causes.

- Constant: Pearls and pitfalls in the use and abuse of diuretics for chronic congestive heart failure. Cardiology 1999;92(3):156-61
**Omega-3 fatty acids** reduce the risk of preeclampsia. Fish must be baked or boiled but not fried.

*Duda et al: Fish oil, but not flaxseed oil, decreases inflammation and prevents pressure overload-induced cardiac dysfunction. Immunopharmacol Immunotoxicol 2009;31(2):209-13

**Pycnogenol** controls edema in hypertensive patients.


**Resveratrol** is a potent antioxidant that improves cardiac function.


**Testosterone deficiency** may contribute to congestive heart failure and raising levels often improves the condition.

*Wehr et al: Low free testosterone is associated with heart failure mortality in older men referred for coronary angiography. Eur J Heart Fail 2011 May;13(5):482-8

**Vitamin Supplements** improve vascular-related pregnancy complications. Avoid synthetic supplements which are often found in mass market stores. The body views these as toxins and receives very little value as opposed to natural-sourced nutrients.


**Vitamin C** decreases the risk of heart failure.


**Vitamin D3** reduces inflammation associated with congestive heart failure and a deficiency leads to a number of cardiovascular diseases.

Erectile Dysfunction/Impotence

Common Examples:

sildenafil – Revatio, Viagra

tadalafil – Adcirca, Cialis

vardenafil – Levitra, Nuviva

Deplete:

no studies found

Ashwaganda is a remarkable herb that helps improve almost any disorder including sperm count. However, when it comes to erectile dysfunction, it should not be used as it interferes with libido.


Cholesterol-lowering drugs, especially Statins, have been associated with ED.


ED is a classic marker for vascular disease (eg. atherosclerosis).


SSRIs (Antidepressants) are associated with sexual dysfunction in both men and women and have long-term effects even after discontinuing the medication.


Suggested Alternatives:

Arginine, an amino acid used alone or with Yohimbe or Pycnogenol improves ED.

*Chen et al: Effect of oral administration of high-dose nitric oxide donor L-arginine in men with organic erectile dysfunction: results of a double-blind, randomized, placebo-controlled study. BJU Int 1999 Feb;83(3):269-73


*Ledda et al: Investigation of a complex plant extract for mild to moderate erectile dysfunction in a randomized, double-blind, placebo-controlled, parallel-arm study. BJU Int 2010 Oct;106(7):1030-3


Citrulline, another amino acid, improves erectile firmness in men with mild ED.


Clove (alone or with Nutmeg) proves its traditional use as an aphrodisiac by producing significant and sustained increase in sexual activity.


CoQ10 deficiency leads to ED as well as many other unpleasant conditions.

*Cohen 2011:10

Ginseng (Panax) improves ED.


Green Tea has a preventative and therapeutic role in ED.


Horny Goat Weed (Epimedium koreanum) has long been used in Asian medicine to improve ED. Its effect is attributed to the production of nitric oxide and the ability to relax smooth muscle.

*Chen & Chiu: Effect of Epimedium brevicornum Maxim extract on elicitation of penile erection in the rat. CNS Neurol Disord Drug Targets 2008 Feb;7(1):20-7

**Erectile Dysfunction/Impotency**

Pamela Duff, RN, CSNC


**Korean Black Raspberry extract** improves the overall function of the male reproductive system.


**Maca**, a Peruvian ginseng-type root, improves physical and mental well-being, fertility, and sexual stamina as well as decreasing an enlarged prostate (see more under Prostate and HRT). It **does not** increase estrogens, progesterone, or testosterone but rather, regulates these hormones.

*Bogani et al: Lepidium meyenii (Maca) does not exert direct androgenic activities. J Ethnopharmacol 2006 Apr;104(3):415-7

*Chung et al: Dose-response effects of Lepidium meyenii (Maca) aqueous extract on testicular function and weight of different organs in adult rats. J Ethnopharmacol 2005 Apr;98(1-2):143-7


*Gonzales et al: Effect of Lepidium meyenii (Maca), a root with aphrodisiac and fertility-enhancing properties, on serum reproductive hormone levels in adult healthy men. J Endocrinol 2003 Jan 1;176:163-8


*León: The "Maca" (Lepidium meyenii ), a little known food plant of Peru. Econ Bot 18(2):122-7


**Mediterranean Diet** improves ED, especially in those with metabolic syndrome (diabetes, cardiovascular disease). The Mediterranean Diet is based on foods and drinks consumed by people in countries surrounding the Mediterranean Sea.

Olive and Coconut oils increase testosterone and antioxidant levels in men.

Passionflower lives up to its name by improving libido and overall sexual function.

Resveratrol enhances testosterone levels, sperm quality and nitric oxide production.

Saffron has a positive effect on sexual function.

Tribulus improves erection in mild to moderate cases of ED.

Zinc improves testosterone and erectile function.
* Cohen 2011:9


**EYESIGHT/DROPS/INJECTIONS**

(used to treat **GLAUCOMA**, **MACULAR DEGENERATION**, **DIABETIC MACULOPATHY**)

**COMMON EXAMPLES:**

**Alpha-agonists (AA)**
- apraclonidine - Iopidine
- brimonidine - Alphagan

**Angiogenics inhibitors (anti-VEGF - Vascular Endothelial Growth Factor)**
- afibercept - Eylea
- bevacizumab - Avastin
- pegaptanib - Macugen
- ranibizumab - Lucentis

**Beta Blockers (BB) (see also Blood Pressure)**
- atenolol - Tenormin
- betaxolol - Betoptic, Kerlone, Lokren
- carteolol - Cartrol, Ocupress
- labetalol - Normodyne
- levobunolol - AK-Beta, Betagan, Liquifilm
- metipranolol - Betanol, Disorat, Optipranolol, Trimepranol
- propranolol - Inderal
- timolol - Betimol, Timoptic

**Carbonic anhydrase inhibitors (CAIs)**
- acetazolamide - Acetazolam, Diamox, and others
- brinzolamide - Azopt
- dichlorphenamide/diclofenamide - Daranide, Oratrol, and others
- dorzolamide - Trusopt and others
- methazolamide - Neptazane and others

**Cholinergics (Miotics)**
- carbachol - Isopto Carbachol
- pilocarpine - Isopto Carpine, Pilocar, Pilopine

**Combinations**
- brimonidine (AA) and timolol (BB) = Combigan
- dorzolamide (CAI) and timolol (BB) = Cosopt

**Epinephrine**
- dipivefrin (Propine)
Prostaglandin Analogs
- bimatoprost (Lumigan)
- latanoprost (Xalatan)
- travoprost (Travatan Z)

Deplete:

CoQ10, calcium, magnesium, potassium, sodium

Although these are the only nutrients known to be depleted, many more are suspected. More depletions can be found under Blood Pressure (Beta Blockers).

Many of these medications are also used as Cancer treatments.

Blood Thinners and Statin drugs (Cholesterol) are linked to massive intraocular hemorrhage in age-related macular degeneration.

*Kiernan et al: Epidemiology of the association between anticoagulants and intraocular hemorrhage in patients with neovascular age-related macular degeneration. Retina 2010 Nov-Dec;30(10):1573-8

Blood Pressure and Cholesterol-lowering medications increase the risk of macular degeneration.


Caffeine increases intraocular pressure.


Smoking depletes nutrients especially ones needed to prevent macular degeneration.


Timolol may cause severe adverse cardiovascular and respiratory effects.


Suggested Alternatives:

Amla (Indian Gooseberry) contains tannins which delay the development of cataracts and may stimulate lens regeneration.

Antioxidants are plant-based substances that protect cells from damage which would lead to disease including eyesight degeneration.

Astaxanthin is the most potent known carotenoid antioxidant. Among its many benefits is that it protects retinal cells against oxidative damage and increases ocular blood flow.

B-complex, especially B5, B6, B9, and B12 help prevent various eye disorders. (see the Appendix for a list of B vitamins according to name and number)
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**Cacao** (unsweetened raw chocolate) has high antioxidant content that can prevent numerous disorders including the formation of cataracts.


**Carnitine** is an amino acid that reduces age-related eye diseases.


**Carnitine**, **Omega-3 fatty acids**, and **CoQ10** improve visual function in macular degeneration.


**Carnosine eyedrops** may prevent vision loss from senile cataracts, primary open-angle glaucoma, macular degeneration, diabetic retinopathy, and aging.


**Chinese skullcap** is an herb that reduces diabetic retinopathy inflammation.


**Chlorella** is a green algae with strong antioxidant properties that prevents cataract formation.


**Coleus Forskohlii** (an Ayurvedic mint plant) contains a compound called forskolin which lowers intraocular pressure. It is also used to improve thyroid function.


**CoQ10** improves blood pressure, cardiac function and protects against Parkinson’s disease. The ubiquinol form functions better than the cheaper ubiquinone.


*Schmelzer et al: The reduced form of coenzyme Q10 mediates distinct effects on cholesterol metabolism at the transcriptional and metabolite level in SAMP1 mice. IUBMB Life 2010 Nov 17

**Cumin** helps prevent cataract formation.

**Curcumin** is a safe and effective treatment for recurrent anterior uveitis, eye inflammation and such degenerative conditions as dry eye, maculopathy, glaucoma, and diabetic retinopathy.
*Kowluru & Kanwar: Effects of curcumin on retinal oxidative stress and inflammation in diabetes. Nutr Metab (Lond) 2007;4:8

**Curcumin, Resveratrol** and **EGCG** (a green tea extract) may have a therapeutic role in proliferative vitreoretinopathy (PVR), a common retinal detachment complication.

**Eggplants** help reduce intraocular pressure.

**Fennel** helps prevent glaucoma and is potent enough to rival the effects of timolol.
Fenugreek helps prevent the formation of cataracts.


Fruit and Vegetable consumption reduces AGEs (advanced glycation end products) which lead to various age-related diseases including cardiovascular, cataracts, diabetes, and Alzheimer's. They also protect against cancer cell formation.


*Platt et al: Fruits and vegetables protect against the genotoxicity of heterocyclic aromatic amines activated by human xenobiotic-metabolizing enzymes expressed in immortal mammalian cells. Mutat Res 2010 Aug 14


Garlic, a natural antimicrobial, also prevents cataract formation.


Gingko biloba improves glaucoma and macular degeneration.


Ginseng improves visual light and color perception and short term memory.


Goji berries/Wolfberry are a safe antioxidant fruit that protect the retina. They have a significant therapeutic effect on glaucoma and macular degeneration as well as eyesight in general.


**Grapeseed extract** helps prevent cataracts.


**Hazelnuts** prevent cataracts caused by the cancer drug doxorubicin.


**Holy Basil** helps prevent cataract formation.


**Lutein** and/or **Zeaxanthin** are potent carotenoid antioxidants that are vital for good eye health.


**Lycopene** is an antioxidant carotenoid that helps prevent oxidative stress-damage. It is found in such bright red fruit and vegetables as tomatoes.


**Melatonin** is significantly protective of the retina; has calming effects; and protects against glaucoma and radiation-induced cataract formation.

Melatonin and Bee Propolis protect against electromagnetic radiation-induced oxidation to the retina associated with long-term mobile phone use.

Omega-3 fatty acids (DHA and EPA) improve ocular blood flow, blepharitis, and meibomian gland dysfunction.

Onions help prevent cataract formation.

Potassium is an important part of the acid-base balance in the body, nerve transmission, digestion and blood pressure.

Resveratrol is a potent antioxidant that prevents various eye disorders.
Sulforaphane is an antioxidant that protects against oxidative damage to the eyes. It is found in such cruciferous vegetables as broccoli, cauliflower, cabbage and kale. The richest source is broccoli sprouts.


**Sulforaphane**


**Tea** (green or black) helps prevent cataract formation.

* Thiagarajan et al: Antioxidant properties of green and black tea, and their potential ability to retard the progression of eye lens cataract. Exp Eye Res 2001 Sep;73(3):393-401

**Various Natural Substances** prove useful in treating glaucoma: Magnesium for vascular regulation; Dark Chocolate and Omega-3 improve blood flow; Gingko reduces oxidative stress; Flavonoids, Anthocyanosides, CoQ10, and Melatonin have antioxidant properties – and so on.


**Vitamins, Minerals and Antioxidants** (astaxanthin, beta-carotene, C, E, zinc, copper, lutein, vanadium, zeaxanthin) significantly reduce the development of vision loss and macular degeneration.


**Zinc** and **Copper deficiency** contributes to age-related macular degeneration and supplementation improves the condition.

**Fat Blockers and Substitutes**

(Used to prevent the digestion and absorption of fat in food)

**Common Examples:**
- **Olestra** – Olean
- **Orlistat** – Xenical, Alli
- **Kidney bean extract**
- **Starch neutralizer**

**Deplete:**

A, D, E, K, lipase enzymes

Fat soluble vitamins (A, D, E, K) are blocked by these drugs and supplements. When used for an extended period of time, they significantly contribute to the risk of developing various disorders.

* Balch 2006:602-3
* Cohen 2011:81,103
* Haas 2006:469
* Nursing Spectrum Drug Handbook, 2008, orlistat
* U Maryland Med Center: “Vitamin A Retinol”, “Possible Interactions with D”, “Possible Interactions with: Vitamin E”, “Vitamin K”.

Lipase is an enzyme that breaks down fats (lipids) in the body. By blocking this important enzyme, dietary fats are not digested or absorbed, which is pleasing to people wanting to lose weight. However, the downside of that supposed benefit is that the fats are delivered straight to the bowel to be eliminated – without warning, no matter where you are – or with whom. According to the Alli website, fat blockers only stop about 25% of the fat you eat with the rest passing “harmlessly” into the bowel – in a most disconcerting fashion. This involuntary action may be considered harmless to the company but it is decidedly embarrassing to the consumer which led to a “Bitter Pill” award being given to the makers: “With Allies Like This, Who Needs Enemas?”

* Alli website - www.myalli.com/
* Dieters snap up new drug alli despite nasty side effects. By Carla Hall, LA Times June 17, 2007
Olistat ingredients list: Active: Orlistat (60 Mg); Inactive: Fd&c blue no. 2, edible ink, gelatin, iron oxide, microcrystalline cellulose, povidone, sodium lauryl sulfate, sodium starch glycolate, talc, titanium dioxide

Orlistat “is a non-digestible plastic” behaving much “like a mineral oil”. I was unable to find a definitive list of ingredients; just a lot of hype about the supposed benefits.

Chemicals are now considered to be a direct cause of weight gain and the inability to lose weight. At least 20 have been identified as hormone-disrupters that program the body’s fat cells into creating more. They have been dubbed Obesogens and so far include: Pthalates, BPA/BPS, DES, Tributyltin, PBDE, PFOA, PCB, Dioxins, Organophosphates, Atrazine, Lead, DDT, Benzopyrene, Nicotine, Genisten, Fructose, and MSG. Chemicals lodge in fat cells and disrupt the endocrine system which, in turn, causes other health issues including male and female reproductive problems, various cancers, cardiovascular diseases and diabetes. The key is to try to eliminate as many chemicals as possible that can be found in such things as non-organic, processed and canned foods, tap water, body care and cleaning products, some plastic food containers, some cooking utensils, drugs of all types, synthetic vitamin supplements, and so on.

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*The Problems with Olestra. Center for Science in the Public Interest - www.cspinet.org/olestra/
*Health Canada rejects Olestra as a food additive, June 22, 2000
*Time Magazine lists Olestra as one of the 50 Worst Inventions, May 27, 2010

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*Grün & Blumberg Minireview: The Case for Obesogens. Molec Endocrin 2009 Aug 1;23(8):1127-34
*Grün & Blumberg: Endocrine disrupters as obesogens. Molec Cell Endocrin 2009 May;304(1-2):19-29
*Grün & Blumberg: Environmental Obesogens: Organotins and endocrine disruption via nuclear receptor signaling. Endocrin 2006 June 1;147(6):550-555
*Heindel & vom Saal: Role of nutrition and environmental endocrine disrupting chemicals during the perinatal period on the aetiology of obesity. Molec Cell Endocrinol 2009 May;304(1-2):90-96
*Hoppe & Carey: Polybrominated diphenyl ethers as endocrine disruptors of adipocyte metabolism. Obesity (Silver Spring) 2007;15(12):2942-50
Nature’s Pharmacy: Evidence-Based Alternatives to Drugs


Karamaus et al: Maternal levels of dichlorodiphenyl-dichloroethylene (DDE) may increase weight and body mass index in adult female offspring. Occup Environ Med 2009;66:143-49

Kirchner et al: Prenatal exposure to the environmental obesogen tributyltin predisposes multipotent stem cells to become adipocytes. Molec Endocrin 2010 Mar;24(3):526-39


Lyche et al: Natural mixtures of POPs affected body weight gain and induced transcription of genes involved in weight regulation and insulin signaling. Aquatic Toxicol 2011;102(3-4):197-204


Rönn et al: Circulating levels of persistent organic pollutants associate in divergent ways to fat mass measured by DXA in humans. Chemosphere 2011 Jul 16


Slotkin: Does early-life exposure to organophosphate insecticides lead to prediabetes and obesity? Reprod Toxicol 2011;31(3):297-301

Susuki: Programmed to be Fat. CBC Nature of Things, aired January 12, 2012


Suggested alternatives:

Coleus forskohlii is an Ayurvedic plant that has several health benefits especially as a fat burner while, at the same time, increasing bone mass.


Fats do play a role in weight gain. However, avoiding hydrogenated trans fats and using good fats that your body needs will automatically adjust a weight problem. The body craves fat because it needs it for proper cell and brain function; but all too often, it is given the unhealthy versions. Good fats include extra virgin olive oil, coconut oil, hempseed oil, avocados, nuts and so on. I do not recommend the popular Canola oil because it is genetically modified and has a very long fatty acid chain which the body cannot fully utilize causing much of it to oxidize. Whichever ones you choose to use, the key is not to over do it. Do not deep fry anything. This is a decidedly
unhealthy practise. **Olive oil**, as part of a Mediterranean diet, is linked to weight reduction and an increase in blood antioxidant levels. **Coconut oil**, a medium-chain saturated fatty acid, increases the effects of CLA to encourage the reduction of belly fat. It also improves brain function.

*Liu et al: An open-label pilot study to assess the efficacy and safety of virgin coconut oil in reducing visceral adiposity. ISRN Pharmacol 2011:949686
*Razquin et al: A 3 years follow-up of a Mediterranean diet rich in virgin olive oil is associated with high plasma antioxidant capacity and reduced body weight gain. Eur J Clin Nutr 2009 Dec;63(12):1387-93

**Fiber** is an important part of the diet that helps with weight loss and prevents other disorders including diabetes and high cholesterol levels.


**Flaxseed** is an insoluble fiber that contains lignans which help prevent organ damage caused by high-fat diets. Flaxseed also reduces the body’s tendency to produce fat cells.


**Grapefruit** helps fat cells properly store and utilize fats and carbohydrates. As an essential oil, it can be used in a carrier oil and massaged into fatty tissue.

*Higley 2010:380

**Mangosteen fruit** contains compounds which may have a beneficial effect in treating obesity as well as cancers.


**Phosphatidylcholine** is a combination of an essential phospholipid (fat) and choline (a B-like vitamin substance). This combination promotes various health aspects including the prevention of cellulite which is caused by various factors including the consumption of unhealthy fats.


**Seaweeds (brown)** contains a carotenoid called Fucoxanthin which helps reduce body weight and improve fat metabolism. Kelp is the most common brown seaweed.

**FLUORIDE**

(USED TO PREVENT CAVITIES AND OSTEOPOROSIS)

**COMMON EXAMPLES:**
- Fluotabs
- Fluor-a-day
- Fluorigard
- Fluorinse
- Fluoritab
- Flura-drops
- Pedi-dent
- PreviDent
  ... and others....

**DEPLETE:**

calcium, vitamins D, E, zinc

_rq Fluoride may thicken but it does not strengthen bone mass, ultimately resulting in brittle bones. Calcium decreases the absorption of fluoride, but on the other hand, fluoride prevents calcium from being absorbed and yet, fluoride is still prescribed as a means of increasing bone density. Go figure.

*Meunier et al: Fluoride salts are no better at preventing new vertebral fractures than calcium-vitamin D in postmenopausal osteoporosis: The FAVOStudy. Osteopor Internat 8(1):4-12

ราว Fluoride contributes to dental fluorosis (spotting or pitting on permanent teeth) – among other health problems. While being touted as “safe”, the FDA ironically requires a poison warning on all fluoride toothpaste labels. The problem with toxic consumption is that fluoride is added to, or hidden in, many items: baby formula, drinking water, juices and juice-flavoured drinks, beer and wine, salt, soft drinks, soups, tea, toothpaste, processed cereals, teflon cookware, anesthetics, cigarettes, and more.

*Abdel-Latif et al: Serum fluoride ion and renal function after prolonged sevoflurane or isoflurane anaesthesia. Egypt J Anaesth 2003;19:79-83

Analysis of government data finds babies over-exposed to fluoride in most major U.S. cities. Environ Work Gr March 22, 2006


Cohen 2011:316


Edwards: Evidence that fluoride in the infant formula causes enamel fluorosis weak. Evid Based Dent 2009;10(3):73


Fluoride Action Network, Dental Fluorosis


Goldberg et al: Sevoflurane versus isoflurane for maintenance of anesthesia: are serum inorganic fluoride ion concentrations of concern? Anesthesia and Analgesia 1996;82(6):1268-72


Fluoride ingested from toothpaste alone exceeds the recommended minimum level for children and community levels should be monitored before adding fluoride to local drinking water.


Fluoride in chemicals used to grow your food. If you do not eat organically, chances are your food is grown with a fertilizer containing sodium aluminum fluoride (cryolite). EPA standards allow up to 7 ppm of fluoride (5 times greater than the standards set in 1933) on over 30 fruits and vegetables treated with cryolite which include: apricots, beets, blackberries, broccoli, brussel sprouts, cabbage, cauliflower, citrus fruits, collards, cranberries, cucumbers, eggplants, grapes, kale, lettuce, melons, nectarines, peaches, peppers, plums, pumpkins, radishes, raspberries, squash, strawberries, tomatoes and turnip. On February 15, 2002, Dow Chemical requested that the EPA allow much greater fluoride levels on foods: 98 ppm for wheat germ, 40 ppm for wheat bran, 31 ppm for rice bran, 30 ppm for several nuts, 28 ppm for corn meal, 26 ppm for corn flour, 25 ppm for millet, 25 ppm for wild rice, 25 ppm for sorghum, 25 ppm for wheat, and 17 ppm for oats.

Fluoride increases lead levels in the body.

- Coplan et al: Confirmation of and explanations for elevated blood lead and other disorders in children exposed to water disinfection and fluoridation chemicals. Neurotoxicol 2007 Sep;28(5):1032-42
- Sawan et al: Fluoride increases lead concentrations in whole blood and in calcified tissues from lead-exposed rats. Toxicol 2010 Feb 25

Fluoride adversely affects the brain, learning memory, and thyroid. Ironically, fluoride (and chlorine) also interferes with iodine supplements taken to offset a thyroid problem.


Fluoride decreases intelligence and growth in children

- Hong et al: A study of fluorine effects on children’s intelligence development under different environments. Chin Prim Heal Care 2001;15:56-57
- Huff: Indian study proves that fluoride consumption causes brain, neurological damage. NaturalNews Dec 14, 2011
- Qin & Cui: The influence of drinking water fluoride on pupils IQ, as measured by Rui Wen’s standards. Chin J Contr End Dis 1990;5:203-4
- Ren: An investigation of intelligence development of children aged 8-14 years in high-fluoride and low-iodine areas. Chin J Contr End Dis 1989;4:251
Suggested alternatives and protectants:

**Acemannan**, an Aloe vera polysaccharide, stimulates tooth regrowth.

*Jittapiromsak et al: Acemannan, an extracted product from Aloe vera, stimulates dental pulp cell proliferation, differentiation, mineralization, and dentin formation. Tissue Eng Part A 2010 Jan 20*

**Aloe vera, Turmeric, and Holy Basil** protect the body from fluoride toxicity especially during pregnancy.


**Arjuna** is an Ayurvedic herb that protects the heart muscle from the toxic effects of fluoride.


**Bee Propolis**, especially Brazilian green propolis, has anti-bacterial effects similar to that of Manuka honey, controlling oral bacteria that cause dental decay and in preventing denture stomatitis.


**Beta glucans** are polysaccharides derived from oats, mushrooms, and yeast. They are important for preventing many diseases including periodontal.


**Bioflavonoids**, usually found with a good vitamin C, help prevent dental caries.


**Black berries** minimize harmful effects of fluoride.

Fluoride

Calcium intake during pregnancy is especially important in reducing the risk of dental cavities in children up to 12 years of age.

Chinese Skullcap has protective properties against fluoride toxicity.

Curcumin minimizes the toxic effects of fluoride and arsenic.

Diet plays a huge role in the prevention of cavities, especially the elimination or severe reduction of sweets and other simple carbohydrates. Evidence to this effect became apparent in the 1930s but is still being ignored today.

Essential Oils prevent dental caries and plaque because they are potent antioxidants and strong anti-microbials against a variety of viruses, bacteria, and yeasts. Peppermint, Rosemary, and Cumin oils were better than chlorhexidine in preventing plaque buildup.


Taguchi et al: Protection of oral or intestinal candidiasis in mice by oral or intragastric administration of herbal food, clove (Syzygium aromaticum). Nippon Ishinkin Gakkai Zasshi 2005;46(1):27-33

Tohidpour et al: Antibacterial effect of essential oils from two medicinal plants against Methicillin-resistant Staphylococcus aureus (MRSA). Phytoemed 2009 Jul 1


Fluoride

Garlic helps control bacteria responsible for dental caries and plaque.

Grapeseed extract is proving to be a non-invasive therapy for remineralization of root cavities.

Green Tea prevents plaque buildup.

Hops is an herb that reduces dental plaque.

Mango and Neem have anti-bacterial properties against 4 organisms responsible for dental caries.

Manuka Honey is as effective as chlorhexidine mouthwash in reducing plaque formation. As an antibacterial, manuka honey is also effective for gingivitis and periodontal disease.

Mastic gum has antibacterial activity which helps prevent tooth decay.

Melatonin protects against fluoride and arsenic toxicity.

Methionine (an amino acid) and Vitamin E protect the kidneys from oxidative stress caused by fluoride.

Mulberry lessens the toxic effects of fluoride on the liver.
* Hassan & Yousef: Mitigating effects of antioxidant properties of black berry juice on sodium fluoride induced hepatotoxicity and oxidative stress in rats. Food Chem Toxicol 2009 Jun 21

NAC (N-acetylcysteine – an amino acid) protects against fluoride-induced damaging effects.
**Fluoride**


**Protein and Calcium** supplements decrease the effects of fluoride-induced thyroid dysfunction.


**Pycnogenol** protects the kidneys from fluoride damage.


**Quercetin**, a bioflavonoid, protects against fluoride damage.


**Quercetin and Bee Pollen** reduces fluoride toxicity.


**Royal Jelly** helps overcome the effects of sodium fluoride exposure


**Selenium and Zinc** protect the kidneys from fluoride toxicity and Selenium lessens the effects of hair loss due to fluoride exposure.


**Spices** possess strong anti-microbial properties especially Aniseed, Basil, Bay leaves, Black pepper, Clove, Coriander, Cumin, Cinnamon, Garlic, Gum Arabic, Horseradish, Marjoram, Oregano, Rosemary, and Thyme.


**Strontium deficiency** plays a role in the development of cavities as well as generalized bone deterioration.


**Tamarind beans** increase urinary excretion of fluoride, helping to delay fluorosis.

Tooth powder: I developed this recipe a few years ago. It has become popular in our household and others with whom I have shared; young and old alike. It is easy to make and use and safer than fluoride toothpaste and it prevents plaque. Use all, or a few, of the oils according to your own taste and availability.

Mix together and store in a dark glass jar, putting small amounts in a similar container for everyday use. Pour a small amount into your hand and scoop up with a moist toothbrush.

12 tbsp baking soda (to whiten teeth and keep mouth fresh)
4 tbsp full-mineral sea salt (grey or pink) (to strengthen gums)
5 drops Peppermint oil
5 drops Thyme oil
4 drops Lemon oil
4 drops Cinnamon oil
3 drops Eucalyptus oil
3 drops Clove oil

Vitamins A, E, and CoQ10 protect the lungs and pancreas from fluoride damage.

Vitamin C protects against fluoride toxicity especially during pregnancy.

Vitamin D prevents cavities. This knowledge was verified in studies dating back to 1928 and a deficiency affects all ages; yet few “modern” studies have followed up on this vital evidence. Vitamin D also decreases toxic effects of fluoride to the embryo during pregnancy.
Vitamin E protects against the toxic effects of fluoride and arsenic.

Vitamin C, D, and E protect the body from fluoride damage.

Xylitol (sugar alcohol with a low glycemic index) reduces the chances of developing cavities by controlling oral bacteria.

Yogurt consumption is linked to fewer cavities in young children but not so with other dairy products.

Zinc supplementation reduces dental cavities in children.
GOUT

(Used to treat symptoms of gout)

COMMON EXAMPLES:
- allopurinol – Zyloprim
- colchicine
- probenecid – Benemid, Benuryl, and others
- sulfinpyrazone – Anturane

DEPLETE:
A, beta carotene, B3, B6, B9, B12, D, E, K, calcium, copper, iron, magnesium, phosphorus, potassium, sodium, zinc

Colchicine, the standard anti-gout medication, apparently is not a clear-cut gout therapeutic.


Gout Triggers: organ meats, seafood, alcohol, soft drinks, fructose, dairy products, soy milk and diuretics.


SUGGESTED ALTERNATIVES:
Ashwaganda reverses gout effects.

**Nature’s Pharmacy: Evidence-Based Alternatives to Drugs**


**Cassia Cinnamon** suppresses uric acid levels.

*Zhao et al: Effects of cassia oil on serum and hepatic uric acid levels in oxonate-induced mice and xanthine dehydrogenase and xanthine oxidase activities in mouse liver. J Ethnopharmacol 2006 Feb 20;103(3):357-65

**Cassia Cinnamon** and **Resveratrol** significantly inhibits gout formation.


**Cherries** (juice or extract) suppress inflammation and pain in gout.


**Curcumin** prevents the formation of gout.


**Ginger** has a strong anti-inflammatory effect.


**Grapeseed** lowers uric acid levels.

*Wang et al: Administration of procyanidins from grape seeds reduces serum uric acid levels and decreases hepatic xanthine dehydrogenase/oxidase activities in oxonate-treated mice. Basic Clin Pharma Toxicol 2004 May;94(5):232-7

**Noni fruit** has anti-gout properties.

*Palu et al: Xanthine oxidase inhibiting effects of noni (Morinda citrifolia) fruit juice. Phytother Res 2009 May 12

**Orange juice** and **Hesperetin** (a bioflavonoid) significantly decrease the risk of gout.


**Pycnogenol** is a potent antioxidant that helps prevent the formation of gout.


**Quercetin, Luteolin, Milk Thistle, and Curcumin** prevent the formation of uric acid.

*Pauff & Hille: Inhibition studies of bovine xanthine oxidase by luteolin, silibinin, quercetin, and curcumin. J Nat Prod 2009 Apr;72(4):725-31
Siberian ginseng, Angelica, and Chinese skullcap protect against the formation of uric acid (urate crystals).


Triphala is an Ayurvedic herb that compares favourably to the drug Indomethacin as an anti-inflammatory while also improving antioxidant levels.


Vitamin C helps prevent the formation of uric acid crystals.

HRTs (Hormones Replacement Therapies)

Common examples:

**androgens**
- oxandrolone – Oxandrin
- methyltestosterone – Android, Testosterone Cypionate, Virilon, and others

**estrogen-containing**
- conjugated/combined – Cenestin, Premarin, and others
- bio-identical – Estrace, Delestrogen, and others
- esterified – Menest
- **estradiols** – Activella, Climara, CombiPatch, Estrace, Estraderm, Estrin, EstroGel, Femogex, Femring, Menostar, and many more
- **oral contraceptives** (levonorgestrel – Mirena, Plan B, and others)

**growth hormones**
- somatropin – Genotropin, Nutropin, and others

**progestins**
- medroxyprogesterone – DepoProvera and others
- norethindrone – Aygestin
- progesterone – Crinone, Prometrium, and others

Deplete:

A, B1, B2, B3, B5, B6, B7, B8, B9, B12, C, D, E, EFAs, quercetin, calcium, iron, magnesium, selenium, zinc and most other minerals, CoQ10, DHEA, beneficial flora

Beneficial Flora

- **Estradiol** and **levonorgestrel** can cause tumors.

- **HRTs** are sometimes given to aging men which has an adverse effect on the prostate as well as accelerating the aging process.

- **Pesticides** (organochlorine compounds, DDT, simazine, lindane and some of
their active constituents) have long been associated with cancers but they can also be linked to numerous other dangerous health conditions including affecting the reproductive systems of both men and women.


**SUGGESTED ALTERNATIVES:**

**Apples** contain a substance that may help treat male baldness. Use only **organically grown** apples as non-organic apples are number one on the list of produce containing pesticides.


**Astaxanthin** and **Saw palmetto** increase testosterone and decrease estradiol levels in men.


**Astragalus** and a Chinese herb, show promise in treating endometriosis.


**Berries** prevent oxidative damage caused by estrogen-containing drugs.


**Beta-sitosterol** (a plant sterol) and **Saw palmetto** (an herb) help protect the prostate and reduce hair loss in men.


**Black cohosh** has long been used to treat menopausal symptoms with studies to prove this traditional use. Although there has been some concern that it contributes to breast cancer because of its phytoestrogen content, studies show the opposite, that it inhibits breast and prostate cancer cells. It can, however, interfere with such cancer treatments as radiation and chemotherapy.

*U Maryland Med Center article on Black-cohosh

**Cat’s Claw**, an immune strengthening herb, proves to be an effective treatment for endometriosis.

**Coconut** reduces changes in the brain caused by hormonal imbalance in women.
*Radenahmad et al: Young coconut juice significantly reduces histopathological changes in the brain that are induced by hormonal imbalance: a possible implication to postmenopausal women. Histol Histopathol 2009 Jun;24(6):667-74

**Coconut** and **Olive oils** increase testosterone and antioxidant levels in the testes.

**Cordyceps mushrooms** increase testosterone production and improve sperm count and quality.

**Dandelion** increases and regulates reproductive hormones.
DHEA (dehydroepiandrosterone) is a hormone produced from cholesterol, resulting in either estrogens or testosterone. Because DHEA levels decline with age, supplementation sometimes helps with menopausal, low adrenal, and lupus symptoms. As a supplement, it is not available in Canada.

* Forsblad-d’Elia et al: Low serum levels of sex steroids are associated with disease characteristics in primary Sjogren’s syndrome; supplementation with dehydroepiandrosterone restores the concentrations. J Clin Endocrinol Metab 2009 Jun;94(6):2044-51

Flaxseed manages hot flashes in women not taking estrogen therapy and reduces the risk of breast cancer.

* Truan et al: Flaxseed oil reduces the growth of human breast tumors (MCF-7) at high levels of circulating estrogen. Mol Nutr Food Res 2010 Oct;54(10):1414-21

Gluten sensitivity can alter hormone levels in men.


Goji berries/Wolfberry alter estradiol metabolism in order to prevent breast cancer.


Healthy lifestyle reduces the need for HRTs.
*Jones-Shoeman: Choose healthy lifestyle, nutritious food over hormone replacement therapy for menopause symptoms. NaturalNews Sunday, January 22, 2012

**Homeopathics** help relieve PMS symptoms.


**Inositol (B8)** helps women with polycystic ovary syndrome.


**Maca** is a Peruvian ginseng-type root that produces similar results as other ginsengs. While the maca root can come in various colours determined by growing conditions (black, blue, cream, green, purple, or red). Black is considered best for energy, stamina, fertility, and sperm quality while the red has been more effective for the male prostate. Maca does not increase estrogens, progesterone, or testosterone but rather regulates hormones in both men and women (see more under Prostate and Erectile Dysfunction). In females who have had their ovaries removed, black maca also relieves depression and mental confusion.

*Bogani et al: Lepidium meyenii (Maca) does not exert direct androgenic activities. J Ethnopharmacol 2006 Apr;104(3):415-7
*Gonzales et al: Effect of Lepidium meyenii (Maca) on spermatogenesis in male rats acutely exposed to high altitude (4340 m). J Endocrinol 2004;180(1):87-95
*León: The “Maca” (Lepidium meyenii) a little known food plant of Peru. Econ Bot 18(2):122-7
*Taylor 2005:338-44

**Magnesium** improves glucose tolerance and blood fat levels in those on oral contraceptives.
**Mangosteen** has aromatase inhibitory activity. Aromatase is an enzyme involved in the synthesis of estrogen.


**Melatonin** protects against endometriosis and endometrial cancer while significantly reducing lesions.

*Paul et al: Melatonin protects against endometriosis via regulation of matrix metalloproteinase-3 and an apoptotic pathway. J Pineal Res 2010 Sep;49(2):156-68
*Paul et al: Melatonin protects against endometriosis via regulation of matrix metalloproteinase-3 and an apoptotic pathway. Ai Zheng 2006 May;25(5):582-6

**Papaya** extract protects the uterus in both women who are pregnant and those who are not. Papaya has antioxidant effects similar to vitamin E.


**Pomegranates** moderate estrogen, helping to improve depression and bone loss in menopausal women. Unlike tamoxifen and estradiol, pomegranates do not have side effects when exerting selective estrogen receptor modulator activity.


**Pomegranates** and **Beta-sitosterol** (a plant sterol) are safe and effective in stimulating uterine contractions.


**Progesterone** affects hormones. When levels are **too low**, the results can lead to painful endometriosis, fibroids, sleep disturbances, melatonin secretion, breast, ovarian and prostate tumors, decreased neuroprotection, and pre-term births.

*Akoum et al: Secretion of interleukin-6 by human endometriotic cells and regulation by proinflammatory cytokines and sex steroids. J Med Case Reports 2010;4:76
Reishi mushrooms inhibit androgen production which diminishes the risk of an enlarged prostate or prostate cancer.

Sage is as effective as a steroid for treating skin redness or rashes, but less harmful. With antioxidant properties, it is also effective for improving mood and mental performance that often accompany hormonal changes.

Sage and Alfalfa help reduce menopausal symptoms.

Seaweed (brown) modifies estrogen-progesterone metabolism in postmenopausal women and initiates a positive change in gut bacteria. Kelp is the most common brown seaweed.

Soy Isoflavones, Lignans (from flaxseed), and Black cohosh help alleviate menopausal symptoms including cognitive decline and weight gain. Equol is a substance metabolized from daidzein, a flavonoid found in soybeans. Certain probiotics feed on this compound and in turn, produce hormone-regulating effects including the relief of menopausal symptoms in women and inhibiting prostate growth in men.
Use only non-GMO fermented soy foods as they have the medicinal value. The fermentation process nullifies any hormone-disrupting qualities.


**Testosterone** levels (higher), **vitamin D** and **Calcium** reduce the risk of falling in older men and women.

* Bischoff-Ferrari et al: Additive benefit of higher testosterone levels and vitamin D plus calcium supplementation in regard to fall risk reduction among older men and women. Osteoporos Int 2008 Sep;19(9):1307-14

**Vitex** (Chasteberry) is an effective treatment for menopausal symptoms in women and in preventing osteoporosis in men. It has also been used to control post-partum bleeding.

* Ladeji et al: Activity of aqueous extract of the bark of Vitex doniana on uterine muscle response to drugs. Phytother Res 2005 Sep;19(9):804-6
* Schellenberg: Treatment for the premenstrual syndrome with agnus castus fruit extract: prospective, randomised, placebo controlled study. BMJ 2001 Jan 20;322(7279):134-7

**Vitex** and **St. John’s Wort** decreases PMS-type symptoms in late-perimenopausal women.


**White mustard seeds** contain compounds which prevent an enlarged prostate.

**IMMUNOSUPPRESSANTS**

(Used to treat autoimmune disorders or prevent organ transplant rejection)

**COMMON EXAMPLES:**
- azathioprine – Imuran
- basiliximab – Simulect
- cyclophosphamide – Cytoxan, Neosar, Procytox
- cyclosporine – Gengraf, Neoral, Sandimmune
- daclizumab – Zenapax
- glatiramer – Copaxone
- methotrexates – amethopterin, MTX
- mycophenolate – CellCept, Myfortic
- pimecrolimus – Elidel
- sirolimus – Rapamune
- steroids – Prednisone and others
- tacrolimus – Prograf
- thalidomide – Thalomid

**DEPLETE:**

B6, B9, B12, E, calcium, copper, iron, magnesium, potassium, EFAs, bioflavonoids, L-glutamine

Autoimmune diseases were once thought to be an overactive immune system and thereby needing to be depressed but many are now being considered as a deficiency of the immune system.

* CLARK 2008:45-46,127-143  

Azathioprine is a known carcinogen. It is prescribed for such conditions as Crohn’s and to inhibit transplant rejection.
**Pesticides** (organochlorine compounds, DDT, simazine, lindane and some of their active constituents) have long been associated with a significant increase in cancers as well as the risk for many other dangerous health problems including the stimulation of immunological abnormalities.


**Pimecrolimus, tacrolimus and medium- to high-potency Corticosteroids** are linked to increased lymphoma rates.


**Statin drugs for Cholesterol** cause serious side effects for heart and liver transplant patients.


*Moreno et al: Severe rhabdomyolysis due to rosuvastatin in a liver transplant subject with human immunodeficiency virus and immunosuppressive therapy-related dyslipidemia. Liver Transplant 2011 Mar;17(3):331-3

**More than 80 diseases** come under the Autoimmune heading.


**SUGGESTED ALTERNATIVES:**

**Aloe vera** provides a safe and effective treatment for patients with oral lichen planus (an autoimmune disease of the mouth) and vulval lichen planus (an infection affecting the female vulva). Neither one is contagious and not caused by any microbe. Internally, Aloe also effectively treats by decreasing the effects of rheumatoid arthritis and multiple sclerosis.


*Choonhakarn et al: The efficacy of aloe vera gel in the treatment of oral lichen planus: a randomized controlled trial. Lipids Health Dis 2006;5:24


**Alfalfa** can reduce the severity of autoimmune susceptibility.
**Nature’s Pharmacy: Evidence-Based Alternatives to Drugs**


**Arnica** contains an immunosuppressive compound called Helenalin which deregulates unwanted T-cell responses.


**Artemesia (wormwood)** significantly improves Crohn’s disease.


**Astragalus** significantly reduces auto-antibodies especially in cases of myasthenia gravia and myocarditis.


**Banana** has immune-regulating activity that is also able to inhibit the HIV virus and cancer cells.

*Cheung et al: Musa acuminata (Del Monte banana) lectin is a fructose-binding lectin with cytokine-inducing activity. Phytomed 2009 Jun;16(6-7):594-600

**Barley grass** moderates the immune system especially in those with rheumatoid arthritis.

*Cremer et al: A purified green barley extract with modulatory properties upon TNF alpha and ROS released by human specialized cells isolated from RA patients. Roum Arch Microbiol Immunol 1998;57:231-42

**Beta glucans** are polysaccharides derived from oats, mushrooms, or yeasts. Beta glucans are particularly effective for priming and normalizing the immune system while decreasing infections and mortality rates in the severely ill.

*Clayton, Paul MD. Natural Defences: strengthening your immune system against modern threats. Booklet by the Sisu company and available online.
Boswellia (frankincense) has long been used as an anti-inflammatory but it also helps regulate the immune system.
Nature’s Pharmacy: Evidence-Based Alternatives to Drugs

**Ammon**: Modulation of the immune system by *Boswellia serrata* extracts and boswellic acids. Phytomed 2010 Sep;17(11):862-7

**Bromelain** has immune-regulating action but appears to be a novel approach in accelerating liver circulation after warm ischemia.


**CoQ10** significantly improves functional status and quality of life of heart transplant patients.


**Cordyceps mushrooms** decrease symptoms of such autoimmune diseases as Lupus; reduce the need for anti-rejection drugs or works with them; prolong the survival time of allogenic grafts; improve the outcome of renal transplants and kidney function in those dealing with a chronic condition; and balance TH1/TH2 function.

- *Ding et al*: The synergistic effects of *C. Sinensis* with CsA in preventing allograft rejection. Front Biosci 2009 Jan 1;14:3864-71
- *Sun et al*: Clinical study on application of bailing capsule after renal transplantation. Zhongguo Zhong Xi Yi Jie He Za Zhi 2004 Sep;24(9):808-10

**Cordyceps** and **Wormwood** prevent the recurrence of lupus nephritis.


**Curcumin** decreases the symptoms of several autoimmune diseases.

- *Xie et al*: Amelioration of experimental autoimmune encephalomyelitis by curcumin treatment through inhibition of IL-17 production. Int Immunopharmacol 2009 May;9(5):575-81
**Dong quai** (Angelica sinensis) decreases the effects of and heals ulcerative colitis.


**Elm Bark** has a protective and immune-regulating effect.


**Enzyme therapy** assists in stabilizing the immune system.

*Bohager 2009:36,37
*Bohager 2006:99-100
*Lee & Turner 1998:75-78

**Essential Oils** prevent cyclophosphamide-induced immunosuppression (Clove, Ginger, Sage). **Oregano oil** is a well-known antimicrobial but it also increases liver regeneration in experiments dealing with partial liver removal.


**Figs** have antioxidant and immune-boosting properties.


**Flaxseed** protects the kidneys, and ultimately improves blood pressure in those with lupus nephritis, an autoimmune disorder.


**Goji berries/Wolfberry** regulate the immune system and are especially good for a declining eyesight.


**Grape seed extract** reduces inflammation and oxidative stress in patients with systemic sclerosis.


**Homeopathics** improve conditions of those with chronic fatigue syndrome, often a symptom of an improper functioning immune system.
Maitake mushrooms stimulate proper immune function.


Mangosteen fruit is a potent antioxidant that displays immune-regulating activity that equals some drugs but without the side effects.


Melatonin safely and effectively treats systemic sclerosis (hardening and scarring of the skin) and pulmonary sarcoidosis (lung inflammation that can turn into fibrosis). Melatonin also reduces oxidative damage to ALS (Amyotrophic lateral sclerosis) patients.

*Pignone et al: Melatonin is a safe and effective treatment for chronic pulmonary and extrapulmonary sarcoidosis. J Pineal Res 2006 Sep;41(2):95-100

Melatonin, Quercetin and NAC (n-acetyl-cysteine) reduce oxidative damage associated with Grave’s Disease, an autoimmune disorder involving the thyroid.

*Tang et al: Oxidative stress in Grave’s disease patients and antioxidant protection against lymphocytes DNA damage in vitro. Pharmazie 2005 Sep;60(9):696-700

Murill mushrooms have immune regulating effects.


Natural substances (Curcumin, ECGC, Green Tea, Milk Thistle, Pomegranate, Quercetin, Resveratrol) may prevent osteoarthritis and rheumatoid arthritis. Nutritional interventions (Vitamin E, B9, Alpha lipoic acid, CoQ10, EGCG, Ginkgo biloba, Melatonin, Chelated Copper, Carnitine) are also successful in treating ALS whereas high-intensity exercise and calorie restriction was not.


Noni fruit is an immune-regulator that stimulates interferon production as well as T and B lymphocytes.
Nutrition has a profound effect on proper functioning of the immune system. Nutrient deficiencies compromise the immune system, in the old and the young, contribute to disease, and put surgery patients at risk for complications.


Olive leaf decreases the risk of autoimmunity.


**Omega-3 fatty acids** and a low carb diet maintains a remission of Crohn's disease.


**Papaya seed extract** has immune-regulating properties.


**Phytosterols** have several health benefits especially for cholesterol and the prostate but they also have immune-regulating properties.


**Pomegranates** reduce pain and inflammation of the autoimmune disease, rheumatoid arthritis. The seed oil protects against pesticide-induced kidney damage and enhances B-cell formation. B-cells are lymphocytes that play an important part in the humoral immune response.
**Probiotics** not only strengthen the immune system but have proven to reduce the rate of bacterial infections after liver transplants. Probiotics play an important role in the remission of inflammatory bowel disease and eczema.

*Hun: Bacillus coagulans significantly improved abdominal pain and bloating in patients with IBS. Postgrad Med 2009 Mar;121(2):119-24
*Tursi et al: Mesalazine and/or Lactobacillus casei in maintaining long-term remission of symptomatic uncomplicated diverticular disease of the colon. Hepatogastroentero 2008 May-Jun;55(84):916-20
*Vilela et al: Influence of Saccharomyces boulardii on the intestinal permeability of patients with Crohn's disease in remission. Scand J Gastroenterol 2008;43(7):842-8

**Reishi mushrooms** effectively treat Sjogren’s syndrome especially when traditional methods have failed and suppress proinflammatory cytokines in rheumatoid arthritis.
Pamela Duff, RN, CSNC


Shiitake mushrooms increase intestinal immunity.


Stevia, an herb that is about 200 times sweeter than table sugar, is often used by diabetics and non-diabetics alike because of its health benefits and no calories. Surprisingly, one of its health benefits is that it helps regulate the immune system.


*Shukla et al: Antioxidant ability and total phenolic content of aqueous leaf extract of Stevia rebaudiana Bert. Exp Toxicol Pathol 2011 Mar 4

Vitamin C and Selenium prevent tissue damage in patients with Raynaud’s and systemic sclerosis.


Vitamin D3 alone or with Beta-sitosterol benefits such autoimmune conditions as multiple and systemic sclerosis and psoriasis. A deficiency of vitamin D is very high in those with sclerosis.


*Vaccia et al: Vitamin D deficiency and insufficiency in 2 independent cohorts of patients with systemic sclerosis. J Rheumatol 2009 Jul 31

Vitamin E enhances beneficial immune responses.

*Meydani et al: Vitamin E supplementation and in vivo immune response in healthy elderly subjects: a randomized controlled trial. JAMA 1997;277:1380-86

Vitamin K2 improves bone status after lung and heart transplantation.

*Forl et al: Dietary vitamin K2 supplement improves bone status after lung and heart transplantation. Transplantation 2010 Feb 27;89(4):458-64
LAXATIVES

(Used to relieve constipation)

COMMON EXAMPLES:

Bulk-forming
- polycarbophil – Equalactin, Konsil fiber, Mitrolan, and others
- psyllium – Fiberall, Metamucil, and others

Lubricant
- mineral oil – Fleet and others

Osmotic
- glycerin – Babylax, Ophthalgan, and others
- lactulose – Cephulac, Chronulac, and others
- polyethylene glycol – GoLYTELY, Peglyte, and others

Saline
- magnesiurns/aluminum – Maalox, Alumed, and others
- sulfate - Epsom salts
- phosphate - Fleet, Phospho-Soda

Stimulants
- bisacodyl – Carter’s Little Pills, Dulcolax, Fleet, and others

Casanthranol/cascara
- phenolphthalein – Correctol, Ex-Lax, Feen-a-mint, and others
- senna – Castoria, Senokot, and others

Softeners
- docusate calcium – Sulfalax and others
- potassium – Dialose and others
- sodium – Colace and others

DEPLETE:

A, beta carotene, B2, B3, B9, B12, D, E, K, EFAs, calcium, magnesium, iron, phosphorus, potassium (and most other minerals)

Laxatives speed up the passage of food through the digestive system thus preventing the absorption of nutrients. Those dependent on laxatives rapidly become nutrient-deficient.
Mineral oil is a petroleum-based product that accumulates in body fat and breast milk.


**Suggested Alternatives:**

**Abdominal massage** with or without **essential oils** (Rosemary, Lemon, Peppermint) is effective for relieving constipation in adults, children, and the elderly.

*S*Ernst: Abdominal massage therapy for chronic constipation: A systematic review of controlled clinical trials. Forsch Komplementarmed 1999 Jun;6(3):149-51
*S*Higley 2010:414
*S*Kim et al: Effect of aromatherapy massage for the relief of constipation in the elderly. Taehan Kanho Hakhoe Chi 2005 Feb;35(1):56-64

**Bamboo shoots** are a good fiber food for relieving constipation in young women.


**Bromelain** from Pineapples is an enzyme that is gentle, effective and safe to be used as a laxative especially for post-operative constipation.


**Calendula flowers** prove their traditional use for relieving abdominal cramps and constipation.


**Cascara sacra**da is safer and more effective than bisacodyl. More importantly, it does not contribute to cancer as does bisacodyl.


**Diet** plays a huge role in constipation or proper elimination – so does exercise. **Plant fiber**, along with plenty of water, improves constipation and various other digestive issues – colitis, hemorrhoids, Barrett’s esophagus, diverticular and so on. Fried foods have been linked to bile duct and gallbladder cancer and a “Western” diet contributes to constipation.

Glucomannan is a fiber from the konjac root which can relieve adult or child constipation and can safely be taken while pregnant – as can any fiber as long as enough water is also consumed.


*Loening-Baucke et al: Fiber (glucomannan) is beneficial in the treatment of childhood constipation. Pediatr 2004 Mar;113(3 Pt 1):e259-64


Guar Gum is a fiber that is safe for hospitalized patients as an effective treatment for constipation and for preventing the dumping syndrome in those who have undergone gastric resection.

Hempseed is a safe and nourishing remedy for adults and children in relieving constipation.

Jujube is an Asian date that safely and effectively treats constipation although other dates are known to do this as well.

Kiwi fruit relieves constipation.

Magnesium deficiency not only contributes to constipation but a myriad of other health issues.

Oat Bran is a fiber that improves constipation and the bioavailability of vitamin B12.

Parsley appears to be an effective laxative.

Pea pod fiber has a prebiotic influence that increases bifidobacteria which ultimately, helps correct constipation.

Probiotics can help overcome constipation in adults, children, and infants. Probiotics are needed for digestion as well as the immune system. PRE-biotics are food sources for probiotics which ultimately keep the gut functioning properly.
Psyllium fiber and Gum Arabic improve bowel conditions including fecal incontinence.


Senna is a safe and effective alternative to the conventional polyethylene glycol-electrolyte lavage solution (PEG-ES) for colonoscopy preparation.


Water is so important in preventing constipation, among other health concerns, especially when consuming fiber. The body is roughly 80% water so it stands to reason that water is what it needs. I never recommend tap water unless that is all you have available. Tap water usually contains chlorine, fluoride and a host of other unwanted metals and microbes.


Yacon is a Peruvian tuber with significant antioxidant activity. Related to sunflower and Jerusalem artichoke, it speeds transit time through the bowel. It is particularly good for diabetics and those with chronic constipation as it contains a good supply of inulin (a prebiotic food).


**MUSCLE RELAXANTS**

**COMMON EXAMPLES:**
- carisoprodal – Soma, Vanadom
- cyclobenzaprine – Flexeril and others
- metaxalone – Skelaxin
- methocarbamol – Robaxin and others
- paracetamol – acetaminophen, Panadol, and others

**DEPLETE:**
C, B9, iron, potassium

Decreased levels of C, B9, and potassium have been observed in cases of muscle complaints associated with cholesterol-lowering drugs, especially Statins. The following references provide evidence for this phenomenon:

- *Scott et al: Statin therapy, muscle function and falls risk in community-dwelling older adults. QJM 2009 Sep;102(9):625-33*

**SUGGESTED ALTERNATIVES:**

- **Anise seed** has a long history as an antispasmodic. This study proves its historical use.

- ** Arnica** is Homeopathy’s first line of defence for pain and muscle stiffness.

- **Beetroot** is high in natural nitrates which enhance muscle performance especially after exercise.
Bromelain and Fresh pineapple juice increase the healing of achilles tendon injuries. The achilles tendon is located at the back of the leg and attaches the calf muscle to the heel bone. While this may have little to do with muscle cramps, it is another exercise-related injury.


**Carnitine** is an amino acid that reduces muscle fatigue. It is a substance synthesized in the body from two amino acids - lysine and methionine – and available as a supplement.


**Cittrulline malate** enhances athletic performance and reduces muscle pain.


**Coconut water** is better nutritionally than commercial sports drinks for rehydration after exercise and for preventing muscle spasms. It can even be used as an IV rehydration and resuscitation fluid.


**Coriander** is an herb with muscle relaxant effects.


**CoQ10** (ubiquinol form) is vital for every cell in the body to produce energy but it has a special affinity for the heart muscle.


**Creatine** enhances muscle endurance and recovery after exercise-induced damage and relieves cramping. Creatine has long been used by body builders but it is a supplement that is safely taken for overall improvement in muscle quality for the diabetic, those on hemodialysis or suffering from dystrophies, the aged as well as the athlete.


Muscle Relaxants

*Hersch et al: Creatine in Huntington disease is safe, tolerable, bioavailable in brain and reduces serum 8 OH2’dG. Neurol 2006 Jan 24;66(2):250-2

Curcumin, the active part of Turmeric root, reduces inflammation thus speeding up muscle recovery.

Essential oils used in carrier oils and massaged into an area can relieve pain and relax the muscles: Aroma Siez, Deep Relief, PanAway, Balsam, Basil, Marjoram, Peppermint, Rosemary, Roman chamomile, Thyme, Wintergreen.
*Higley 2010:428-430
*Sagorchev et al: Investigations into the specific effects of rosemary oil at the receptor level. Phytomed 2009 Dec 22

Magnesium is a major mineral needed for proper functioning of bones and muscles. A deficiency can cause muscle spasms, among other disorders.

Melatonin deficiency may play a role in the development of adolescent scoliosis.

NAC (N-acetylcysteine) is a derivative of the amino acid cysteine which is known to have several health benefits including reducing muscle inflammation after exercise.
**Omega-3 fatty acids** are known anti-inflammatories that improve muscle performance and recovery.


**Purslane** is a salad herb that has muscle relaxant properties.


**Sulforaphane** is a compound found mainly in broccoli sprouts as well as other cruciferous vegetables (cabbage family). It has many health benefits including protecting the muscles against exhaustion-induced damage.


**Tart Cherry juice** taken regularly can minimize muscle pain after strenuous exercise.


**Valerian** herb has antispasmodic effects but be careful when you take it as it is also used to induce sleep.


**Vitamin E** decreases muscular and oxidative damage but does not address inflammation.

NAUSEA/ANTI-EMETICS

(Used to manage nausea, vomiting or vertigo)

COMMON EXAMPLES:

anticholinergics – scopolamine [Scopace, Transderm Scop]
antihistamines
  - dimenhydrinate – Dramamine
  - meclizine – Antivert
  - phenothiazines
  - prochlorperazine – Compazine
  ... and many others

DEPLETE:

B2, riboflavin, CoQ10, NAC

Prochlorperazine has adverse reactions frequently seen in hospital emergency departments.


SUGGESTED ALTERNATIVES:

Anti-nausea Herbs include: ginger, chamomile, peppermint and raspberry leaf.


CAM (Complimentary and Alternative Medicine) is being used more and more for all manner of disorders including nausea and vomiting related to various causes, including pregnancy. CAM includes a variety of methods including accupressure and supplementation.


Curcumin protects against memory loss associated with scopolamine.
Essential oil of Peppermint relieves digestive issues including nausea and can safely be taken internally.

Ginger root, alone or with Protein and/or B6, has a long history of safe and effective use for nausea related to motion, cancer treatments, surgery, or pregnancy.

Noni juice reduces post-operative nausea.

Patchouli herb has anti-emetic effects.

Vertigoheel is a homeopathic remedy that is safe and effective for dizziness (vertigo).
Pamela Duff, RN, CSNC


**Vitamin supplementation** helps prevent nausea, especially in pregnancy. I have noticed that when pregnant women take synthetic vitamins, there are more incidences of nausea than when more natural forms of vitamins are taken.


**Vitamin B6** has long been used to relieve nausea in pregnancy but it should always be taken with a B-complex to avoid creating a deficiency in one or more of the other B family members since they all work closely together.


**Nicotine**

**Common Examples:**
- cigarettes
- cigars
- chewing tobacco
- nicotine gum, lozenges, patches:
  - Commit, Habitrol, Nicoderm, Nicorette, and others
- nicotine-containing foods:
  - cauliflower, eggplant, tomatoes, potatoes (plus other nightshade vegetables)
- prescription drugs (nasal spray and inhalers)
  - Nicotrol

**Deplete:**
- A, carotenoids, all B vitamins, C, E, calcium, selenium, zinc, CoQ10

- More than 4,000 chemical substances have been found in cigarette smoke; many are carcinogenic.

- Nicotine use during teen years later increases the likelihood of depression as adults.

- Nicotine speeds up the elimination of some medications, making them less effective.
  - Cohen 2008:221

- Nicotine increases the body’s need for caffeine, which is why the two are often used together.
Nicotine is one of at least 20 chemicals now labelled as Obesogens which contribute to weight-gain, including that of children born to parents who smoke.

Smoking is one of the 9 measured risk factors for heart attacks, arrhythmias, and cancer.

Smoking, Alcohol, and Coffee (caffeinated and non-caffeinated) use during pregnancy affects fetal breathing rates, movement, development, defects, and birth weight; decreases fertility; increases the risk of miscarriages and stillbirths; increases the risk of pancreatic disease and diabetes.

Varenicline (Champix in Canada and Chantix in the US) is sold mainly to help people quit smoking but it is strongly linked to worsening psychiatric disorders.

Suggested alternatives:

Aromatherapy (inhaling black pepper vapour) reduces symptoms of smoking withdrawal.
Chicory helps protect the liver against the carcinogens found in tobacco products.


Curcumin, Resveratrol, and Selenium reduce damage to the brain and lungs from cigarette smoke.

- Vanisree & Sudha: Curcumin combats against cigarette smoke and ethanol-induced lipid alterations in rat lung and liver. J Appl Microbiol 2009 Jun;106(6):2086-95

Melatonin given to newborns protected their hearts from nicotine damage caused by mothers who smoked.


Noni juice is a safe remedy for reducing cancer risk in current smokers.


Vitamins and Minerals disappear faster in smokers and those associated with smokers than in non-smokers, creating a greater need for supplementation especially such antioxidants as vitamins C and E which help repair lung damage.

- Alberg: The influence of cigarette smoking on circulating concentrations of antioxidant micronutrients. Toxicol 2002 Nov;180(2):121-37
- Bruno & Traber: Vitamin E biokinetics, oxidative stress and cigarette smoking. Pathophysiol 2006 Aug;13(3):143-49
- Bruno et al: α-Tocopherol disappearance is faster in cigarette smokers and is inversely related to their ascorbic acid status1,2,3. Am J Clin Nutr 2005 Jan;81(1):95-103
- Lykkesfeldt: Cigarette Smoke and Oxidative Stress, 2006:237-260 - Smoking depletes vitamin C: Should smokers be recommended to take supplements?
**NITRATES**

(Used to treat angina)

**COMMON EXAMPLES:**

- **isosorbides** – Apo-ISDN, Cedocard-SR, Imdur, Isordil, ISMO, Monoket
  ... and others
- **nitrofurantoin** – Furadantin and others
- **nitroglycerin** – Deponit, Minitran, Nitro-Dur, Notroject, Nitrolingual, Nitrostat
  ... and others
... and others

**DEPLETE:**

B3, C, NAC

Angina is a chest pain or discomfort that occurs if an area of the heart when it is not getting enough oxygen-rich blood. Often, nitrates are given sublingually (under the tongue) when this happens.

Nitrates are used commercially as food preservatives in cured meats (ham, bacon, hot dogs and so on). They are also used to make fertilizers, glass and explosives and found in drinking water. When nitrates are ingested, they are converted to nitrites which becomes a health concern because the nitrites then react with hemoglobin which in turn, decreases blood oxygen levels, ultimately affecting the heart.

*Nitrates and nitrites. CAS # 84145-82-4, 14797-65-0. Agen Toxic Sub Dis Reg (ATSDR) 2011 January
*No authors listed: Nitrates and Nitrites. TEACH Chemical Summary US EPA Toxicity and Exposure Assessment for Children’s Health 2006
*No authors listed: Nitrate and Nitrite. Argonne National Laboratory, EVS, US Dept Energy Human Health Fact Sheet, August 2005
SUGGESTED ALTERNATIVES:

**Antioxidants, Spirulina, CoQ10** and various other supplements prove to be valuable in preventing various heart problems.

*McCarty: Practical prevention of cardiac remodeling and atrial fibrillation with full-spectrum antioxidant therapy and ancillary strategies. Med Hypoth 2010 Jan 16

**Arjuna** improves angina in men.


**B5** improves coronary conditions including angina. Do not take this for long periods of time without taking a full B-complex in addition since a deficiency in one or more of the other B vitamins can be created by just taking only one family member for any length of time.


**Carnitine** is a substance produced in the body from the amino acids, lysine and methionine. Carnitine effectively decreases the number and intensity of exercise-induced angina episodes.


**CoQ10** is a vital antioxidant needed by every cell in the body to make energy but has a special affinity for the heart, improving various conditions and is capable of regenerating vitamin E. The ubiquinol form proves better than the cheaper ubiquinone


CoQ10 and Carnitine significantly reduce the inflammatory processes that lead to heart failure.


CoQ10, Carnitine, and Omega-3 fatty acids is an effective combination that works synergistically with conventional therapy to address cardiomyopathy.


Enzymes improve stable angina.


Magnesium improves angina related to coronary spasms.


Magnesium and Vitamin K help prevent barium nitrate-induced toxicity.

Payen et al: Intoxication by large amounts of barium nitrate overcome by early massive K supplementation and oral administration of magnesium sulphate. Hum Exp Toxicol 2010 Mar 30

Mediterranean diet protects against the production of coronary artery inflammation in those with unstable angina.


Omega-3 (fish oil) is comprised of DHA (docosahexaenoic acid) and EPA (eicosapentaenoic acid) which help to reduce angina attacks by decreasing inflammation and increasing stability of the cardiovascular system.

**Taurine** is an amino acid that may help improve blood flow.


**Tribulus** is an herb that increases blood flow. It is safe and effective in treating angina.


**Zinc** decreases angina episodes while improving cardiac function.

OSTEOPOROSIS

(Used to slow down osteoporosis development)

**COMMON EXAMPLES:**

- **Bisphosphonates**
  - alendronate - Fosamax
  - etidronate – Didronel
  - ibandronate – Boniva
  - pamidronate – Aredia
  - risedronate – Actonel
  - zoledronic – Zometa, Zomera, Aclasta, Reclast

- **Calcium-lowering hormone**
  - calcitonin – Cibacalcin, Calcimar, and others

- **Others**
  - raloxifene – Evista
  - teriparatide – Forteo

**DEPLETE:**

- **B6, D, calcium, iron, magnesium, zinc**

  - **Aspirin** inhibits bone healing and new bone formation with results dose-depandant.


  - **Bisphosphonates** used over an extended period of time lead to excessive mineralization, resulting in microcracks that interfere with bone quality and strength, increasing the risk of fractures. After a 4-year trial involving more than 4,000 patients, **alendronate** showed no reduction in fracture risks but it did show an increase in esophageal ulcerations. **Zoledronic** use resulted in renal impairment of prostate cancer patients.

**Bisphosphonates** are made from the chemical *Etidronic acid*, an ingredient also found in such things as cosmetic formulas, detergents, water treatments (swimming pools), and peroxide bleaching agents. There was even a study done that made the leap from cleaner to bone builder. And these same chemicals are prescribed for bone health. Go figure.


**Bisphosphonates** are often used to prevent metastatic bone cancer but, ironically, cause necrosis (death of all tissue) of the jaw bone and an increase in fractures and gastric ulcers. *Anastrozole* (Arimidex) is another cancer drug given to postmenopausal women undergoing breast cancer treatments but along with these treatments comes a decline in bone density.


**Bisphosphonates** contribute to bone loss and a significant increase in serious atrial fibrillation in postmenopausal women as well as a wide range of other health issues.

*Bhuriya et al: Bisphosphonate use in women and the risk of atrial fibrillation: a systematic review and meta-analysis. Int J Cardiol 2010 Jan 3
*Ho: Bisphosphonate stimulation of osteoblasts and osteoblastic metastasis as a mechanism of hypocalcaemia. Med Hypotheses 2011 Dec 27
*Papapetrou: Bisphosphonate-associated adverse events. Hormones (Athens) 2009 Apr-Jun;8(2):96-110

**Bisphosphonates** are linked to the cause behind a rare disorder called osteopetrosis where bones become abnormally dense, significantly increasing the risk of fractures. These drugs have also been the cause of a temporary or permanent loss of blood supply to a bone area.
Blood Thinners used over a long period of time are associated with reduced bone density and an increase in the number of fractures.


Celiacs have much higher rates of osteoporosis than those who do not have digestive issues.


Cow’s milk consumption increases the risk of cancers and fractures.


Diabetes drugs decrease bone mass and strength while increasing fracture risks.

- Wei et al: PGC1beta mediates PPARgamma activation of osteoclastogenesis and rosiglitazone-induced bone loss. Cell Metab 2010 Jun 9;11(6):503-16

Diuretics affect bone health by removing minerals along with excess fluid.

- Rejnmark et al: Loop diuretics increase bone turnover and decrease BMD in osteopenic postmenopausal women: results from a randomized controlled study with bumetanide. J Bone Miner Res 2006;21(1):163-70

DXA (dual-emission X-ray absorptiometry) bone scans have an error rate of +/-20% - meaning at least 20% of the time, the reading will be in error.


Proton-pump inhibitors (Acid Blockers) increase the risk of hip fractures mainly because they inhibit valuable stomach acids needed for digestion and absorption of nutrients.

- Ing-Lorenzini et al: Low-energy femoral fractures associated with the long-term use of bisphosphonates:
osteoporosis

Nature's Pharmacy: Evidence-Based Alternatives to Drugs

a case series from a Swiss university hospital. Drug Saf 2009;32(9):775-85

Radiation treatments have a significantly destructive effect on bones.

Smoking profoundly increases the risk of bone fractures.

Teriparatide causes an increase in bone cancer especially those treated for the disease or at a high risk for developing bone cancer.
*Teriparatide. MedicineNet website
*Vahle et al: Skeletal changes in rats given daily subcutaneous injections of recombinant human parathyroid hormone (1-34) for 2 years and relevance to human safety. Toxicol Pathol 2002 May-Jun;30(3):312-21

Thyroxine, a thyroid medication, interferes with the action of bisphosphonates.

Suggested alternatives:

Alpha-Lipoic acid inhibits inflammatory bone resorption.

Alpha-lipoic acid, Berberine, EGCG, and Resveratrol have beneficial effects on bone health.

Anise seed, Chamomile, and Mountain tea have estrogen-modulating effects that help prevent osteoporosis.
Arginine and Lysine are amino acids that are important bone-building promoters. These proteins double calcium absorption into the bone and generally improve mineral absorption.

**Filip et al:** Alpha-ketoglutarate decreases serum levels of C-terminal cross-linking telopeptide of type I collagen (CTX) in postmenopausal women with osteopenia: six-month study. Int J Vitam Nutr Res 2007 Mar;77(2):89-97

**Fiore et al:** L-arginine prevents bone loss and bone collagen breakdown in cyclosporin A-treated rats. Eur J Pharmacol 2000 Nov 24;408(3):323-6

**Fürst:** Dietary L-lysine supplementation: a promising nutritional tool in the prophylaxis and treatment of osteoporosis. Nutr 1993 Jan-Feb;9(1):71-2


**Pennisi et al:** Supplementation of L-arginine prevents glucocorticoid-induced reduction of bone growth and bone turnover abnormalities in a growing rat model. J Bone Miner Metab 2005;23(2):134-9

Ashwaganda has a profound effect in preventing bone loss in women who have had their ovaries removed.


B vitamin (6,9,12) deficiency contributes to increased levels of homocysteine which lead to bone fractures as well as cardiovascular disease and Alzheimer’s. Supplementation of these nutrients (plus a total B-complex to avoid creating a deficiency in one or more of the family members) and Betaine hydrochloric acid to improve digestion, help prevent such disorders.


**Spence et al:** Understanding the complexity of homocysteine lowering with vitamins. JAMA 2011;306(23):2610-11

**van Meurs et al:** Homocysteine levels and the risk of osteoporotic fracture. New Eng J Med 2004;350(20):2033–41

Bee Propolis and Royal Jelly prevent osteoporosis by stimulating bone formation and increasing bone fracture healing time.

**Guney et al:** Effects of Propolis on Fracture Healing: An Experimental Study. Phytother Res 2011 Mar 21

**Ha et al:** Caffeic acid phenethyl ester inhibits osteoclastogenesis by suppressing NF kappaB and downregulating NFATc1 and c-Fos. Int Immunopharmacol 2009 Jun;9(6):774-80

**Hidaka et al:** Royal jelly prevents osteoporosis in rats: beneficial effects in ovariectomy model and in bone tissue culture model. J Nutr 2007 Jul;137(7):1769-75

**Hidaka et al:** Royal jelly prevents osteoporosis in rats: beneficial effects in ovariectomy model and in bone tissue culture model. Adv Acc Publ 2006 April 24:3(3):339–48

**Narita et al:** Royal jelly stimulates bone formation: physiologic and nutrigenomic studies with mice and cell lines. Bull Exp Biol Med 2008 Jan;145(1):75-7

**Narita et al:** Royal jelly stimulates bone formation: physiologic and nutrigenomic studies with mice and cell lines. Biosci Biotechnol Biochem 2006 Oct;70(10):2508-14

Berberine-containing plants (Barberry, Goldenseal, Oregon grape, Goldenthread), Hops and Vitamins D and K have bone-protecting qualities that are particularly beneficial to postmenopausal women.

**Konda et al:** Rho iso-alpha acids from hops inhibit the GSK-3/NF-κB pathway and reduce inflammatory markers associated with bone and cartilage degradation. J Inflamm (Lond) 2009;6:26
*Holick et al: Hop rho iso-alpha acids, berberine, vitamin D3 and vitamin K1 favorably impact biomarkers of bone turnover in postmenopausal women in a 14-week trial. J Bone Miner Metab 2009 Dec 19


**Blackberries** have bone-protecting properties.


**Black cohosh**, an herb often used in the treatment of menopausal symptoms, also stimulates skeletal bone growth, even in men, without affecting the prostate.


**Black olives** (but not green) prevent bone loss.


**Boron** is a trace mineral that stimulates bone formation and inhibits bone resorption.


**Calcium without vitamin D** or taken in high amounts increase the risk of fractures.


**Calcium supplements**, from a plant-based red marine algae called Lithothamnion calcareum, are better absorbed than calcium derived from “rock” and have additional benefits of prohibiting the growth of colon cancer cells and acting as an anti-inflammatory. Inflammation often increases bone loss. Red marine algae is full of minerals, especially bioavailable calcium, which help improve bone structure.


**Cinnamon** prevents bone loss and reabsorption of bone into tissues.
Pamela Duff, RN, CSNC


**Citrus juices and pulp**, improve bone quality and antioxidant status but they should not be eaten by those on any kind of medication including a one-a-day aspirin.

* Deyhim et al: Citrus juice modulates bone strength in male senescent rat model of osteoporosis. Nutr 2006 May;22(5):559-63

**Colostrum** (lactoferrin) is the first milk produced by mammals right after giving birth. It has significant immune-boosting properties valuable for the newly born and as a supplement, offers the same effects to the elderly as well as preserving their bones.


**Conjugated linoleic acid (CLA)** increases bone mineral content.


**Cumin seed** reverses bone loss as effectively as estradiol in those who have had their ovaries removed.


**Curcumin** is the active part of Turmeric and significantly contributes to bone health.

* Oh et al: Curcumin inhibits osteoclastogenesis by decreasing receptor activator of nuclear factor-kappaB ligand (RANKL) in bone marrow stromal cells. Mol Cells 2008 Nov 30;26(5):486-9

**Exercise** is very important for maintaining bone health, balance, and reducing falls and resulting fractures. Tai chi and yoga have been studied the most related to bone health but any form of exercise is much better than nothing.

FOS (fructooligosaccharide) is a prebiotic food supply for good gut bacteria, usually derived from inulin. FOS with Plums, Omega 3, or fermented soy are good combinations to increase bone health. Healthy supplies of good bacteria help correct malabsorption problems and resulting bone disease.

Fruit, Vegetable, and Legume consumption is linked to greater bone health. Red and orange produce, in particular, contain carotenoids which stimulate bone formation and inhibit bone resorption into the tissues but green and yellow produce is equally as important. The Western-type diet, with more processed foods and fewer fresh fruits and vegetables, contributes to bone loss and other health issues.

Genistein is an isoflavone found in high concentrations in such foods as soy and fava beans and kudzu (a pea plant considered to be a noxious weed in many places). Genistein is well-known and safe for supporting bone health without adversely affecting breast density or endometrium thickness. It also proved to be superior to the bone drugs alendronate, raloxifene and estradiol in reversing drug-induced
Osteoporosis. However, Genistein can also be a hormone-disrupter so eating such foods should be limited to the occasional use. Fermenting these foods does get rid of the disrupting substances.


**Grapefruit pulp** improves bone quality **but should not be consumed by anyone on any kind of medication.**


**Hesperitin** is a citrus bioflavonoid that is important for the formation and maintenance of bone mass and strength.


**Homeopathic plumbum** proves better than calcitonin for regenerating bone.


**Horny Goat Weed** is an herb often sold as an endurance supplement that improves circulation but it is also high in a substance called icarlin which appears to be more potent than genistein when it comes to promoting bone health.

Kudzu is an herb that is often viewed as a noxious weed in many places but it does have some valuable health properties and one is contributing to the prevention of bone loss.


Maca is a Peruvian root noted for balancing hormones in both men and women and therefore valuable in protecting against estrogen deficient bone loss.


Melatonin protects the digestive tract from damage caused by bisphosphanates.


Mineral-deficiency, especially magnesium, contributes to osteoporosis especially in those with gluten sensitivity. Digestive problems such as celiac, Crohn’s, IBS etc significantly decreases the ability to absorb nutrients efficiently thus contributing to various health problems including osteoporosis.


Manganese is a trace mineral that improves mineral density in bones.


Milk Thistle is an estrogen modulator that has positive effects in preventing osteoporosis.


Nutmeg contains a compound that stimulates osteoblast differentiation.


Olives contain a compound called oleuropein which protects against bone loss.


Omega 3 fatty acids and GLA (the “good” part of Omega 6 fatty acid) found in the oils of borage, evening primrose, and black currant have beneficial effects on bone health and joints in general.
Oranges improve osteoporosis and bone strength, especially in males.


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Silica is a mineral known to improve the conditions of skin, hair, nails, and bones. Its nutritional bioactive form is called Orthosilicic acid and found in health products derived from bamboo, horsetail, or other sources.

Soy milk and Progesterone taken separately may be beneficial to bone health but when taken together, contributes to bone loss. Fermented soy poses no problem to bone health.

Strontium renalate safely reduces risk of fractures in postmenopausal osteoporosis.

Sulforaphane is a compound found in cruciferous vegetables, especially broccoli sprouts, which shows important action in preventing osteoporosis.

Tea (Green and Black) is linked to better bone structure.
Vitamin C improves collagen formation and osteoblast differentiation. The best vitamin C for bioavailability is that made from mineral ascorbates (less acidic) rather than ascorbic acid.


Vitamin D3 is an essential nutrient for bone health and the many other health conditions that it improves.


Vitamin D3 and K2 together have a greater effect on bone health.


Vitamin E tocotrienols promote bone formation. The best vitamin E supplement is one that contains all 4 tocopherols and 4 tocotrienols.

*Ahmad et al: Tocotrienol offers better protection than tocopherol from free radical-induced damage of rat bone. Clin Exp Pharmacol Physiol 2005 Sep;32(9):761-70

Vitamin K is a fat-soluble vitamin vital for blood clotting and bone health. It is found in fermented foods (natto, soy, tempeh, miso, etc) and green foods (kale, spinach, chard, etc). Fermented soy is an excellent source since the fermentation process nullifies substances that can disrupt hormones. Be aware that most soy is genetically modified making it an inferior food with little to no medicinal value so try to find organic fermented soy products as much as possible. Since these foods are high in vitamin K, they should be carefully used by those on blood thinners.

*Droke et al: Soy isoflavones avert chronic inflammation-induced bone loss and vascular disease. J Inflamm (Lond) 2007 Sep 7;4:17
*Hara & Akiyama: Vitamin K and bone quality. Int J Cardiol 2010 Jan 3
Iwamoto: Anti-fracture efficacy of vitamin K. Clin Calcium 2009 Dec;19(12):1805-14
Kaneki: Protective effects of vitamin K against osteoporosis and its pleiotropic actions. Clin Calcium 2006 Sep;16(9):1526-34
Kaneki et al: Japanese fermented soybean food as the major determinant of the large geographic difference in circulating levels of vitamin K2: possible implications for hip-fracture risk. Nutr 2001 Apr;17(4):315-21
Sasaki et al: Vitamin K2 inhibits glucocorticoid-induced bone loss partly by preventing the reduction of osteoprotegerin (OPG). J Bone Miner Metab 2005;23(1):41-7
Tsukamoto et al: Intake of fermented soybean (natto) increases circulating vitamin K2 (menaquinone-7) and gamma-carboxylated osteocalcin concentration in normal individuals. J Bone Miner Metab 2000;18(4):216-22
Vitex (Chasteberry) is an herb often used by women to manage PMS but has a traditional value for the reproductive systems of both men and women. Vitex also has osteoprotective effects.


Walnut extract contains a substance (ellagic acid) which stimulates bone formation as well as having an anti-inflammatory effect on the aorta.


Xylitol is a healthier sugar substitute that actually helps with bone health as well as preventing dental cavities.


Yacon is a Peruvian tuber with significant antioxidant activity. Yacon is related to the sunflower and Jerusalem artichoke and found to improve bone density and quality.


Yam (Dioscorea alata) has beneficial effects on bone health.

*Peng et al: Antiosteoporotic activity of Dioscorea alata L. cv. phyto through driving mesenchymal stem cells differentiation for bone formation. Evid Based Compl Alt Med 2011;712892:12 pages

Zinc and Carotenoids are important components of healthy bones.


Zyflamend is an anti-inflammatory product that inhibits prostate cancer cells and has proven to be beneficial for bone health.

Pancreas

(Used to treat pancreatic disorders and cystic fibrosis digestion)

Common examples:

- **pancreatin** – Donnazyme, Pancrezyme, Pancote and others
- **pancrelipase** – Cotazym, Creon, Ku-zyme, Pancrease, Ultrase, Viokase and others

Deplete:

B9, iron

Suggested alternatives:

- **Pancreatic enzymes** are formed in the pancreas and consist of about 22 different kinds with only a few being prescribed for either humans or animals. Since these enzymes are vital, nutritional supplements should also be taken to offset any deficiencies the enzymes might cause. Without vitamins, enzymes cannot function.
  
  * Haas 2006:83

- **Pancreatic enzymes** consist of substances that break down proteins (protease), fats (lipase), and carbohydrates (amylase) and generally come from an animal source. Digestive enzymes, as a whole can come from two sources, plants and animals. Animal sources are slaughtered to extract the raw material. Most of these sources are raised in questionable environments and given disturbing substances. That said, in cases of pancreatic disorders, it is still recommended that animal-based enzymes be combined with plant-based because animal-based will fortify the organ while the plant-based enzymes will break down food that is eaten.

  * Bohager 2009:18-23
  * Murray 1998:127
Pancreatic and Digestive Enzymes assist:

- **Athletic performance**

- **Celiac disease**

- **Chronic Pancreatitis, especially after pancreatic surgery**

- **Cystic Fibrosis**
  *No authors listed: Comparison of a high lipase pancreatic enzyme extract with a regular pancreatin preparation in adult cystic fibrosis patients. Aliment Pharmacol Ther 1994 Dec;8(6):603-7

- **Diabetes**

- **Fat malabsorption**

- **Pancreatic cancer**
  *Saruc et al: Treatment with pancreatic enzymes significantly prolongs the survival of mice with human pancreatic cancer xenografts and slows the tumor growth. Pancreas 2004 May;28(4):401-12

- **Pancreatic insufficiency**

- **Rosacea**

**Processed Meats** are significantly linked to the development of pancreatic cancer with a 68% increased risk over those that ate other types of meat.

Suggested Helpers:

**Astragalus** is an herb that reduces the autoimmune destruction of pancreatic cells, especially in diabetics.


**Dandelion** has pancreatic lipase activity which protects the pancreas from chemically-induced pancreatitis.


**Melatonin** has beneficial effects involving pancreatic cancer.


**Melatonin** and **Tryptophan** reduce damage during acute pancreatitis.


**Phospholipids** (lecithin, phosphatidylcholine) protect the pancreas from alcohol-induced oxidation and the liver from fibrosis.


**Spices** enhance pancreatic enzyme activity, especially Asafoetida (a gum obtained from giant fennel), Capsaicin, Cumin, Curcumin, Fenugreek, Ginger, Mustard, and Black pepper.

**Parkinson’s Disease**

**Common Examples:**

**Anticholinergics**
- atropine
- benztropine – Cogentin
- glycopyrrolate – Robinul
- propantheline – Norpanth
- trihexyphenidyl – Artane

**Dopamine agonists**
- amantadine – Symmetrel, Symadine
- bromocriptine – Parlodel
- levodopa – Sinemet, L-Dopa, and others
- pergolide – Permax

**Deplete:**

**B3, B6, B9, B12, C, iron, potassium, SAMe**

- **5-HTP** should not be taken with these drugs as the combination can cause scleroderma-like conditions (skin becomes hard and tight).
  

- **Cholinesterase inhibitors**, taken for Alzheimer’s disease, increase the tremors and exacerbation of Parkinson’s disease.
  

- **Cholesterol levels** at moderately high levels seem to slow the progression of Parkinson’s.
  
  *Huang et al: Serum cholesterol and the progression of Parkinson’s disease: Results from DATATOP. PLoS One 2011;6(8):e22854
**Suggested alternatives:**

**Alpha lipoic acid** is a potent antioxidant with neuro-protective effects making it ideal for such diseases as Alzheimer’s and Parkinson’s.

*Fujita et al: Alpha-lipoic acid suppresses 6-hydroxydopamine-induced ROS generation and apoptosis through the stimulation of glutathione synthesis but not by the expression of heme oxygenase-1. Brain Res 2008 Apr;1206:1-12

**Ashwaganda** is an adaptogenic herb used to combat stress but it also has neuro-protective effects.


**Astaxanthin** is a carotenoid that has many health benefits including neuroprotective properties.


**Blueberry polyphenols** reduce the effects of neurodegenerative diseases.


**Chinese skullcap** is an herb that contains baicalein which has neuro-protective effects.

*Li et al: Inhibition of microglial activation by the herbal flavonoid baicalein attenuates inflammation-mediated degeneration of dopaminergic neurons. J Neural Transm 2005 Mar;112(3):331-47

**Coconut water** protects neurons from degenerating.

*Park et al: Poria cocos water extract (PCW) protects PC12 neuronal cells from beta-amyloid-induced cell death through antioxidant and antiapoptotic functions. Pharmazie 2009 Nov;64(11):760-4

**CoQ10** protects neurons and slows the degenerative progress. The ubiquinol form is better absorbed and utilized than the cheaper ubiquinone.


**Creatine**, alone or with **CoQ10**, is a combination proving to be useful in treating such diseases as Parkinson’s, Huntington’s and other neurological conditions. Creatine
alone improves muscle quality in the aged, the athlete and those with muscular diseases. It also reduces muscle cramps and helps with noise-induced hearing loss. It is safely taken by diabetics and those on dialysis. Creatine decreases homocysteine levels, important in those with Parkinson’s or heart disease.

- Yang et al: Combination therapy with coenzyme Q10 and creatine produces additive neuroprotective effects in models of Parkinson’s and Huntington’s diseases. J Neurochem 2009 Jun;109(5):1427-39

**Curcumin** is the active compound found in the food spice, Turmeric. It has numerous healing benefits including neuro-protective effects and alleviating glutathione depletion, which is valuable in treating such diseases as Parkinson’s and Alzheimer’s.

**Echinacea** is an herb well known for boosting the immune system during cold and flu season but it also contains a compound which has neuro-protective effects.


**Exercise** improves balance confidence and endurance. Although tai chi and dancing have been studied the most in relation to Parkinson’s, any form of exercise is better than nothing.


**Ginkgo biloba** is an herb most often used for increasing memory (mainly because it increases blood flow to the brain) but Ginkgo also has properties that decrease the neurotoxic effects of l-dopa.


**Homocysteine levels** should be decreased in order to prevent Parkinson’s, cardiovascular diseases, and bone loss in those taking l-dopa, a medication which tends to raise homocysteine levels. This can be achieved through supplementation of certain B vitamins (6,9,12) which should be taken with a B-complex in order to prevent a deficiency in one or more of the other B family members. In addition, B6 may reduce the severity of l-dopa-induced dyskinesias (involuntary movements) in Parkinson’s disease and B5 may play a role in reversing the effects of Hallervorden-Spatzy syndrome, which also has a movement disorder as part of the diagnosis.

*Ientile et al: Homocysteine, vitamin determinants and neurological diseases. Front Biosci (Schol Ed) 2010;2:359-72
**Lion’s Mane mushroom** stimulates nerve regeneration.


**Psyllium fiber** increases the bioavailability of l-dopa.


**Quercetin** is a bioflavonoid that may be an effective helper for l-dopa.


**Quince fruit (Chaenomeles speciosa)** has anti-Parkinson’s effects, useful in treating the disease.

- Zhao et al: Dopamine transporter inhibitory and antiparkinsonian effect of common flowering quince extract. Pharmacol Biochem Behav 2008 Sep;90(3):363-71

**Red Sage** increases dopamine release.


**Reishi mushrooms** protect the neurons in such degenerating diseases as Parkinson’s.

- No authors listed: Ganoderma lucidum protects dopaminergic neuron degeneration through inhibition of microglial activation. Evid Based Complement Alternat Med 2009 Jul 16


**Resveratrol** is a substance derived from red grape skins and other fruits such as mulberry, reduces oxidative damage, depletion of dopamine, and protects the neurons.

- Busanello et al: Resveratrol protects against a model of vacuous chewing movements induced by reserpine in mice. Behav Pharmacol 2010 Nov 30


*Zhang et al: Resveratrol protects dopamine neurons against lipopolysaccharide-induced neurotoxicity through its anti-inflammatory actions. Mol Pharmacol 2010 Sep;178(3):466-77

**Rosemary** contains a compound that stimulates nerve growth.


**SAMe** is effective and well-tolerated in those with Parkinson’s suffering from depression.


**Sulforaphane** is a substance found in cruciferous vegetables but highest is in broccoli sprouts. Sulforaphane has numerous health benefits including a protective effect against neuron cell death.

*Vauzour et al: Sulforaphane protects cortical neurons against 5-S-cysteinyl-dopamine-induced toxicity through the activation of ERK1/2, Nrf-2 and the upregulation of detoxification enzymes. Mol Nutr Food Res 2010 Apr;54(4):532-42

**Theanine** is a substance derived from Green tea and has neuroprotective properties as well as a calming effect, useful in stressful situations.


**Velvet bean extract (Mucuna pruriens)** has a long history of use for treating Parkinson’s because of its natural dopamine content. Tests revealed that this herb had better effects, including a longer relief from dyskinesia, than those taking l-dopa. If you want to try it, it is wise to find the ready-made extract because the seed pods also have a history of use – as an itch powder. Mucuna pruriens is not available in Canada because it is a pharmaceutical rival but some Horny Goat weed products do contain this herb.

Vitamin D deficiency leads to a greater risk of developing Parkinson’s and such other neurological disorders as multiple sclerosis.


Prostate

(used to treat prostate enlargement [BPH – benign prostatic hyperplasia])

Common Examples:

5-Alpha Reductase Inhibitors
- finasteride – Proscar
- dutasteride – Avodart

Alpha-1 Blockers
- alfuzosin – UroXatral
- doxazosin – Cardura
- prazosin – Minipress
- tamsulosin – Flomax
- terazosin – Hytrin

Deplete:

* studies have not yet determined any

- **Aluminum-containing antiperspirants** contribute to breast and prostate cancers as well as other disorders. Aluminum is found in many products including acid relievers, food and soft drink cans, cookware, vaccines, food additives (often beginning with an E followed by a number) and more.

  *Hupston: Avoid aluminum - Locate the unexpected sources of aluminum in products. NaturalNews Friday, August 26, 2011

  *McGrath: Apocrine sweat gland obstruction by antiperspirants allowing transdermal absorption of cutaneous generated hormones and pheromones as a link to the observed incidence rates of breast and prostate cancer in the 20th century. Med Hypotheses 2009 Jun;72(6):665-74

- **Bisphosphonates** are prescribed for osteoporosis but have, instead, resulted in renal impairment of prostate cancer patients.


- **Blood thinners** used beyond two years after a diagnosis of prostate cancer is associated with a poorer prognosis.


- **Certain drugs** used to induce growth in young boys, cause loss of bone quality and increases the size of the prostate. These drugs, called Aromatase
inhibitors (AIs), are normally used for breast cancer treatments in women and to prevent enlarged breasts in men.


Dairy consumption increases the risk of prostate (and ovarian cancer) as well as decreased bone quality. While dairy is the main focus of the studies, one also states that “milk was most closely correlated ... with prostatic cancer incidence, followed by meat and coffee. As for testicular cancer, cheese was most closely correlated ... with the incidences in ages of 20-39, followed by animal fat and milk.”


Enlarged prostates create a higher risk for prostate cancer, a risk that continues to climb with age and nutrient deficiencies, which increase even more when drugs for the prostate are added to the other factors.

* Mandal: Drugs for enlarged prostate raise cancer risk. news-medical.net online article published June 9, 2011

HRTs (Hormone Replacement Therapy) are occasionally used in aging men but that has adverse effects on the prostate as well as accelerating the aging process.


Nutrient deficiencies contribute to male hormone reduction, especially vitamins A and E and the minerals selenium and zinc.


Pesticides (DDT, simazine, lindane and some of their active constituents) have long been associated with a significant increase in developing cancers. Chronic exposure also increases the risk for diabetes, thyroid diseases, and hypertension.

* Band et al: Prostate cancer risk and exposure to pesticides in British Columbia farmers. Prostate 2010 Aug 26
Nature’s Pharmacy: Evidence-Based Alternatives to Drugs


Petroleum products such as mineral oil, often used as a laxative, increases cancer risks and not just of the prostate.

* Tolbert: Oils and cancer. Cancer Causes Control 1997 May;8(3):386-405

Statin drugs, used for Cholesterol, have many side effects including stimulating the growth of prostate cancer cells.

* Chang et al: Statins increase the risk of prostate cancer: A population-based case-control study. Prostate 2011 Dec;71(16):1818-24
* Ritch et al: Effect of statin use on biochemical outcome following radical prostatectomy as evidenced by the fact that Statin users have a lower 5-year biochemical recurrence-free survival compared with non-users. BJU Int 2011 Oct;108(8 Pt 2):E211-6

Trans fats significantly increase the risk of numerous diseases including cancers, which is why it is so important to take antioxidants. Trans fats are found in processed foods, hard margarines and shortening, and notoriously high in deep fried foods.


Vaccines using animal cells are linked to retrovirus infections associated with chronic fatigue and prostate cancer.


SUGGESTED ALTERNATIVES:

SEE MORE SUGGESTIONS FOR PROSTATE UNDER CANCER.

Antioxidants, Milk thistle, Isoflavones, and Lycopene significantly reduce enlarged prostates and the risk for prostate cancer. Other antioxidants (CoQ10, vitamin E, Selenium, Methionine, Phospholipids) protect men (and women) against the occupational stress of working with petrochemicals in the oil and gas industry.

* Jian et al: Do dietary lycopene and other carotenoids protect against prostate cancer? Int J Cancer 2005 Mar 1;113(6):1010-4
* Korkina et al: Coenzyme Q10-containing composition (Immugen) protects against occupational and environmental stress in workers of the gas and oil industry. Biofactors 2003;18(1-4):245-54
Apigenin and Luteolin are bioflavonoids found in a number of fruits, vegetables, and herbs. They are potent antioxidants that prohibit the progression of prostate cancer cells and trigger their death.

Apricots reduce alcohol- or radiation-induced testicular damage.

Aristolaxanthin (a potent antioxidant carotenoid) and Saw palmetto decrease the growth of prostate cancer cells.

Avocados are rich in compounds that help prevent prostate problems.

B12 deficiency causes a type of anemia called pernicious anemia which has been linked to prostate cancer but which responds well to supplementation.

Banana peel extract reduces the risk of prostate enlargement.

Bee pollen derived from mustard green flowers induces prostate cancer cell death.

Bee propolis and Brazilian Green Bee Propolis are known anti-infectives but they also induce the deaths of various cancer cells including that of the prostate.
Berberine-containing plants (Barberry, Goldenseal, Goldenthread, Oregon grape) are strong anti-microbials as well as having an anti-cancer effect on the prostate.

*Szliszka et al: Ethanolic extract of Brazilian green propolis sensitzes prostate cancer cells to TRAIL-induced apoptosis. Int J Oncol 2011 Feb 1

Beta-sitosterol and Saw palmetto protect the prostate and reduce hair loss in men.


Black cohosh is an herb frequently used by women for menopausal symptoms but it also works very well for men by inhibiting the formation of prostate cancer cells.


Brown Seaweed and Spinach carotenoids (fucoxanthin and neoxanthin respectively) have anti-cancer properties against prostate cells. Fucoxanthin is also sold as a weightloss product.


Cacao is the base for cocoa and chocolate but in the raw state has many health benefits including a protective effect on the prostate.


Coconut oil has significant health benefits including reducing enlarged prostates while increasing testosterone and antioxidant levels in the testes.


Cruciferous (Brassica) vegetables of the cabbage family significantly reduce the risk of prostate cancer but a “Western-style diet” aggressively increases the risk. Selenium and Sulforaphane (a potent phytosterol) are found in high amounts in broccoli sprouts.


Gibbs et al: Sulforaphane destabilizes the androgen receptor in prostate cancer cells by inactivating histone deacetylase 6. Proc Natl Acad Sci USA 2009 Sep 29;106(39):16663-8


Xue et al: Induced hyperproliferation in epithelial cells of mouse prostate by a Western-style diet. Carcinogen 1997 May;18(5):995-9

**Cubeb pepper** demonstrates hormone-regulating and anti-inflammatory effects, important in treating an enlarged prostate.


**Curcumin** is an active compound of the cooking spice, Turmeric, and known to significantly enhance health including that of the prostate, inducing cancer cell death and preventing metastatic activity.

Chaudhary & Hruska: Inhibition of cell survival signal protein kinase B/Akt by curcumin in human prostate cancer cells. Int J Cardiol 1995 May;49(3):191-9


Choi et al: Curcumin interrupts the interaction between the androgen receptor and Wnt/β-catenin signaling pathway in LNCaP prostate cancer cells. Prostate Cancer Prostatic Dis 2010 Dec;13(4):343-9

Deeb et al: Curcumin [1,7-bis[4-hydroxy-3-methoxyphenyl]-1-6-heptadine-3,5-dione; C21H20O6] sensitizes human prostate cancer cells to tumor necrosis factor-related apoptosis-inducing ligand/


*Hilchie et al: Curcumin-induced apoptosis in PC3 prostate carcinoma cells is caspase-independent and involves cellular ceramide accumulation and damage to mitochondria. Nutr Cancer 2010 Apr;62(3):379-89


*Li et al: Curcumin, a dietary component, has anticancer, chemosensitization, and radiosensitization effects by down-regulating the MDM2 oncogene through the PI3K/mTOR/ETS2 pathway. Cancer Res 2007 Mar 1;67(5):1988-96


*Yang et al: Inhibition of the expression of prostate specific antigen by curcumin. Yao Xue Xue Bao 2005 Sep;40(9):800-3

*Zhang et al: Reducing effect of curcumin on expressions of TNF-alpha, IL-6 and IL-8 in rats with chronic nonbacterial prostatitis. Zhonghua Nan Ke Xue 2010 Jan;16(1):84-8
Curcumin and Brassica vegetables have synergistic effects on preventing the growth of prostate cells.


Curcumin, Resveratrol and Ginger is a powerful combination that decreases inflammation plus their antioxidant activity discourages the formation of prostate cancer cells.


Curcumin and Soy isoflavones reduce PSA levels.

*Ide et al: Combined inhibitory effects of soy isoflavones and curcumin on the production of prostate-specific antigen. Prostate 2010 Jul 1;70(10):1127-33

Dandelion is an excellent blood cleanser but it also has anti-cancer activity against prostate and breast cancer cells.


DIM (diindolylmethane) is a substance found in cruciferous (brassica) vegetables that inhibits prostate cancer cell growth.

*Bhuiyan et al: Down-regulation of androgen receptor by 3,3'-diindolylmethane contributes to inhibition of cell proliferation and induction of apoptosis in both hormone-sensitive LNCaP and insensitive C4-2B prostate cancer cells. Carcinogen 2000 May;21(5):921-7

Echinacea is an herb most often used to boost the immune system at onset of an illness but it also prevents the development of an enlarged prostate.


EGCG (epigallocatechin-3-gallate) is a potent antioxidant derived from Green Tea and proves to be valuable in prostate health, reducing PSA levels without affecting the liver in men with prostate cancer.

*Brusselmans et al: Epigallocatechin-3-gallate is a potent natural inhibitor of fatty acid synthase in intact cells and selectively induces apoptosis in prostate cancer cells. Cancer Immunol Immunother 2010 Feb 6
*McLarty et al: Tea polyphenols decrease serum levels of prostate-specific antigen, hepatocyte growth factor, and vascular endothelial growth factor in prostate cancer patients and inhibit production of...


**Essiac Tea** inhibits cancer growth including that of the prostate. Essiac tea consists of four herbs: burdock root, slippery elm, sheep sorrel, and Indian rhubarb root.


**Fisetin** is a flavonoid found in strawberries, mangos and other plants. As with other flavonoids, fisetin also encourages the death of tumours.


**Flaxseed** contains lignans which improve urinary function in those with enlarged prostates as effectively as drugs but without the side effects. Flaxseed also reduces prostate cancer cell proliferation and increases sperm quality.


**GLA** (gamma linolenic acid) is the anti-inflammatory part of omega-6 which is found in such oil seeds as borage, evening primrose, and black currant. GLA plays a significant role in reducing prostate tumor growth.

*Pham et al: Dietary gamma-linolenate attenuates tumor growth in a rodent model of prostatic adenocarcinoma via suppression of elevated generation of PGE(2) and 5S-HETE. Prostaglandins Leukot Essent Fatty Acids 2006 Apr;74(4):271-82

**Garlic**, a natural antibiotic, has a synergistic effect with the antibiotic ciprofloxacin in treating chronic prostatitis.


**Genistein** is an isoflavone found in high concentrations in such foods as Soy and Fava beans and Kudzu (a pea plant considered to be a noxious weed in many places). Genistein-containing foods reduce PSA levels and the risk of prostate cancer. Equol is an isoflavonol metabolized from daidzein, another flavonoid found in soybeans. Certain probiotics feed on this compound and in turn, produce hormone-regulating effects including relieving menopausal symptoms in women and inhibiting prostate growth in men. **Use only non-GMO or fermented soy foods as they have the medicinal value.** The fermentation process nullifies any hormone-disrupting qualities present in soy and other foods.

*Burich et al: Genistein combined polysaccharide enhances activity of docetaxel, bicalutamide and Src kinase inhibition in androgen-dependent and independent prostate cancer cell lines. BJU Int 2008 Nov;102(10):1458-66
**de Vere White et al:** Effects of a genistein-rich extract on PSA levels in men with a history of prostate cancer. Urol 2004 Feb;63(2):259-63

**Hamilton-Reeves et al:** Effects of soy protein isolate consumption on prostate cancer biomarkers in men with HGPIN, ASAP, and low-grade prostate cancer. Nutr Cancer 2008;60(1):7-13

**Hamilton-Reeves et al:** Isoflavone-rich soy protein isolate suppresses androgen receptor expression without altering estrogen receptor-beta expression or serum hormonal profiles in men at high risk of prostate cancer. J Nutr 2007 Jul;137(7):1769-75


**Ishiwata et al:** New equol supplement for relieving menopausal symptoms: randomized, placebo-controlled trial of Japanese women. Menopause 2009 Jan-Feb;16(1):141-8

**Jacobsen et al:** Does high soy milk intake reduce prostate cancer incidence? The Adventist Health Study (United States). Cancer Caus Contr 1998;9(6):553-7


**Li et al:** Inactivation of nuclear factor kappaB by soy isoflavone genistein contributes to increased apoptosis induced by chemotherapeutic agents in human cancer cells. Cancer Res 2005 Aug 1;65(15):6934-42

**Lund et al:** Equol is a novel anti-androgen that inhibits prostate growth and hormone feedback. Int J Neurosci 2008 Jan;118(1):59-77

**Majid et al:** Genistein reverses hypermethylation and induces active histone modifications in tumor suppressor gene B-Cell translocation gene 3 in prostate cancer. Cancer 2009 Nov 2

**Maskarinec et al:** Serum prostate-specific antigen but not testosterone levels decrease in a randomized soy intervention among men. Eur J Clin Nutr 2006 Dec;60(12):1423-9

**Onozawa et al:** Effects of a soybean isoflavone mixture on carcinogenesis in prostate and seminal vesicles of F344 rats. Jpn J Cancer Res 1999 Apr;90(4):393-8


**Travis et al:** Plasma phyto-oestrogens and prostate cancer in the European Prospective Investigation into Cancer and Nutrition. Br J Cancer 2009 Jun 2;100(11):1817-23


**Yan & Spitznagel:** Soy consumption and prostate cancer risk in men: a revisit of a meta-analysis. Am J Clin Nutr 2009 Apr;89(4):1155-63


**Yatkin et al:** The soy effect in the disease models of nonbacterial prostatitis and obstructive voiding. Exp Biol Med (Maywood) 2007 May;232(5):674-81


**Zhou et al:** Inhibition of orthotopic growth and metastasis of androgen-sensitive human prostate tumors in mice by bioactive soybean components. Prostate 2002 Oct 1;53(2):143-53

**Ginger** reduces the risk of prostate cancer and tumor growth.


**Shukla et al:** In vitro and in vivo modulation of testosterone mediated alterations in apoptosis related proteins by [6]-gingerol. Mol Nutr Food Res 2007 Dec;51(12):1492-502

**Goji berries/Wolfberry** induce programmed cell death in prostate cancer cells.
Nature’s Pharmacy: Evidence-Based Alternatives to Drugs


Goldenrod (Solidago virgaurea) inhibits the growth of prostate tumor cells.

Grape seed extract contains a substance called Gallic acid which inhibits prostate cancer cell growth.
  *Tyagi et al: Grape seed extract inhibits EGF-induced and constitutively active mitogenic signaling but activates JNK in human prostate carcinoma DU145 cells: possible role in antiproliferation and apoptosis. Oncogene 2003 Mar 6;22(9):1302-16

Grape seed extract and Pycnogenol prevent prostate cancer cells from forming.
  *Neuwirt et al: Oligomeric proanthocyanidin complexes (OPC) exert anti-proliferative and pro-apoptotic effects on prostate cancer cells. Prostate 2008 Jul 28

Graviola is a rainforest tree whose leaves have potent anti-cancer properties especially against prostate and pancreatic cell lines.

Guggul is an Ayurvedic herb often used to control cholesterol levels. It also contains a substance called Guggulsterone which induces the deaths of prostate cancer cells.

Herbal compounds (apigenin, baicalein, curcumin, EGCG, genistein, quercetin, resveratrol) prove to be safer, less expensive, and just as effective in preventing cancer cell growth as most medications.
  *Slusarz et al: Common botanical compounds inhibit the hedgehog signaling pathway in prostate cancer. Virol J 2006 Sep 1;3:68

Homeopathic selective treatments slow the progression of tumor cells but are not preventatives.

Honokiol is a substance found in Magnolia that is effective for preventing and treating prostate cancer. Magnolia is one of the herbs found in Relora which is used for regulating cortisol and stress levels.
**Hops** is an herb used extensively in the brewing industry and often used to promote sleep but it also has compounds which promote prostate cancer cell deaths.


**I3C (Indole-3-carbinol)** is a phytonutrient found in cruciferous vegetables and some spices like cardamom. It is often used as a supplement for hormonal balance in both men and women but it also has substances which prevent the formation of prostate cancer cells.

*Chinni et al: Indole-3-carbinol (I3C) induced cell growth inhibition, G1 cell cycle arrest and apoptosis in prostate cancer cells. Oncogene 2001 May 24;20(23):2927-36


**Inositol** (vitamin B8) has significant anti-cancer effects, stimulating the natural killer cells.


**Isoliquiritigenin** is a flavonoid found in such foods as licorice and soybeans that has anti-tumor effects against prostate cancer. **Licorice** also contains a component called licochalcone-A which prevents prostate cancer cell growth.


**Kava** is a calming herb that also has anti-prostate cancer effects. Kava is banned in Canada despite its proven usefulness.

**Lycopene** is a carotenoid found in high amounts in tomatoes and a significant nutrient in prostate health. It also enhances the effects of the antibiotic ciprofloxacin in the treatment of prostatitis.

*Jian et al: Do dietary lycopene and other carotenoids protect against prostate cancer? Int J Cancer 2005 Mar 1;113(6):1010-4

**Lycopene, Soy isoflavones, Milk Thistle, and Antioxidants** lower PSA levels even in men with prostate cancer.


**Maca** is a Peruvian ginseng-type root, producing similar results as other ginsengs. The typical modulation of the male hormones includes decreasing an enlarged prostate and increasing sperm quality. While the maca root can come in various colours (black, blue, cream, green, purple, or red), black is considered best for energy and stamina while the red has been more effective for the prostate. It does not increase estrogens, progesterone, or testosterone. See more under Prostate and Erectile Dysfunction.

*Bogani et al: Lepidium meyenii (Maca) does not exert direct androgenic activities. J Ethnopharmacol 2006 Apr;104(3):415-7
*Chung et al: Dose-response effects of Lepidium meyenii (Maca) aqueous extract on testicular function and weight of different organs in adult rats. J Ethnopharmacol 2005 Apr;98(1-2):143-7
*Gonzales et al: Effect of Lepidium meyenii (Maca), a root with aphrodisiac and fertility-enhancing properties, on serum reproductive hormone levels in adult healthy men. J Endocrinol 2003 Jan 1;176:163-8
*León: The “Maca” (Lepidium meyenii), a little known food plant of Peru. Econ Bot 18(2):122-7
*Taylor 2005:338-44

**Maitake mushroom** induces the deaths of prostate cancer cells.


**Mango** contains compounds that induces prostate cancer cell death.


**Mass Market Multivitamins without** additional vitamins A, C, and E, are associated with an increase in prostate cancer deaths. The explanation is likely due to the fact that mass market multis often consist of synthetic “nutrients” and fillers which the body cannot utilize but rather treats as toxic substances.

*Balch 2006:15-16
*Cohen 2011:310-17

**Melatonin** suppresses prostate cancer cell growth; decreases BPA toxin effects in the testicles; and reduces effects of kidney damage caused by cell phones.


**Milk Thistle** contains flavonoids that protect the prostate from cancer and induces prostate cancer cell death.

*Singh & Agarwal: Prostate cancer chemoprevention by silibinin: bench to bedside. Mol Carcinog 2006;45(6):436-42
Modified Citrus Pectin induces prostate cancer cell deaths. Citrus pectin is processed or modified for supplemental purposes to increase absorption.

Murill mushrooms suppress prostate tumor growth.

Neem leaves are known to have anti-microbial effects but they also protect the prostate by inhibiting the formation of cancer cells.

Nettle, sometimes referred to as Stinging Nettle, contains compounds that benefit an enlarged prostate as well as one for cancer.

Omega fatty acids inhibit the growth of various cancer cells including prostate, pancreas, colon and breast. A deficiency is apparent in those with prostate cancer as opposed to those who do not have prostate problems.

Onion and Garlic consumption is associated with a reduced risk of developing an enlarged prostate.

Orange juice with pulp from blood oranges inhibit prostate cancer cell growth. Blood oranges are a deep red indicating more carotenoids which have numerous health benefits.

Oyster mushrooms encourage prostate cancer cell deaths.
Panax Ginseng contains hormone-regulating compounds that prevent prostate cancer.


Pau d’arco (Taheebo) is an herb often used as an anti-inflammatory and anti-microbial but it also inhibits the formation of prostate cancer cells.

*RainTree Tropical Plant Database www.rain-tree.com

Peppermint oil induces prostate cancer cell death. Peppermint oil can safely be taken internally.


Phellodendron (Cork Tree) is a popular Chinese herb used to inhibit cancer cell growth.

*Muralimanoharan et al: Butanol fraction containing berberine or related compound from nexrutine inhibits NFkappaB signaling and induces apoptosis in prostate cancer cells. Prostate 2008 Dec 23

Phytoestrogens are found in almost all plant-based unprocessed foods that protect the body from breast and prostate cancer as well as numerous other disorders.


Pomegranates reduce PSA levels and stop the proliferation of prostate cancer cells.

*Seeram et al: In vitro antiproliferative, apoptotic and antioxidant activities of punicalagin, ellagic acid and a total pomegranate tannin extract are enhanced in combination with other polyphenols as found in pomegranate juice. J Nutr Biochem 2005 Jun;16(6):360-7

Prickly Pear Cactus Flower extract is a novel alternative for the treatment of an enlarged prostate.


Pumpkin seeds are high in zinc, phytosterols, omega fatty acids, and proteins, therefore a significant contributor to prostate health.

Red Clover inhibits prostate enlargement and prevents the formation of prostate cancer cells.

- Tsai et al: Pumpkin seed oil and phytosterol-F can block testosterone/prazosin-induced prostate growth in rats. Urol Int 2006;77(3):269-74

Red Yeast Rice is not only an effective alternative for reducing Cholesterol but it also inhibits the growth of prostate cancer cells.

- Hong et al: Chinese red yeast rice versus lovastatin effects on prostate cancer cells with and without androgen receptor overexpression. J Med Food 2008 Dec 3;11(4)
- Tsai et al: Red mold rice mitigates oral carcinogenesis in 7,12-dimethyl-1,2-benz[a]anthracene-induced oral carcinogenesis in hamster. Evid Base Complement Alt Med 2011(2011); Art ID245209:8 pages

Reishi mushroom inhibits androgen production which diminishes the risk of an enlarged prostate or prostate cancer while improving urinary function in those with enlarged prostates.

- Liu & Tamura: Anti-androgen effects of extracts and compounds from Ganoderma lucidum. Chem Biodivers 2009 Feb;6(2):231-43

Resveratrol is a potent antioxidant found in the skins of red grapes. It is a significant health booster including that of the prostate, reducing PSA levels in those with enlarged prostates and protecting the urinary bladder from dysfunction. Choose organic grapes, however, since non-organic grapes are one of the top ten foods high in pesticide contamination.

- Gill et al: Resveratrol sensitizes androgen independent prostate cancer cells to death-receptor mediated apoptosis through multiple mechanisms. Prostate 2007 Nov 1;67(15):1641-53

*Hudson et al: Inhibition of prostate cancer growth by muscadine grape skin extract and resveratrol through distinct mechanisms. Cancer Res 2007 Sep;67(17):8396-405


**Ruta graveolens (Rue),** either in herbal or homeopathic form, inhibits colon, breast and prostate cancer cells.


**Rye Bran bread** increases the death of prostate cancer cells.


*Landberg et al: Rye whole grain and bran intake compared with refined wheat decreases urinary C-peptide, plasma insulin, and prostate specific antigen in men with prostate cancer. J Nutr 2010 Dec;140(12):2180-6


**Rye bran** and **Soy** (Genistein) induce prostate cancer cell death. Be sure to use only non-GMO, organically-grown or fermented soy.


**Rye Flower Pollen** has proven to reduce enlarged prostates for more than 50 years. The earliest study I found was from 1962 with dozens more since then but not all listed here. This flower pollen is called by different names, notably Swedish Flower Pollen, Cernilton, PollenAid, and Graminex. In Canada, I tend to lean towards Graminex as a supplement of choice because it is organically certified, kosher, and uses solvent-free extraction.


Saw Palmetto and Pygeum are herbs that can function alone but do especially well together in reducing an enlarged prostate and preventing cancer cell growth. Saw Palmetto compares favourably with the drug tamsulosin in treating an enlarged prostate. The Cuban royal palm (Roystonea regia), mentioned in one of the studies, is a member of the Saw palmetto family.

Saw palmetto, Lycopene and Selenium work well together in preventing prostate inflammation and urinary bladder obstruction.
Saw Palmetto, Nettle, Curcumin and Quercetin is another combination that improves the effects of the antibiotic prulifloxacin (fluoroquinolone) in treating bacterial prostatitis.

*Cai et al: Serenoa repens associated with Urtica dioica (ProstaMEV) and curcumin and quercetin (FlogMEV) extracts are able to improve the efficacy of prulifloxacin in bacterial prostatitis patients: results from a prospective randomised study. Int J Antimicrob Agents 2009 Jun;33(6):549-53

Seaweeds (brown – kelp, wakame) contain carotenoids called fucoidans which prevent the formation of prostate cancer cells.


Selenium is an important mineral for prostate health, reducing PSA levels in those with enlarged prostates. Do not use sodium selenate/selenite. This form is very toxic. Sodium selenate is a by-product of the copper refining industry and disposed of in some selenium supplements, human and animal multivitamins, baby formulas, and “nutritional” shakes.

*108 Milligrams Of This Common “Nutrient” Can Kill A Person by Sayer Ji, GreenMedInfo, Saturday, January 21, 2012

Selenium, Vitamin E, and/or Soy isoflavones reduce PSA levels, lowering the risk of prostate cancer.


Sesame seeds contain compounds that stop the growth of a wide variety of tumor cells including leukemia, multiple myeloma, and cancers of the colon, prostate, breast, pancreas, and lung.


Strawberries contain compounds that have antioxidant and anti-cancer effects against prostate cancer. However, be sure to buy only organically-grown strawberries as they are high on the pesticide-containing list.

Tea and Soy (Genistein) contain active compounds that inhibit the formation of prostate cancer cells especially green tea and is recommended over coffee as a better health choice.


**Tea Tree oil** is safe to use externally on animal prostate abscesses. Tea tree is an anti-microbial that will help reduce infection.


**Vitamin C** supplementation prevents testosterone-induced prostate enlargement.

- Maramag et al: Effect of vitamin C on prostate cancer cells in vitro: effect on cell number, viability, and DNA synthesis. Prostate 1997 Aug 1;32(3):185-95

**Vitamin D3** stops the growth of various cancers including that of the prostate. Although it is best to get it from the sun, Vitamin D3 is just as valuable as a supplement.


**Vitamin E** (see more under Cancer) is important for prostate health and helps prevent cancer and increase prostate cancer survival. The best and most effectively complete vitamin E is one that has all 4 tocopherols and 4 tocotrienols (alpha, beta, delta, gamma).

- Luk et al: Gamma-tocotrienol as an effective agent in targeting prostate cancer stem cell-like population. Int J Cancer 2010 Jul 8
- Watters et al: Associations between alpha-tocopherol, beta-carotene, and retinol and prostate cancer survival. Cancer Res 2009 May 1;69(9):3833-41

**Vitamin E** and **Selenium** induce programmed cell death of prostate cancer cells.


**Vitamin E, Green tea (EGCG), and Genistein** work synergistically with the chemotherapy drug Taxol (paclitaxel) to kill prostate cancer cells.

- Ping et al: Taxol synergizes with antioxidants in inhibiting normal refractory prostate cancer cell growth. Urol Oncol 2008 Sep 23
**Vitamin K** is important in preventing prostate cancer. However, it should not be taken by anyone on blood thinners.


**Vitex** (Chasteberry) is an herb often used by women to manage hormonal issues but it is also useful for men especially in preventing and treating an enlarged prostate.


**Walnut** consumption improves prostate health, likely because of its omega fatty acid content.


**White button mushrooms** and its major component CLA, prevent prostate tumor growth.


**White mustard seeds** contain phytosterols which prevent prostate inflammation and enlargement.


**Whole grains**, **Rye bran**, and **Soy protein** (use only non-GMO and fermented) significantly reduce PSA counts in prostate cancer patients.


*Landberg et al: Rye whole grain and bran intake compared with refined wheat decreases urinary C-peptide, plasma insulin, and prostate specific antigen in men with prostate cancer. J Nutr 2010 Dec;140(12):2180-6

**Zinc** is a known healing mineral which also prevents various cancers including that of the prostate.


*Wei et al: Differential expression of metallothioneins (MTs) 1, 2, and 3 in response to zinc treatment in human prostate normal and malignant cells and tissues. Mol Cancer 2008 Jan 21;7:7

**Zyflamend** by New Chapter is a potent anti-inflammatory that also kills various cancer cells including prostate while suppressing tumor growth.

Psoriasis

Common Examples:

- **Retinoids** – acitretin [Soriatane]
- **Folic Acid Antagonist** – methotrexate
- **Steroids** – triamcinolones [Aristocort, Kenacort] and others
- **Others** – anthralin [Anthraforte, Dithranol, Psoriatec] and others

Deplete:

A, Beta Carotene, B9, E, (plus many others if on Steroids)

- **Cholesterol-lowering drugs** are linked to numerous skin disorders including psoriasis.
- **Psoriasis** is just one of more than 80 diseases that come under the Autoimmune heading.

Suggested Alternatives:

- **Aloe vera** is a safe and effective treatment for psoriasis which can be used internally and externally.
- **Almond oil** has a wide range of therapeutic properties which may be of benefit for psoriasis if used topically.
- **B12 in Avocado oil** applied topically improves the condition.
- **Calaguala** (Polypodium decumanum) is a fern that has been clinically documented in South America and Spain for the treatment of psoriasis, likely due to its high fatty acid content.
Curcumin is the active part of Turmeric root and a potent antioxidant that improves many health conditions including psoriasis and other autoimmune disorders. It can also be applied topically for greater improvement.

Dehydration is linked to allergy symptoms and psoriasis which is not always preventable. Those with such skin diseases as psoriasis may have what is referred to as clinically normal skin but they also have reduced skin water content and increased transepidermal water loss. This means that although the skin may appear normal, there is a defective barrier that prevents normal hydration and water-retention capacity. Keeping well hydrated is important and equally important is keeping the skin well lubricated to hold in as much moisture as possible.

Edgar Cayce (1877-1945) diet proved effective in treating psoriasis. Based on his writings, the diet was reimplemented in later years and consists of fresh fruits and vegetables, small amounts of protein from fish and fowl, fiber supplements, olive oil, and no red meat, processed foods, or refined carbohydrates. Saffron tea and slippery elm bark water were consumed daily.

Gluten sensitivity is associated with the development of psoriasis and its progression. Those with Crohn's disease are 5 times more likely to develop psoriasis than normal (Silverberg). Celiac disease is also associated with gluten-sensitivity and psoriasis.

Homeopathics are safe and effective for treating psoriasis.
Honey and Beeswax in Olive oil is an effective topical treatment for psoriasis.

Indigo naturalis (Quig dai) is a dark blue Chinese herb that has been successfully used to treat psoriasis since ancient times and without side effects, clearing 74% of the skin lesions in 12 weeks.

Omega-3 fatty acids contain EPA and DHA which improve conditions in those with psoriasis and psoriatic arthritis.

Plant phenols have a beneficial role in treating psoriasis which stresses the importance of diet, and a plant-based one at that, in preventing and treating such diseases.

Pycnogenol is a potent antioxidant derived from pine bark. It reduces inflammation including those of the skin.

Vitamin D3 improves psoriatic conditions whether received through sunlight or supplement.
**Nature’s Pharmacy: Evidence-Based Alternatives to Drugs**


**Vitamin D3, A, and Calcium** have a therapeutic effect on rosacea and psoriasis.

*No authors listed: Kallikrein expression and cathelicidin processing are independently controlled in keratinocytes by calcium, vitamin D(3), and retinoic acid. J Invest Dermatol 2010 Jan 21

**Vitamin E, CoQ10, and Selenium** supplements significantly improve the skin condition.


**Whey Protein isolate** may have therapeutic effects for mild to moderate psoriasis.

*Drouin et al: XP-828L (Dermylex), a new whey protein extract with potential benefit for mild to moderate psoriasis. Can J Physiol Pharmacol 2007 Sep;85(9):943-51

SEDATIVES

(Used to treat anxiety or insomnia)

COMMON EXAMPLES:

**Antihistamines**
- diphenhydramine – Benedryl and others
- hydroxyzine – Atarax and others
- promethazine – Phenergan and others

**Barbiturates**
- amobarbital – Amytal
- butalbital – Axotal, Fiorinal, Fioricet, Fiorgan, Phrenilin, and many others
- phenobarbital – Donnatal, Luminal, Nembutal, and others
- secobarbital – Seconal
- thiopental – Pentothal

**Benzodiazepines**
- any of the -pams
- diazepam – Valium and others
- flurazepam – Dalmane and others
- oxazepam – Novoxapam and others
- ... and others
- any of the -lams
- alprazolam – Xanax and others
- midazolam – Versed
- triazolam – Halcion and others
- chlordiazepoxide – Librium and others
- clorazepate – Tranxene and others

**Others**
- buspirone – BuSpar
- meprobamate – Equanil and others
- zolpidem – Ambien and others

DEPLETE:

A, B1, B2, B3, B5, B6, B7, B9, B12, C, D, K, calcium, potassium, L-carnitine, melatonin
Mobile phones interfere with sleep patterns.

Statins for Cholesterol can cause insomnia as well as other adverse health conditions.

Sudden withdrawal of zolpidem (Ambien) can cause seizures. Alzheimer’s drugs, donepezil and memantine, induce a lower heart rate and raise the risk of seizures.

Suggested alternatives:

Aromatherapy (inhalation or massage) using essential oils (Lavender, Roman Chamomile, Ylang-Ylang) relieve sleep problems especially with those under hospice care or are severely demented. Be aware that if you use massage, whatever is put on the skin is the same as eating it therefore, it is imperative that chemically-laden products be avoided.

Ashwagandha addresses stress-induced insomnia by improving sleep quality while decreasing the harmful effects of sleep loss.

Gourd seeds are rich in tryptophan which improve insomnia.
**Homeopathics** are safely used by everyone from infants to aged adults for sleep. Studies show that Verum remedies significantly increased total sleep time as well as awakenings and stage changes.

* Tuet et al: Homeopathic treatment of elderly patients—a prospective observational study with follow-up over a two year period. BMC Geriatr 2010;10:10

**Kava** is an herb that improves sleep quality and has long been used as a sedative worldwide. However, it is no longer allowed in Canada despite its many health benefits.

* Shinomiya et al: Effects of kava-kava extract on the sleep-wake cycle in sleep-disturbed rats. Psychopharmacol (Berl) 2005 Jul;180(3):564-9

**Kava** and **Valerian** are effective for relieving stress-induced insomnia.


**Magnolia bark** and **Jujube dates** have sleep-inducing qualities.


**Medicinal plants** were studied and generally found to be effective for inducing sleep (hops, kava, melissa, passion flower, valerian).


**Melatonin** improves insomnia in all age groups from children to the elderly; helps overcome jet lag; stimulates the anti-aging human growth hormone; reduces tinnitus intensity while improving sleep quality; reduces neurological damage associated with sleep apnea; and increases bladder capacity while decreasing urine volume associated with poor sleep quality.

Melissa (Lemon balm) is a calming herb that reduces stress, making it easier to fall asleep.

Passion flower is an herb that reduces anxiety that ultimately enhances sleep.

Schisandra is an herb that possesses potent sedative qualities.

Tart cherry juice increases the body’s production of melatonin which improves sleep quality and duration.

Valerian root has effects comparable to the drug oxazepam in treating insomnia and improving sleep quality in postmenopausal women. It also helps those who are going through benzodiazepine and morphine withdrawal and helps reduce restless leg syndrome. Analysis of 16 studies indicates that Valerian improves sleep quality without producing side effects because of its action on GABA receptors.
Valerian and Hops are herbs that are safely taken together to improve insomnia. Hops is a familiar herb used in the brewing industry but it also has calming effects that work well alone or with other herbs to induce sleep.

Valerian and Melissa taken together reduces anxiety for a more effective sleep.
SEIZURES/ANTI-CONVULSANTS

COMMON EXAMPLES:

Barbiturates
  amobarbital – Amytal
  phenobarbital – Luminal and others
  primidone – Myidone and others
  thiopental – Pentothal
  ... and others including Sedatives

Benzodiazepines
  clonazepam – Klonopin
  clorazepate – Tranxene
  diazepam – Valium and others

Hydantoins
  phenytoin – Dilantin and others

Succinamides
  ethosuximide – Zarontin

Valproates
  valproic acid – Depacon, Depakene, Depakote, and others

Others
  acetazolamide – Diamox and others
  carbamazepine – Tegretol and others
  felbamate – Felbatol
  gabapentin – Neurontin
  pregabalin – Lyrica
  zonisamide – Zonegran

... and more

DEPLETE:

A, B1, B2, B3, B6, B7, B9, B12, D, E, K, carnitine, choline, calcium, copper, potassium, selenium, zinc

Noni juice and the herb Ginkgo biloba may interact with phenytoin.

Certain Vaccines (DPT, H1N1) and Drugs (anti-depressants, anti-psychotics, and drugs for dementia) can cause seizures. WHO reports 71,471 seizures
from the top ten of the most frequently used convulsive-associated neuro-active drugs between 1968-2006. Isoniazid, an antibiotic used for tuberculosis, and zolpidem, a drug for insomnia, are also known to cause seizures.


Prednisone (Steroid) used by pregnant women can trigger low blood sugar seizures and adrenal insufficiency in the newborn.


Statin drugs for Cholesterol cause seizures and rhabdomyolysis (destruction of the skeletal muscle tissue) and much more.


Suggested Alternatives:

Amla (Indian Gooseberry) protects against drug-induced seizures, oxidative stress and cognitive impairment.


American ginseng has anti-convulsant and neuroprotective effects.


B6 and B7 may lower the risk of seizures. It is wise to take a complete B-complex with these added B vitamins to reduce the risk of creating a deficiency in one or more of the other family members.

*Arslan et al: The effects of biotin supplementation on serum and liver tissue biotinidase enzyme activity and alopecia in rats which were administrated to valproic acid. Brain Dev 2009 Jun;31(6):405-10

Bacopa (Water hyssop) has neuroprotective effects and is beneficial in treating epilepsy.

Berberine-containing plants (Barberry, Goldenseal, Goldenthread, Oregon grape) are strong anti-microbials but they also possess anti-convulsant activity.


Blue skullcap has anticonvulsant activity.


Carnosine, an amino acid and precursor of histidine (another amino acid), reduces seizures.


Curcumin has anti-convulsant activity and neuro-protective effects.

*Bharal et al: Curcumin has anticonvulsant activity on increasing current electroshock seizures in mice. Phytother Res 2008 Dec;22(12):1660-4
*Jyoti et al: Curcumin protects against electro-behavioral progression of seizures in the iron-induced experimental model of epileptogenesis. Epilepsy Behav 2009 Feb;14(2):300-8

Essential oils have anti-seizure properties (Bay leaf, Nutmeg, Rose, Tarragon).


Evening Primrose oil has benefits for epileptics.


Feverfew has beneficial effects on epilepsy and migraines.


Gluten-free diet often benefits those prone to seizures. For instance, unexplained epilepsy with cerebral calcifications may be caused by undiagnosed celiac disease.

Huperzine A from Chinese club moss is noted for helping with memory and focus but is also helpful for treating seizures.

Ketogenic diets (high fat, low carb, adequate protein) reduce seizures. Because this diet is designed to utilize fats for fuel, it is important to use good fats as opposed to “any type”. The same goes for proteins and carbohydrates. Sort out which ones are beneficial for health and which ones need to be avoided.

Magnesium deficiency causes seizures in those using PPIs (Acid Blockers) for a long time.

Motherwort is an herb so named because it was used to calm pregnant women but it also has anti-convulsant activity.

Noni juice improves neural damage in the brain. However, it should not be consumed if on medication.

Omega-3 fatty acids help prevent and treat epilepsy.

Passion flower has a number of therapeutic benefits including as a treatment for epilepsy.

Valerian root, often used to induce sleep, also has anticonvulsive properties.

Vitamin D deficiency is prevalent in children with epilepsy.
Vitex (Chasteberry) is an herb often used to help regulate female hormones but it has other properties including the control or reduction of epileptic episodes.

**STEROIDS/CORTICOSTEROIDS**

(Used to treat difficult inflammations)

**COMMON EXAMPLES:**

- **Corticosteroids**
  - beclomethasone – Beclodisk, Beconase, and others
  - betamethasone – Betnelan, Celestone, and others
  - budesonide – Entocort, Pulmicort, and others
  - cortisone – Cortone
  - dexamethasone – Decadron, Hexadrol, and others
  - fludrocortisone – Florinef
  - hydrocortizone – Cortisol, Cortef, Hycort, Westcort, and others
  - methylprednisolones – Medrol, Unimed, and others
  - mometasone – Elocon
  - pimecrolimus – Elidel
  - prednisolone – Delta-Cortef, Inflamase, Preline, Pediapred, and others
  - prednisone – Deltasone, Meticorten, Orasone, Panasol-S, Winpred, and others
  - tacrolimus – Prograf
  - triamcinolone – Aristocort, Kenalog, and others
  - ... and many others

**DEPLETE:**

A, B6, B9, C, D, E, calcium, chromium, iron, magnesium, potassium, selenium, strontium, zinc, DHEA

Corticosteroids/Steroids belong to a class of prescription drugs that are based on hormones formed in the adrenal glands and generally used to reduce inflammation. They are divided into two groups: Glucocorticoids (anti-inflammatories) and Mineralocorticoids (control salt and water balance). Anabolic steroids are a group of synthetic hormones used by athletes and body builders to stimulate muscle growth and strength. They are generally illegal and not addressed in this book.

Corticosteroids are linked to an increased risk of lymphoma.

*Schneeweiss et al: Topical treatments with pimecrolimus, tacrolimus and medium- to high-potency...
Corticosteroids are widely used in veterinary medicine and can trigger adverse reactions in animals just as they can in humans. In this study, healthy dogs were given corticosteroids for 30 days after which, a 14% bone mass loss was noted.


Inhaled steroids increase the risk of pneumonia in those with COPD and are linked to low blood sugar and adrenal suppression. Internal use of steroids in COPD patients also suppresses the hypothalamic-pituitary-adrenal-axis which may be linked to obesity.


Injections of steroids to treat tendinopathy may relieve immediate pain but ultimately contribute to long-term damage, delayed healing, and a significant increase in recurrence.


Steroids increase the risk of atrial fibrillation (heart arrhythmia) especially in pregnant women.

*van der Hoof et al: Corticosteroids and the risk of atrial fibrillation. Arch Intern Med 2006 May 8;166(9):1016-20

Steroids are linked to mood and behavioral changes similar to bipolar disorder. They also contribute to muscle weakness in those with cystic fibrosis.


Topical steroids used in the diaper area causes immunosuppression, infection and Cushing’s disease (caused by an over-production of cortisol).

**SUGGESTED ALTERNATIVES TO DRUGS:**

**Apigenin** is a flavonoid found in a variety of fruits and vegetables that not only has anti-cancer properties but suppresses inflammations found in a number of diseases treated with steroids including lupus, psoriasis, rheumatoid arthritis, and Crohn’s.


**Arnica** is superior to steroids or NSAIDs for reducing pain and it does not affect blood clotting as do the medications.

*Alfredo et al: Effects of phonophoresis with Arnica montana onto acute inflammatory process in rat skeletal muscles: an experimental study. Ultrasonics 2009 May;49(4-5):466-71

**Beta-carotene, Curcumin, and Vitamin C** prevent steroid-induced deaths of healthy body cells.


**Black Cumin seed** contains a substance that proves superior to fluticasone in treating asthma.


**Chamomile** proves better than steroids for stomach ulcers.
Chinese skullcap contains substances called wogonin which prevents steroid-induced immune suppression although it does not have any anti-inflammatory effects.

Creatine is a supplement well known to body builders but it also has other qualities important to those with muscular or neurotoxic disorders including Parkinson’s or Huntington’s. In addition, creatine is proving to be a useful treatment for young people who experience reduced growth due to steroid use, for whatever reason. Creatine has no detrimental effect on the kidneys and is safely taken by diabetics and those on dialysis.

Curcumin prevents steroid-induced deaths of healthy cells and reverses steroid-resistance, common in COPD patients.

Dill weed reverses steroid-induced type 2 diabetes.

Echinacea is an herb most recognized as one to improve the immune system during the cold and flu season but echinacea is a safe alternative in treating some steroid-dependent illnesses. Those who did not receive echinacea required longer periods of steroid use.

Elemental Diet is superior to steroids in treating Crohn’s disease, even in children. An elemental diet consists of liquids that contain nutritional supplementation, giving the digestive system time to rest and heal.
Genistein is an isoflavone found in high concentrations in such foods as soy and fava beans and kudzu (a pea plant considered to be a noxious weed in many places). Genistein has protective effects against steroid-induced bone disease and the formation of cancerous liver cells.

Glucosamine is a safer treatment than steroids for inflammatory bowel disease in children.

Gluten-free diet is beneficial for treating the lung disease associated with Celiac disease in children who were able to wean off the steroids. Gluten sensitivity is often misdiagnosed as lupus.

Gymnena and Inula racemosa (herb) helps reverse steroid-induced diabetes.

Gynura procumbens has anti-diabetic and steroidal properites.

Horny Goat Weed is an herb usually sold to improve circulation but it has other beneficial effects including reducing the adverse effects of long-term use of steroids.
Hyaluronic acid injections are just as effective as steroids but without the side effects since hyaluronic acid is a substance needed throughout the body.


Immune stimulating herbs include alfalfa, astragalus, echinacea, licorice root.

Melatonin, often used to induce sleep, has many other benefits including neuro-protective qualities that are superior to prednisone in spinal cord injuries.


Milk Thistle is an herb with a long history of protecting the liver especially from drug-induced damage.


Multivitamins and Phosphatidyl complexes protect the liver from steroid-induced damage.


Noni fruit is as effective as analgesics and steroids for reducing pain and inflammation.

*Dixon et al: Ferment this: The transformation of Noni, a traditional polynesian medicine (Morinda Citrifolia, Rubiaceae). Econ Bot 53(1):51-68
*Nualsanit et al: Damnacanthal-induced anti-inflammation is associated with inhibition of NF-κB Activity. Inflamm Allergy Drug Targets 2011 Nov 1

Omega 3 fatty acids taken during pregnancy and while breast feeding significantly reduce the risk of infantile eczema.

*Furuhjelm et al: Fish oil supplementation in pregnancy and lactation may decrease the risk of infant allergy. Acta Paediatr 2009 Sep;98(9):1461-7
Steroids/Corticosteroids

Pamela Duff, RN, CSNC


Panax Ginseng reduces side effects caused by steroids.

Prednisone used by pregnant women can trigger low blood sugar, seizures and adrenal insufficiency in the newborn.

Probiotics are vital for preventing and treating eczema, even in children and much safer than using steroids internally or externally.

Resveratrol is superior to steroids in treating COPD and has a better effect than methylprednisolone in treating experimental spinal cord injury.

Selenium improves rheumatoid arthritis and decreases the need for steroids or NSAIDs. **Do not use sodium selenate/selenite.** This form is very toxic. Sodium selenate is a by-product of the copper refining industry and disposed of in some selenium supplements, cheaper human and animal multivitamins, baby formulas, and “nutritional” shakes.
**(Nature’s Pharmacy: Evidence-Based Alternatives to Drugs)**


*108 Milligrams Of This Common “Nutrient” Can Kill A Person by Sayer Ji, GreenMedInfo, Saturday, January 21, 2012

**Tripterygium wilfordii** (a Chinese herb) suppresses abnormal immune reactions to steroids used in Guillan-Barre syndrome.


**Vegetarian diet** improves skin conditions without the use of steroids.


**Vitamin B12 topically** is a safer and more effective choice to use on children with eczema.


**Vitamins B6, B9, B12** (used to decrease homocysteine levels) are decreased even more during steroid use, meaning that homocysteine levels will rise.


**Vitamin D3** decreases adverse effects in children taking steroids for asthma.


**Vitamins D3 and K2** protect against bone loss caused by steroid use.


**Wobenzym** is superior to Lynestrenol (a synthetic progestogen hormone).


**Wormwood**, often used as an anti-parasitic, is more effective than steroids for treating Crohn’s disease. It was also found to improve mood and quality of life which was not achieved with standard medications.

THYROID HORMONE REPLACEMENT

(USED TO TREAT LOW [HYPO] THYROID CONDITIONS)

COMMON EXAMPLES:

- desiccated thyroid – Armour Thyroid
- liothrix – Euthroid, Thyrolar, and others
- liothyronine – Cytomel, Triostat
- levothyroxine – Synthroid, Levothyrox, Levoxyl, Thyro-tabs, Eltroxin, L-thyroxine, LT4, and others
- teriparatide – Forteo

DEPLETE:

- calcium, iodine, iron, phosphorus, zinc

Levothyroxine reduces the effects of bisphosphonates taken for Osteoporosis.

Pesticides (organochlorine compounds, DDT, simazine, lindane and some of their active constituents) have long been associated with the development of cancer but they are also linked to numerous other dangerous health conditions including affecting the thyroid. Exposure to other chemicals such as BPA, PBDE, HBCD, perchlorate, petroleum products also have the same effect.
*Ji et al: Transthyretin-binding activity of hexabromocyclododecanes (HBCDs) and its thyroid hormone disrupting effects after developmental exposure. Huan Jing Ke Xue 2010 Sep;31(9):2191-5
*Lacasaña et al: Interaction between organophosphate pesticide exposure and PON1 activity on
Thyroid function. Toxicol Appl Pharmacol 2010 Aug 5

*Meeker & Ferguson: Relationship between Urinary Phthalate and Bisphenol A Concentrations and Serum Thyroid Measures in U.S. Adults and Adolescents from NHANES 2007-08. Environ Health Perspect 2011 Jul 11


*Turyk et al: Hormone disruption by PBDEs in adult male sport fish consumers. Environ Health Perspect 2008 Dec;116(12):1635-41


Thyroid disorders are linked to breast cancer and celiac disease.


Thyroid nodules are detected in about 68% of healthy people who use high sensitivity ultrasound diagnostic equipment (mammograms, ultrasounds etc) especially 13 Mhz scanners.


Triclosan, a chemical used in such products as deodorants, cleaners, and hand sanitizers, decreases thyroxine secretion in mothers and infants. Thyroxine is the body’s main metabolic hormone which is secreted by the thyroid gland.


Suggested alternatives:

Ashwagandha reverses the hypothyroid effects caused by Metformin, a Diabetes drug.


B-complex deficiency is associated with thyrotoxicosis caused by hyperthyroidism which goes on to cause an increase in homocysteine levels resulting in a higher risk of cardiovascular events.

Berberine reduces thyroxine-induced diarrhea. Berberine is a compound found within such plants as Barberry, Goldenseal, Goldenthread, and Oregon grape, that has anti-cancer effects.


Calcium and Vitamin D reduce symptoms of hyperparathyroidism in the elderly.


Catechin, a compound found in green tea and cacao, reduces thyroxine-induced oxidative stress on the liver and male testes.


Citrus fruits help regulate thyroid and insulin levels by reducing oxidative stress that contributes to diabetes and thyroid irregularities.

*Parmar & Kar: Medicinal values of fruit peels from Citrus sinensis, Punica granatum, and Musa paradisiaca with respect to alterations in tissue lipid peroxidation and serum concentrations of glucose, insulin, and thyroid hormones. J Med Food 2008 Jun;11(2):376-81

Curcumin may somewhat stimulate proper function of the thyroid but has little or no such effect in the aged.


Curcumin with Vitamin E prevents thyroid hormone-induced oxidative stress damage to the kidneys and male testes.


Custard apple is more effective than thiouracil for controlling hyperthyroidism.


Iodine deficiency increases oxidative stress and DNA changes in the thyroid which can lead to nodules and/or thyroid cancer. Since it is a trace element, not much is needed. However, an increased consumption of processed food has placed the majority of the population in the deficiency range. Adding seaweed and unprocessed sea salt (coloured, not white), enough iodine can be obtained.

*Paschke: Molecular pathogenesis of nodular goiter. Langenbecks Arch Surg 2011 Apr 14

Magnesium decreases severity of hyperthyroidism. Collard greens prove to have the best absorption of magnesium from a food source.


**Mangoes** and **Melons** decrease the risks of hypothyroidism and abnormal cholesterol and blood sugar levels.


**Melatonin, Quercetin** and **NAC** (n-acetyl-cysteine) reduce oxidative stress in the patients with Graves’s Disease, an autoimmune disorder associated with the thyroid.

*Tang et al: Oxidative stress in Graves’ disease patients and antioxidant protection against lymphocytes DNA damage in vitro. Pharmazie 2005 Sep;60(9):696-700

**Potassium iodide** reduces radiation damage to the thyroid but **only** if taken within the period of two days before exposure to approximately 8 hours after.

*Zanzonico & Becker: Effects of time of administration and dietary iodine levels on potassium iodide (Kl) blockade of thyroid irradiation by 131I from radioactive fallout. Chest 2005 Dec;128(6):3817-27

**Seaweed** suppresses any effect that radioactive iodine might have on the thyroid.


**Selenium deficiency** is associated with an enlarged thyroid and Hashimoto’s disease. **Do not use sodium selenate/selenite**. This form is very toxic. Sodium selenate is a by-product of the copper refining industry and disposed of in some selenium supplements, most human and animal multivitamins, baby formulas, and “nutritional” shakes.


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**Sweet Orange peel** has therapeutic action for hyperthyroidism. It is best to buy **organically** grown oranges as they are on the list of high pesticide content.

*Parmar & Kar: Medicinal values of fruit peels from Citrus sinensis, Punica granatum, and Musa paradisiaca with respect to alterations in tissue lipid peroxidation and serum concentration of glucose, insulin, and thyroid hormones. J Med Food 2008 Jun;11(2):376-81


**Tyrosine** is an amino acid whose action proves to be superior to liothyronine and levothyroxine.

Zinc deficiency is associated with an abnormal thyroid function.

*Ertek et al: Relationship between serum zinc levels, thyroid hormones and thyroid volume following successful iodine supplementation. Hormones (Athens) 2010 Jul-Sep;9(3):263-8

VACCINES

Vaccines may be necessary at times but not nearly in the quantity or frequency that is now being recommended. Pick and choose the ones you feel are necessary and the timing of them, especially when it comes to your children. It is your responsibility to research all vaccines and each side of the issue in order to make informed decisions.

**List of Canadian Vaccines**

**List of UK Vaccines**
Department of Health - immunisation.dh.gov.uk/

**List of USA Vaccines**
Center for Disease Control - www.cdc.gov/vaccines/vpd-vac/vaccines-list.htm

**List of Vaccinations required in the USA before age 6 – with ingredients**

**List of Vaccinations required in Canada**
www.phac-aspc.gc.ca/im/is-cv/#a

**Vaccine ingredients:** Not every ingredient listed here is found in all vaccines at any one time.
- Acetic acid (Sodium acetate)
- Aluminum (hydroxide, phosphate, sulfate)
- Ammonium sulfate
- Antibiotics
- Benzethonium chloride (antimicrobial)
- Boric acid (Sodium borate)
- Calcium phosphate
- Carbonyl iron
- Egg albumin
- Formaldehyde
- Formalin
- Gelatin
- Glutaraldehyde
- Human and Animal DNA
- Hydrochloric acid
- Hydrogen peroxide
- Lab altered viruses and bacteria
Lactose
Mercury
Mineral oil based adjuvants
MSG (monosodium glutamate)
Peanut oil
Phenols (carbolic acid)
Phenoxyethanol
Polysorbates (Tween-20 and Tween-80)
Salt (Sodium chloride)
Squalene (MF59, AS03)
Sweeteners (sucrose, sorbitol, aspartame)
Thimerosal (Mercury)
Triton-X 100
Unidentified contaminants

*Autism is only the tip of the iceberg. Koren Publications
*Do you know what's in a vaccine? Koren Publications
*Do you know what's in a flu shot? Koren Publications
*How Many Vaccines will your child get? Koren Publications
*Informed Choice - www.informedchoice.info/cocktail.html
*National Vaccine Information Center - www.vaccine-tlc.org/
*Potential bio-hazard found in Gardasil vaccine, September 2011, VRAN
*Rense.com
*SaneVax (Safe Affordable Necessary Effective vaccines and vaccination practices through education and information)
*Vaccine Education - www.vaccinationeducation.com/
*VRAN (Vaccine Risk Awareness Network) - vran.org/
*WAVE (World Association for Vaccine Education) - www.novaccine.com/
*Whale.to - www.whale.to/a/adjuvants_bibliography.html and www.whale.to/vaccines/ingredients.html
Vaccine Ingredients: Governmental reasoning behind vaccines
*CDC - www.cdc.gov/vaccines/vac-gen/additives.htm

Vaccinations, technically, are not mandatory in Canada or the USA but enforcement is being pushed with choices no longer being tolerated. However, while no federal law exists – yet – there are state laws that have mandatory vaccination requirements for schools.

*Adams: Vaccination rights attorney Patricia Finn threatened with criminal charges; New York State demands she surrender names of all clients. 2012 February 28
*CDC - www.cdc.gov/vaccines/vac-gen/laws/state-reqs.htm
*Immunization is Not Mandatory in Canada. VRAN
*Lendman: Ready Americans for Dangerous, Mandatory Vaccinations. Global Research
*O’ Shea: End of vaccine exemptions in California? The Doctor Within newsletter April 2011, reprinted with permission by GreenMedInfo March 2, 2012
*Walkershaw: Mandatory vaccinations: The Canadian picture. CMAJ 2011 Nov 8;183(16)

Medical Professionals around the world have joined forces to “counter the messages asserted by pharmaceutical companies, the government and medical agencies that vaccines are safe, effective and harmless.”

*International Medical Council on Vaccinations - www.vaccinationcouncil.org
Adjuvants are agents used in vaccines to stimulate the immune system into increasing its response to the vaccine as well as to modify the effect of other ingredients. According to the CDC, aluminum is the only adjuvant licensed in the US for vaccine use yet, and many others, are used. In Canada, aluminum adjuvants are still used in some vaccines (MF59 in seasonal flu, for example). Adjuvants are linked to numerous adverse side effects.

* Canada-U.S. may go differently on vaccine production. Canadian Press, June 30, 2009
* CDC - www.cdc.gov/vaccinesafety/concerns/adjuvants.html
* Chirumbolo et al: Use of basophil activation test in the investigation of adverse effects to vaccines. Hum Vaccin 2011 Aug 1 ;7(8)

Aluminum is an adjuvant with toxic effects that are linked to motor neuron degeneration, autism, immunodeficiency, and Gulf War syndrome.

* Nakayama: Influenza vaccine and adjuvant. Yakugaku Zasshi 2011;131(12):1723-31

Animal cells used in vaccines are linked to retrovirus infections, producing chronic fatigue and prostate cancer. Aborted human fetal cells (diploid) are used in most vaccines: measles, mumps, rubies, rubella, polio, smallpox, hepatitis, chickenpox, herpes zoster, flu, respiratory syncytial, para-influenza viruses, HIV, West Nile virus, Ebola, Marburg, Lassa, foot and mouth disease, Japanese encephalitis, dengue, tuberculosis, anthrax, plague, tetanus and malaria.


Anthrax vaccine is linked to birth defects in newborns when pregnant women were vaccinated within the first trimester and cause the most adverse reactions compared to other vaccines. Reactions at the site of injection are significant and occur twice as often in women as men.
**Boric Acid** (Sodium borate) is an antifungal and insecticide found in some vaccines, including HPV. It is linked to adverse fetal development (teratogenicity) and death. It also increases cancer cell growth because of its estrogen-like effects, as well as affecting the male reproductive system.

- Balie et al: Is new always better than old?: The development of human vaccines for anthrax. Hum Vaccin 2009 Dec;5(12):806-16

Boric Acid (Sodium borate) is an antifungal and insecticide found in some vaccines, including HPV. It is linked to adverse fetal development (teratogenicity) and death. It also increases cancer cell growth because of its estrogen-like effects, as well as affecting the male reproductive system.

- Heindel et al: Developmental toxicity of boric acid in mice and rats. Fundam Appl Toxicol 1992 Feb;16(2):266-77
Boric acid and Diphenhydramine (Benadryl) are toxic to the developing embryo if taken together by pregnant women.

Calcium phosphate is a vaccine adjuvant linked to rheumatic disease.

Calcium phosphate and Aluminum are toxic to the immune system and bloodstream which can lead to anemia.

Carbonyl iron is an adjuvant that is linked to acute brain and spinal cord inflammation.

Combination vaccinations are associated with significant adverse reactions which decreased when the vaccines were given separately.

DNA and Contraceptive vaccines are being developed as a possible means of population control. There are at least 76 factors involved in the establishment of pregnancy which become targets for vaccine-induced abortion or contraception. DNA vaccines also carry under-reported risks associated with structural instability. The use of dead tissue to produce biologicals, vaccines and feedstuffs may be contributing to transmissible encephalopathies.
**Vaccines**

**DTP** (Diphtheria, Tetanus, Pertussis [whooping cough]) vaccine is associated with an increased risk of asthma, allergies, seizures and SIDS (sudden infant death syndrome).


*Kaur & Handa: Erythema multiforme following vaccination in an infant. Indian J Dermatol Venereol Leprol 2008 May-Jun;74(3):251-3


*Prandota: Urinary tract diseases revealed after DTP vaccination in infants and young children: cytokine irregularities and down-regulation of cytochrome P-450 enzymes induced by the vaccine may uncover latent diseases in genetically predisposed subjects. Reprod Biomed Online 2010 Jul;21(1):100-8


**Flu vaccines**, according to study conclusions, have not been proven to be safe, effective or reduce mortality in any age group with benefits being substantially overestimated. Flu vaccines actually prevent the immune system from functioning properly and have been linked to increased risks of developing autoimmune disorders, diabetes, and skeletal muscle destruction. Pregnant women receiving the flu vaccine have significant increased rates of pre-eclampsia and preterm births. Acute renal failure in those taking Statin drugs for Cholesterol is also attributed to the flu vaccine.

*Adams: CDC admits flu vaccines don’t work (which is why you need a new one every year). May 29, 2011


Flu vaccine of 2008/2009 was associated with an increase of H1N1 infection the same year. In fact, in England, the flu vaccine given for the supposed H1N1 pandemic
of 2008/2009 proved to have virtually no effect but instead caused the development of Guillain-Barré syndrome.

*Janjua et al: Seasonal influenza vaccine and increased risk of pandemic A/H1N1-related illness: first detection of the association in British Columbia, Canada. Clin Infect Dis 2010 Nov 1;51(9):1017-1027


**Formaldehyde** and **Mineral oil adjuvants** injected into subjects are used to induce arthritis in lab models.


**Heart inflammation** (myopericarditis) had almost a 4-fold increase in military personnel vaccinated for smallpox. Other cardiovascular events are also linked to the smallpox vaccine and would be significantly higher and costly if a mass smallpox vaccination program was carried out.


H1N1 (see under Squalene below)

**Hepatitis B vaccine** given to white males are linked to a 3-fold increased risk for autism before 1999. Non-white males had a higher risk. Coincidentally, in the same year, 1999, the CDC admitted that the mercury in vaccines was neurotoxic and replaced it with another toxic substance, aluminum. Today, autism is 1500% higher than it was before the vaccine push. **HepB vaccine** is also strongly linked to several autoimmune and connective tissue disorders, degeneration of the central nervous system, liver problems, arthritis, and the altering of at least 144 genes in the liver – damaging the very organ it was supposedly designed to protect. Many doctors refuse to give it to their children, likely because it has been linked to anaphylactic shock and death in infants. In 1985, the **HepB vaccine** proved to be -58% effective when given to children in Minnesota (Osterholm).


Geier & Geier: A case-control study of serious autoimmune adverse events following hepatitis B immunization. Autoimmun 2005 Jun;38(4):295-301


Hamza et al: Hepatitis B vaccine induces apoptotic death in Hepa1-6 cells. Apoptosis 2012 Jan 17


Kaur & Handa: Erythema multiforme following vaccination in an infant. Indian J Dermatol Venereol Leprol 2008 May-Jun;74(3):251-3


HPV (Human Papillomavirus) vaccine is associated with numerous profound side effects, including Guillain-Barré Syndrome (GBS), lupus and death. The vaccine has no effect in those who already have the virus. (see more under Anti-virals).

Infant Mortality decreased when the number of vaccines given to infants under three months, also decreased. In one study undertaken for the years 1991-1994, “38,787 adverse events” including infant death (highest in 1-3 month olds) after vaccination were reported (Braun).
Measles vaccine is associated with autoimmunity in children with autism and increased death rates in female children given the vaccine before the age of 9 months. It is also noted that measles vaccination given in developing countries has resulted in higher than normal infant mortality rates.

MMR (Measles Mumps Rubella) vaccine causes a significantly higher risk of multiple sclerosis, febrile convulsions, autism, immune disorders, and ulcerative colitis.

Mercury (Thimerosal/Thiomersal) is linked to several neurodevelopmental disorders in children including autism spectrum disorders, brain damage, premature puberty,
tics, and delayed speech. When it was removed from some childhood vaccines, the rate of such disorders decreased.

*Geier: Thimerosal exposure increasing trends of premature puberty in the vaccine safety datalink. Indian J Med Res 2010 Apr;131:500-7
*Geier & Geier: An evaluation of the effects of thimerosal on neurodevelopmental disorders reported following DTP and Hib vaccines in comparison to DTPH vaccine in the United States. J Toxicol Environ Health A 2006 Aug;69(15):1481-95
*Olczak et al: Neonatal administration of a vaccine preservative, thimerosal, produces lasting impairment of nociception and apparent activation of opioid system in rats. Brain Res 2009 Dec 8;1301:143-51
**Mineral oils** are generally considered non-toxic but studies show they may be linked to certain autoimmune diseases as well as tissue destruction. Examples of mineral oil adjuvants would be Bayol F (incomplete Freund’s adjuvant, IFA). Mineral oil component examples would be **Squalene** (see below) and **n-hexadecane** which are often used to induce experimental disorders in lab models.

*Kuroda et al: Distinctive patterns of autoimmune response induced by different types of mineral oil. Toxicol Sci 2004 Apr;78(2):222-8
*Stills: Adjuvants and antibody production: dispelling the myths associated with Freund’s complete and other adjuvants. ILAR J 2005;46(3):280-93

**Mosquitoes** are being genetically engineered to act as flying vaccine syringes.

*Enserink: Researchers Turn Mosquitoes Into Flying Vaccinators. Science Now, March 18, 2010

**Pertussis vaccine** (for Whooping Cough) not only does not give full protection, it activates a predisposition for brain dysfunction (encephalopathy), decreases muscle function (hypotonic-hyporesponsive episodes – HHEs) and contributes to SIDS (sudden infant death syndrome). Despite high rates of immunization, incidents of the disease are increasing and **under-estimation** is common regarding central nervous system damage.

*Vandebriel et al: Lung pathology and immediate hypersensitivity in a mouse model after vaccination with pertussis vaccines and challenge with Bordetella pertussis. Vaccine 2007 Mar 8;25(12):2346-60
*Wilson et al: Revisiting the possibility of serious adverse events from the whole cell pertussis vaccine: were metabolically vulnerable children at risk? Pharmazie 2007 Apr;62(4):299-304
Pneumonia vaccine given to pregnant women does not protect the developing fetus nor does it prevent ear infections in children or reduce pneumonia deaths in adults.


Polio vaccine may actually cause the disease with a 25-fold increased risk of developing paralytic poliomyelitis. The vaccine is also associated with an increase in female deaths and emerged as the #1 vaccine-associated disease in the US from 1980 to 1990. In addition, contaminated vaccine is linked to HIV/AIDS when it was grown in SIV infected chimpanzee kidney cells during the late 1950's.

*Hooper: Experimental oral polio vaccines and acquired immune deficiency syndrome. Mol Nutr Food Res 2010 Jan 28

Polysorbates (Tween) are often used as emulsifiers in food and vaccines. There are strong links between them and damaged reproductive organs.


Preservatives used in vaccines exhibit significant toxicity and revealed that “None of the compounds commonly used as preservatives in US licensed vaccine/biological preparations can be considered an ideal preservative, and their ability to fully comply with the requirements of the US Code of Federal Regulations (CFR) for preservatives is in doubt. Future formulations of US licensed vaccines/biologics should be produced in aseptic manufacturing plants as single dose preparations, eliminating the need for preservatives and an unnecessary risk to patients.”


Rabies vaccine is not only ineffective during symptoms of the disease but may contribute to an early death.

Rotavirus vaccination is associated with an increased risk of a certain type of bowel obstruction in infants. Intussusception is the most common infantile abdominal emergency and occurs when the bowel slides into another part, much like pieces of a telescope.


Rotavirus vaccination is associated with an increased risk of a certain type of bowel obstruction in infants. Intussusception is the most common infantile abdominal emergency and occurs when the bowel slides into another part, much like pieces of a telescope.


*Haber et al: An analysis of rotavirus vaccine reports to the vaccine adverse event reporting system: more than intussusception alone? Pediatrics 2004 Apr;113(4):e353-9


Ruebella (German measles) vaccine causes fetal malformations and brain damage as well as significantly contributing to abortions when given to pregnant women.


Smallpox vaccine is linked to several important complications including the heart.


*Mora et al: Cardiac complications after smallpox vaccination. South Med J 2009 May 7


Squalene (MF59, AS03) is an oil often obtained from shark livers and used as an adjuvant in some vaccines, including H1N1 (Swine flu, Influenza-A) and Anthrax. It is strongly associated with the development of Gulf War Syndrome, anemia, autism, lupus, delayed focal lipoatrophy (loss of muscle tissue after nerve injury), heart disease and seizures.


*Bhakdi et al: Possible hidden hazards of mass vaccination against new influenza A/H1N1: have the cardiovascular risks been adequately weighed? Med Microbiol Immunol 2009 Oct 23


*Jacobucci: Million TIMES More Squalene In H1N1 Vax Than Caused GWI!! Rense.com Exclusive, August 8, 2009

*Javelle et al: Delayed focal lipoatrophy after AS03-adjuvanted influenza A (H1N1) 2009 vaccine. Vaccine 2010 Dec 17
*Kuroda et al: Distinctive patterns of autoimmune response induced by different types of mineral oil. Toxicol Sci 2004 Apr;78(2):222-8  
*No authors listed: Possible association of new-onset seizure with the H1N1 influenza vaccine. Pharmacother 2011 Jan;31(1):113  

Tetanus booster can cause leukemia, which first manifests itself as severe skin lesions. It was designed to have anti-fertility action and given to women in the Philippines.  
*No authors listed: Tetanus vaccine may be laced with anti-fertility drug. International/developing countries. Vaccine Wkly 1995 May 29 - Jun 5:9-10

Tdap (Tetanus Diphtheria Acellular Pertussis) vaccine is recommended by the CDC for teens and for postpartum women before hospital discharge in order to prevent whooping cough in the newborn but it is proving to have no effect. When it is given to female infants along with the measles vaccine, the combination increases the death rate and contributes to stunted growth. It is also associated with recurring seizures.  

Thrombocytopenia (low blood platelets) is a significant risk after vaccinations.  

Tuberculosis vaccine (BCG - Bacillus Calmette-Guérin) increases the death rates of young children who received it. Leg ulcers and kidney disease are other known side effects.  
**Vaccinations** are linked to brain damage, neuropathy, spinal cord inflammation (transverse myelitis), connective tissue disorders, anemia, autism, autoimmune diseases, deep morphea (patches of hardened skin), site-associated sarcoma, and death. Single, multiple, and simultaneous vaccines given to premature infants cause heart and respiratory problems and death. The number of vaccine-induced abortions during pregnancy are substantial and under-reported.

* Aaby et al: Age-specific changes in the female-male mortality ratio related to the pattern of vaccinations: an observational study from rural Gambia. Vaccine 2006 May 29;24(22):4701-8
**Vaccination Incentives** include food vouchers, Hallmark greeting cards, financial assistance, church recruitments, and more. When incentives fail to work would **Mandated vaccinations** be next? “In recent decades there has been a distressing decline in the numbers of healthy volunteers who participate in clinical trials. If progression of promising vaccines from the lab to the clinic is to remain unaffected and financial inducement is an ethically unacceptable solution to the recruitment shortage, other strategies need to be considered. Compulsory involvement in vaccine studies is one alternative solution that is not as outlandish as it might seem…” (Sheehy & Meyer). Are epidemics being manufactured in order to force “volunteers” to participate?

*Adams: Health insurance company preys upon the poor with junk food reward program for vaccinating your baby. NaturalNews January 23, 2012

*Adams: Hallmark now distributing vaccine shot compliance cards targeting newborns across America. December 9, 2011


*Vaccine Money Incentive Quotes - www.whale.to/vaccine/quotes15.html


**Vaccine Trial** killed babies but company was only fined.

*GSK fined after over vaccine trials; 14 babies reported dead. By Javier Cardenal Taján, Buenos Aires Herald, January 31, 2012

*GSK fined measly $90,000 by Argentine court for killing 14 babies in illegal vaccine trials; drug giant actually appealing. By Ethan Huff, NaturalNews, January 31, 2012

**Vaccines** are not developed with a focus on helping people which is evidenced by the number of serious to deadly side effects. They are also being encouraged instead of breastfeeding.


*Huff: CDC researchers say mothers should stop breastfeeding to boost ‘efficacy’ of vaccines. NaturalNews, Sunday, January 22, 2012


**Varicella vaccine** for Chickenpox is linked to several adverse reactions in thousands of recipients and an increase in shingles (herpes zoster) during the same time period.
In addition, one or two doses do not prevent school outbreaks and, yes, vaccine-associated rashes are contagious.

*Salzman et al: Transmission of varicella-vaccine virus from a healthy 12-month-old child to his pregnant mother. Homeopathy 2009 Apr;98(2):77-82

SUGGESTED ALTERNATIVES THAT REDUCE TOXIC EFFECTS OF VACCINES:

**Beta Glucans** are polysaccharides derived from oats, mushrooms, or yeasts. Beta glucans are particularly effective for priming and normalizing the immune system and protecting the body from a number of viruses in those who have been vaccinated and those who have not. (see more under Anti-virals).


**Calotropis procera** (Roostertree) protects against Mineral-oil-induced arthritis.


**Clean Lifestyle** (diet, exercise, and avoiding as many chemicals as possible) keeps the immune system strong enough to ward off disease. See more suggestions under alternatives for **Antivirals** (which most pandemics are) and **Antibiotics** (for bacterial infestations). Above all, study and use common sense. Ask yourself, how could any chemical be good for me? We eat, breathe, and put chemicals on our skin, but many of these can be avoided, if we choose to do so. Do not give up the right to choose.

**Coconut oil** effectively treats aluminum poisoning.

**Homeopathic Vaccines** have been proven safe and effective by those who use them.

- Dr. Isaac Golden Natural Immunisation Research (Australia) - www.homstudy.net/Research/
- Homeopathic Immunizations: A Proven Alternative to Vaccinations. Little Mountain Homeopathy, Vancouver, BC, January 27, 2010
- Pitcairn: Homeopathic Alternatives to Vaccines. ThinkTwice Global Vaccine Institute

**Olive leaf** is a strong anti-microbial that also decreases the effects of Mineral-oil-induced encephalomyelitis.


**Plant-based vaccines** have been developed and tested for years with encouraging results.

- Licciardi PV, Underwood JR. Identification of a novel vaccine adjuvant that stimulates and maintains diphtheria toxoid immunity. Vaccine 2010;28(22):3865-3873
- Wen et al: A plant-based oral vaccine to protect against systemic intoxication by Shiga toxin type 2. PNAS 2006 Apr 25; Published online before print
Premna corymbosa is a plant used in Ayurvedic medicine which reverses the effects from mineral-oil-induced (Freund’s adjuvant) arthritis.


Probiotics keep the immune system healthy in non-vaccinated individuals and are effective against a variety of pathogens. They can also diminish the harmful effects of vaccinations, especially in infants.

*Boge et al: A probiotic fermented dairy drink improves antibody response to influenza vaccination in the elderly in two randomised controlled trials. Vaccine 2009 Jul 15
*Chang et al: Inhibition of HIV infectivity by a natural human isolate of Lactobacillus jensenii engineered to express functional two-domain CD4. Proc Natl Acad Sci USA 2003;100:11672-7
*Corr et al: Bacteriocin production as a mechanism for the antiinfective activity of Lactobacillus salivarius UCC118. Proc Natl Acad Sci USA 2007;104:7617-21
*Isolauri et al: Improved immunogenicity of oral D × RRV reassortant rotavirus vaccine by Lactobacillus casei GG. Vaccine 1995;13(3):310-12
*Mohamadzadeh & Owen: Reprogramming intestinal immunity is the answer to induced pathogenic inflammation. Immunother 2011 Dec;3(12):1415-7


Oliva et al: Oral intake of Lactobacillus fermentum CECT5716 enhances the effects of influenza vaccination. Nutr 2007;23(3):254-60


Saputo: Can probiotics replace the flu shot? NaturalNews, Tuesday, November 15, 2011


Sleator: Probiotics: A viable therapeutic alternative for enteric infections especially in the developing world. Discov Med (John Hopkins) Published on August 6, 2010


Soh et al: Effect of probiotic supplementation in the first 6 months of life on specific antibody responses to infant Hepatitis B vaccination. Vaccine 2010;28(14):2577-79

Thomas & Greer: Probiotics and prebiotics in pediatrics. Pediatrics 2010;126(6):1217-31

Vitamin C can treat whooping cough. According to Suzanne Humphries, MD, who states that “...natural immunity to whooping cough lasts at least 30 years, whereas the immunity from a vaccine lasts 3 years, and after adult boosters, all antibodies have disappeared within a year” and that “Pertussis toxin can be neutralized in 12 hours with correct vitamin C dosing.”

Vitamin D3 is vitally important to a proper functioning immune system. Supplementing it with Probiotics is a good defensive maneuver against most pathogens as well as preventing the development of autoimmune diseases. Vitamins A and E are others that have proven to be important. Basically, overall nutrition is the best line of defence, critically important for maintaining health and diminishing the side effects of vaccinations.
Zinc decreases inflammation and general discomfort that are often associated with vaccinations.

*Yalçın et al: Zinc supplementation and TNF-α levels in vaccinated cardiac patients. J Trace Elem Med Biol 2011 Apr 21
Appendix

B Vitamin List

Since B vitamins work together and are water-soluble, when one is listed as being depleted, it is likely that the others are affected as well even though they may not have “officially” made the list. When taking B vitamins as a supplement, it is wise to take a complex in addition to the singles needed to correct a problem.

B1 – Thiamin
B2 – Riboflavin
B3 – Niacin
B5 – Pantothenic acid
B6 – Pyridoxine
B7 – Biotin
B8 – Inositol
B9 – Folic acid
B12 – Methylcobalamin
B13 – Orotic acid
B15 – Panamic acid
B17 – Laetrile
Choline
PABA (Para-aminobenzoic acid)
# Amino Acid List

Although there are differences of opinion, the following is basically correct.

**Essential** *(the body cannot make them so they must be obtained from food)*

**Non-essential** *(can be made in the body from other amino acids)*

**Conditionally essential** *(not normally required but if needed, the health status of an individual will determine whether the body needs to make them or obtain from the diet)*

| Alanine** | Arginine*** |
| Asparagine*** | Aspartic Acid** |
| Carnitine*** | Carnosine** |
| Citrulline*** | Cysteine/Cystine*** |
| Glutamic Acid** | Glutamine*** |
| Glycine*** | Histidine*** |
| Homocysteine** | Isoleucine* |
| Leucine* | Lysine* |
| Methionine* | Ornithine*** |
| Phenylalanine* | Proline*** |
| Serine** | Taurine*** |
| Threonine* | Tryptophan* |
| Tyrosine*** | Valine* |
### Gluten-Free Foods

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<tbody>
<tr>
<td>Agar</td>
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<td>Arabic Gum</td>
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<td>Bean Flours</td>
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<td>Carob</td>
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<td>Cellulose</td>
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<tr>
<td>Dahl</td>
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<tr>
<td>Dried Legumes (beans, peas)</td>
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<td>Garbanzos (chickpeas)</td>
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<td>Glutinous Rice</td>
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<tr>
<td>Harina</td>
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<tr>
<td>Maltodextrin</td>
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<td>Millet</td>
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<td>Poi</td>
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<td>Potato</td>
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<td>Rice (all types)</td>
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<td>Sorghum (a cereal grass)</td>
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<tr>
<td>Succotash (corn &amp; bean mix)</td>
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<td>Teff (a cereal grass)</td>
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<td>Amaranth</td>
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<tr>
<td>Arrowroot</td>
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<td>Buckwheat (not a grain)</td>
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<td>Cassava</td>
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<td>Corn (maize)</td>
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<td>Dextrose</td>
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<td>Flax</td>
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<td>Glutamine</td>
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<td>Guar gum</td>
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<td>Kasha</td>
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<tr>
<td>Maltitol</td>
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<td>Nuts &amp; nut flours</td>
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<tr>
<td>Polenta (corn mush)</td>
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<td>Quinoa</td>
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<tr>
<td>Sago (from palm plants)</td>
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<td>Soy</td>
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<td>Tapioca</td>
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<td>Xanthan gum</td>
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### Gluten-Containing Foods

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<td>Baking powder</td>
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<td>Beer</td>
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<td>Cereal binding</td>
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<td>Durum (wheat)</td>
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<td>Emmer (wheat)</td>
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<tr>
<td>Farro (a variety of wheat)</td>
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<tr>
<td>Graham (wheat flour)</td>
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<tr>
<td>Kamut (wheat)</td>
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<tr>
<td>Malt &amp; malt flavorings</td>
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<tr>
<td>Barley</td>
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<tr>
<td>Bulgur (wheat)</td>
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<tr>
<td>Couscous (semolina wheat dish)</td>
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<tr>
<td>Einkorn (wheat)</td>
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<tr>
<td>Farina (wheat)</td>
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<tr>
<td>Fillers</td>
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<tr>
<td>Hydrolysed Plant Proteins</td>
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<tr>
<td>Licorice</td>
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<tr>
<td>Maltose</td>
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<tr>
<td>Pamela Duff, RN, CSNC</td>
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<td>---------------------------------</td>
</tr>
<tr>
<td>Nama shoyu (raw soy sauce but has wheat)</td>
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<tr>
<td>Pilaf mixes</td>
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<tr>
<td>Rye</td>
</tr>
<tr>
<td>Semolina (wheat)</td>
</tr>
<tr>
<td>Spelt/Dinkel (a variety of wheat)</td>
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<tr>
<td>Wheat</td>
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<tr>
<td>Wheat Germ</td>
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Juice and Medication Interaction Studies

Grapefruit Juice


Fuhr et al: Increase of verapamil concentrations in steady state by coadministration of grapefruit juice. Naunyn-Schmiedbergs Arch Pharmacol 1996;R134:Abstract 536


James: Grapefruit juice and saquinavir. AIDS Treat News 1995;235:5-6


Lane et al: Lack of CYP3A4 inhibition by grapefruit juice and ketoconazole upon clozapine administration in vivo. Drug Metabol Drug Interact 2001;18(3-4):263-78


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