

Links to Data Presented & Additional Resources

Following are links to some of the reports and studies presented in the lecture and to some that I haven't mentioned.

List of Studies

- **US Navy Report (1971)** – Naval Medical Research Institute – [Bibliography of Reported Biological Phenomena \('Effects'\) and Clinical Manifestations Attributed to Microwave and Radio-Frequency Radiation](#)
- **Blood Brain Barrier** – The first study was conducted by Dr. Allan Frey (1975) (who already proved the ["Auditory Effect" / "Frey Effect"](#) of non-thermal Microwave Radiation) – The study found that (1) non-thermal levels of microwave radiation can break the blood brain barrier (BBB) (2) the main cause of the adverse effects are from the modulation rather than the carrier wave - Neural function and behavior: defining the relationship. The Swedish Neuro-Scientist, Dr. Lai Salford confirmed Frey's study regarding the BBB. He conducted further studies on the various effects of this radiation on the brain. [Summary by Arthur Firstenberg from Cellular Phone Task Force about Salford's work and link to his studies.](#)
- **Bioinitiative Report (2012)** - [The Bioinitiative report](#) is the most comprehensive review of studies on biological effects caused by EMFs. It was prepared by 30 world-leading scientists and public health professionals. The authors reviewed 3000 peer reviewed studies on EMF's, including about 1,800 on the effects of wireless radiation. Their conclusion: "Bio-effects can also occur from just minutes of exposure to mobile phone masts (cell towers), Wi-Fi, and wireless utility 'smart' meters that produce whole-body exposure". – [Color Charts of Sample Studies of Reported Biological Effects from Radiofrequency Radiation at LowIntensity Exposures.](#)
- **Oxidative Stress Mechanism** – Meta Analysis Paper - Yakymenko (2015) – This analysis shows that 93 out of 100 studies show wireless radiation causes oxidative stress, a mechanism that can lead to cancer, non-cancer diseases, and DNA damage. This study disproves the wireless industry's misleading statements that there are no mechanisms by which non-thermal levels of wireless radiation can affect the body. It also disproves the industry contentions that "the overwhelming majority of studies show no effects". [Oxidative Mechanisms of Biological Activity of Low-Intensity Radiofrequency Radiation](#)
- **Increase in Glucose Metabolism** - National Institute of Health (NIH) Study - Volkow (2011) - This study shows conclusive evidence of the bio-effects of wireless radiation on the human brain. [Effects of Cell Phone Radiofrequency Signal Exposure on Brain Glucose Metabolism](#)
- **NTP Study** – On Nov. 1 2018, the final report of the results of the \$30 million 14-year study of the [National Toxicology Program \(NTP\) of the National Institute of Environmental Health Sciences \(NIEHS\)](#) was published and determined the study showed CLEAR EVIDENCE that cell phones cause cancer and breaks the DNA. This is the largest study of its kind. A peer review panel of 11 scientists confirmed the findings of "clear evidence" on March 28, 2018. Read about the study on SaferEMR.com Website: National Toxicology Program Finds Cell Phone Radiation Causes Cancer. We now have the government study that proves beyond a doubt the harm of wireless technology and it should be a game changer. The public must be warned and protected. Dr. Ron Melnik, PhD, Senior Toxicologist and Director of Special Programs in the (NIEHS), who lead the study until he retired, said in 2016: "The NTP tested the hypothesis that cell phone radiation could not cause health effects and that hypothesis has now been disproved. The experiment has been done and, after extensive reviews, the consensus is that there was a carcinogenic effect". In regard to the DNA damage findings, Dr. Melnik stated that the results of the study: "should put to rest the old argument that RF radiation cannot cause DNA damage".
- **The Ramazzini Study** – [The Ramazinni study](#) is a 6 million Euro study conducted by the Ramazzini Institute in Italy. The study is similar to the NTP study with one major difference – while the NTP study used levels of radiation similar to those emitted from a cell phone, the Ramazzini used levels of radiation 6,000 times lower,

which are more like the levels of radiation we get from further away cell towers. The results were the same as the results of the NTP.

- **Microwave Sickness** – [Belyaev et al \(2016\) - EUROPAEM EMF Guideline 2016 For the Prevention, Diagnosis and Treatment of EMF-Related Health Problems and Illnesses](#). Microwave Sickness is the more accurate name for electro-sensitivity (ES). It is the most widespread manifestation of illness from wireless radiation with mainly neurological symptoms. At least 10% of the population has already developed the condition; the rates are likely much higher. In 2016, the EMF working group of the European Academy for Environmental Medicine (EUROPAEM) published guidelines, which include a review of the science of Electro-Sensitivity and instructions for doctors on how to diagnose and treat ES. It is important to know that Microwave Sickness is Recognized under the ICD-10 as 'Radiation Sickness' and was acknowledged by various government agencies as a disability.
- **Cancer in Children- American Brain Tumor Association - Ostrom (2015)** – This report shows that the 4 leading diseases that kill children and young adults are brain tumors, thyroid cancer, testis cancer and rectal cancer – cancer in proximity to where wireless devices are carried/used. [Adolescent and Young Adult Primary Brain and Central Nervous System Tumors Diagnosed in the United States in 2008-2012](#). Read about the [school in Ripon CA](#) in which 6 children and 3 teachers developed cancer after a “small cell” antenna was installed in the school.
- **Cancer from Cell Towers** – Meta Analysis Paper- Yakymenko et al (2011) – a good summary of studies including army and air-force studies that show wireless radiation from cell towers and radars have severe adverse effects. This is a good study to explain to legislators why we should not allow 5G towers near our homes or children's schools. Long-Term Exposure to [Microwave Radiation Provokes Cancer Growth: Evidences From Radars and Mobile Communication Systems](#)
- **Courts Find Causation Between Cell Phones & Brain Tumors - Fifth Court in Italy Ruled Cell Phones Cause Brain Tumors and Determined It Is An Occupational Disease**
- **Reduced Sperm Count** - Zilberlicht (2015) - Dozens of studies prove beyond a doubt that wireless radiation adversely affects the sperm. - [Habits of cell phone usage and sperm quality - does this warrant attention?](#)
- **Autism** – Prof. Martha Herbert MD. PhD is a pediatric Neurologist from Harvard University who specializes in autism. After exploring the potential correlation between the exponential increase in the rates of children with autism to the exponential increase in our exposure to electromagnetic fields and radiation from wireless, she concludes that there is a likely correlation - [Autism and EMF? Plausibility of a pathophysiological link – Part I; Part 2](#). She is now convinced that there are established non-thermal effects from wireless radiation and is a strong advocate against WiFi in schools. [Click here for her letter on this issue](#). A Facebook Page: [Autism & EMF](#).
- **ADHD** – Prof. Hugh Taylor (2012) Yale University – The study showed that when pregnant mice were exposed to microwave radiation, it caused changes in the brains of their babies and behavior that resembled ADHD. [Fetal Radiofrequency Radiation Exposure From 800/1900 Mhz-Rated Cellular Telephones Affects Neurodevelopment and Behavior in Mice](#). [CLICK HERE for Prof. Taylor video presentation](#). [Click Here](#) for the human study that confirms that animal study results – results of 5 studies on a total of 83,000 women which confirmed that women who were exposed to more wireless radiation while pregnant has higher chances of having children with behavioral and attention deficit problems.
- **Wi-Fi** - [New meta-analysis paper by Prof. Martin Pall \(2018\)](#) – The paper summarizes the various health effects found to be caused by WiFi. Wi-Fi is an important threat to human health

The Wireless Fraud

- **The Nation Article** – excellent article that was published on 3/29/18, about the wireless industry fraud/cover up titled: " [How Big Wireless Made Us Think That Cell Phones Are Safe: A Special Investigation](#)" and the [subtitle](#): The disinformation campaign—and massive radiation increase - behind the 5G rollout." The article is especially important as it was written by two leading investigative journalists - Mark Hertsgaard and Mark Dowie. Dowie is a former publisher and editor of Mother Jones and has won nineteen journalism awards.

- **FCC – Captured Agency** - [Harvard University Center for Ethics \(2015\)- Captured Agency: How the FCC is Dominated by the Industries It Presumably Regulates](#). Summary of relevant points from the report regarding the FCC & the wireless industry from [SaferEMR.com - An Exposé of the FCC: An Agency Captured by the Industries it Regulates](#)

Impact on the Environment

- **Bees Birds and Mankind** - A very interesting report from a leading German scientist about the effects of wireless radiation on bees, birds and humans. [Ulrich Warnke \(2009\) – Bees, Birds and Mankind - Destroying Nature by ‘Electrosmog’](#)

5G Science

- **A good introductory article about 5G health effects** - 017) - [A 5G Wireless Future – Will It Give Us a Smart Nation or Contribute to an Unhealthy One?](#)
- **CIA Translated Paper from 1976 on effects of MMW** - [Effects of Millimeter Waves on Brain](#) - The study showed that “low intensity” MMW of 42 GHz frequency which is the same bandwidth that will be used for 5G can be felt by people and cause changes in Alpha, Delta and Theta brain waves as shown by EEG . The paper is attached.
- **Feldman (2007)** - [Human Skin As Arrays of Helical Antennas in the Millimeter and Submillimeter Wave Range](#) - Millimeter waves interact with the sweat nodes of our skin which have a helix structure, like an antenna and make the body into an antenna.

5G – Activism & Additional Links

- **5G Appeal** - Appeal of 240 scientists from 31 countries who published over 2,000 studies on EMF effects calling for a moratorium on 5G because the harms are proven and because an epidemic of sickness already exists. Ignoring it is a price society can no longer pay.
- **Impact of 5G on Energy Consumption** - [5G use will increase energy costs: study](#)
- **5G in Congress** - Senator Blumenthal’s Actions to Expose the Lie About the FCC claim that 5G is safe - [Finally, Health Effects Were Mentioned in 5G Senate Commerce Committee Hearing](#)
- **Louisiana Legislature passed a Resolution (LA HR145) Requests the Department of Environmental Quality in conjunction with the Louisiana Department of Health to study the effects of evolving 5G technology**
- **OTARD (Over The Air Receiving Devices)** – The new regulation the FCC plans to adopts allowing “small cells” on people’s home. The docket for public comments was closed on the end of June
- **McKinsey Report** - [Showing the data collected from IOT \(Internet of Things\) is an \\$ 11 trillion a year industry.](#)
- **Rep. Eshoo (D-CA) Bill H.R. 530** – Rep. Eshoo introduced a bill, H.R. 530 to reverse the FCC’s regulation from Sept 2018 and to give back the municipalities their power to regulate ‘Small Cells’. PLEASE get your Congressmen to co-sponsor the bill and your municipality to join the list of municipalities supporting the bill.
- **ARTWORK on 5G – Shelley Masters, from Sonoma**. CA is a talented artist who has developed Microwave Sickness. She created two beautiful posters. One can be found online but the second was finished on June 29th and is yet to be published.

Taking Action -There are various ways to take further action. Joining the local groups is important!

- **EMF Safety Network** published a wonderful guide – How to Oppose “Small Cell” 5G Towers.
- **Americans For Responsible Technology** which is a coalition of national organizations including my organization,
- **We Are The Evidence** has been leading a coordinated national action on 5G titled [5G Crisis](#). Please add your name to their mailing list to be part of our movement and help the effort.

- ❖ **See below list of websites with information about 5G.**

Database of Studies

- Database of Studies – A website which is managed by a German hospital and funded by the German government and industry. Likely the most comprehensive database of studies on the issue of electromagnetic fields and radiation (both studies that found effects and studies that didn't find effects), a total of about 30,000 studies- [EMF-Portal](#)

California Specific Information

- **California Medical Association (CMA) [Resolution on Wireless Standards Reevaluation \(2014\)](#)**
[Resolution 107- 14 -](#) The California Medical Association passed a resolution stating that our current safety standards are not adequate to protect public health and need to be revised to take into account non-thermal biological effect. Its resolve states: "CMA support efforts to implement new safety exposure limits for wireless devices to levels that do not cause human or environmental harm based on scientific research." In this resolution CMA acknowledges that "... peer reviewed research has demonstrated adverse biological effects of wireless EMF including single and double stranded DNA breaks, creation of reactive oxygen species, immune dysfunction, cognitive processing effects, stress protein synthesis in the brain, altered brain development, sleep and memory disturbances, ADHD, abnormal behavior, sperm dysfunction, and brain tumors..." CA Medical Association is the only medical association that passed such a resolution.
- **LA Firefighters & Cell Towers** - in 2005, The International Firefighters Union, representing over 300,000 firefighters recognized wireless microwave radiation health effects and has stood strongly against locating cell towers on top of their fire stations; [28 page International Association of Fire Fighters Resolution detailing health effects associated with exposure to wireless microwave radiation and reported symptoms of their exposed firefighters](#). The document states numerous health effects were found to be caused by wireless radiation. The resolution was a result of complaints by firefighters of headaches, memory problems, sleeping problems, anxiety following the installation of cell towers at their fire stations. Brain scans of the firefighters in 2005 showed abnormalities. The results of these abnormal brain scans were summarized in a [letter written to the FCC in 2013](#). California Assembly Bill AB57, which passed on October 9, 2015, exempts fire stations from having transmitting devices on their facilities. The 5G Bill SB 649 which was vetoed by Governor Brown included an exemption for firefighters.
- **Medical Studies From CA:** Divan (2010) – "[Cell Phone Use and Behavioral Problems in Young Children](#)" Two of the top universities in California, UCLA along with USC, completed a National Institute of Health (NIH) funded study showing that pregnant women using cell phones had children with more behavioral problems. This was a repeat of a study previously done in Europe, showing its validity. Another recently published study was done on 83,000 women showing the same results.
- **CA Department of Public Health (CDPH) [Cell Phone Safety Guidelines \(2017\)](#)** - In December 2017, the California Department of Public Health became the first US State Department of Health to publish guidelines on how to reduce exposure to radiofrequency from cell phones cell phones. However, sadly the story behind the publication of the guidelines exposes the outrageous failure of those entrusted to protect our health, likely because of fear of industry. In 2014 Dr. Joel Moskowitz, Director of the Center for Family and Community Health, School of Public Health, University of California, Berkeley, submitted 3 requests to the CDPH under the California Public Records Act for this information. All three requests were denied. In 2016, the UC Berkeley School of Law, Environmental Law Clinic and the First Amendment Project filed a lawsuit on his behalf in the Sacramento Superior Court. On May 12, 2017, CA Attorney General's office released the drafts. Shockingly it was discovered that since 2009 and until 2015, the California Department of Public Health prepared 27 versions of a cell phone radiation safety fact sheet but never released them to the public. In December 2017 it officially published the guidelines. Needless to say the guidelines are inadequate, full of fear of telling the truth

and also give bad advice such as encouraging the use of bluetooth headphone. The story was covered by the San Francisco Chronicles "[New records show how state reworked secret cell phone warnings](#)"

Technical Information

- **Purchasing a Meter to Measure Wireless Radiation** - There are various meters on the market. Each has advantages and disadvantageous. My personal favorite is [Cornet ED88T](#) Plus. I like it because it is small and easy to carry everywhere. It also has the most features - lights, sound, graph, it shows the frequency and measures not only the radiation from wireless devices but also the electric and magnetic fields of the house electricity (low frequencies). It is the best value for the money and quite accurate. Other popular meters are the [Acoustimeter](#) and the [Trifield](#). PLEASE do not buy the meter on Amazon (even though the links provided might be from them) but rather from activists who have also a side business of selling such products to help support their efforts. For example - you can buy from Josh Hart at [StopSmartMeters.Org](#). Josh has led the movement against smart meters and he is also in California. If you mention my name he will give you a discount. Another website of an activist who is doing a great job is [4EHSbyEHS.com](#). There are many others.
- **Building Biologists** - if you are considering shielding your house and/or make sure it is optimal in terms of EMFs and radiation, you can hire a building biologist to help you. [CLICK HERE](#) for a list of Building Biologists. Another company which is doing home assessments is Shielded Healing of Brian Hoyer.

Recommended Articles

- Article About the NTP Study - [Study Finds 'Clear Evidence' Linking Cellphone Radiation to Tumors in Rats](#)
- Article About 5G - [Resistance to 5G: Roadblock to a High Tech Future or Warning of a Serious Health Risk?](#)
- Article About Wi-Fi in Schools - Wi-Fi in Schools: [Experimenting With The Next Generation](#)
- Article About Microwave Sickness - [Tuning in to Microwave Sickness - How wireless technology can trigger a devastating illness](#)

Recommended Movies

- [Generation Zapped](#) – An introductory movie to the issue of wireless health effects. •
- [Microwaves, Science & Lies](#) – A movie about the wireless fraud including in the World Health Organization.
- [Resonance – Beings of Frequency \(free\)](#) – A movie about how wireless is affecting us, considering humans are electric beings. • Take Back Your Power – A movie mainly about wireless "smart" meter fraud and harms.

Recommended Books

- [Invisible Rainbow](#) – A History of Electricity and Life – By Arthur Firstenberg
- [Disconnect](#) – The Truth About Cell Phone Radiation, What the Industry Has Done to Hide it and How to Protect Your Family – By Dr. Devra Davis
- [Overpowered](#) - By Dr. Martin Blank