

Harmful Biological Effects of Electromagnetic Radiation

Annotated Bibliography

1. **1970's - US Navy Medical Research Institute Reports:** (7 Supplements, National Call for Safe Technology goes into greater depth on this) There are also Air Force, DIA and others.
 - i. <https://ehtrust.org/wp-content/uploads/Naval-MRI-Glaser-Report-1976.pdf>
 - ii. *The Safety of Wireless Technologies: The Scientific View* (2025) links wireless technology with the rise in chronic illness observed since the 1990's when wireless products were introduced. The 1971 Naval Medical Research Institute Reports contain over 7,000 studies on the harmful effects of electromagnetic radiation (EMR) results and explain this rise in health problems.
https://www.researchgate.net/publication/388763046_Safety_of_Wireless_Technologies_The_Scientific_View
2. **1997 Harvard & Boston University: 125 public health scientists MD/PHDs from Harvard and Boston Universities signed a petition in 1997 to stop microwave radiation infrastructures.** (<https://pasafetech.org/resource-files>)
<https://img1.wsimg.com/blobby/go/560ca86e-e802-4adb-8733-b30528eacc28/downloads/1997%20Consensus%20Statement.pdf?ver=1737558669350>
3. **2000 ECOLOG study** – T-Mobile's own research showing neurological problems and cancer at levels about 1 uW/m², today we are exposed to thousands of uW/m². In a home of a Pennsylvanian severely disabled by EMR Syndrome, who has installed substantial, 3rd party tested shielding, RF measurements have been as high as 350 uW/m² when the electric smart meters transmit during the night.
<https://ehtrust.org/wp-content/uploads/ecolog2000.pdf>
4. **Cities of Philadelphia and Boston University FCC Filing (2013):** Concludes with the following:

“The 1999-2000 judicial challenge to the FCC's 1996 rules²³ never reached the issue of “electrosensitivity” as a cognizable disability under the Americans with

Disabilities Act. (“ADA”) Here again, an agency responsible for ADA implementation acknowledges that the impairment may be disabling but has promised merely further inquiry. After more than a decade, that investigation remains unopened.²⁴ The dockets here have been updated with massive additional evidence of the crippling effects of RF radiation on an admitted minority – but a suffering minority – of U.S. citizens.²⁵ The FCC and its sister regulatory agencies share responsibility for adherence to the ADA and should replace promises with serious attention to a serious medical problem. This is one area where the FCC could lead in advice to electrosensitive persons about prudent avoidance.“

<https://img1.wsimg.com/blobby/go/560ca86e-e802-4adb-8733-b30528eacc28/downloads/FCC%2C%20Boston%2C%20Phil%2C%20BBK%20reply%20comments%2C%2011-13%20A.pdf?ver=1737558668155>

5. **National Council on Disability (2023) :** Framework to End Health Disparities of People with Disabilities May 2023, item 10 page 6 discusses the problem and need for help and research:

“Provide mandatory industry guidance, including recommended policies, training and best practices, to address the needs of people disabled by exposure to low level chemical, electromagnetic, and other environmental exposures that preclude access to care and treatment at medical, dental and at other providers offices, hospitals, surgical centers, and other healthcare and healthcare-related facilities, as a result of their use of chemical, fragranced and other scented products, and also as a result of the usage of wireless communications and electrical technologies and other sources of non-ionizing radiation, which may trigger disabling and life-threatening cardiac, respiratory, neurological, and other adverse physical reactions. (Requires administrative action through HHS Office of Civil Rights, and further research concerning this matter should be conducted by the FDA, NIH, HHS, and HUD.)” National Council on Disability (2023). Framework to End Health Disparities of People with Disabilities.

<https://ncd.gov>

6. **US Access Board Indoor Air Quality Report**

“The Board recognizes that multiple chemical sensitivities and electromagnetic sensitivities may be considered disabilities under the ADA if they so severely impair the neurological, respiratory or other functions of an individual that it substantially limits one or more of the individual’s major life activities. The Board plans to closely examine the needs of this population and undertake activities that address accessibility issues for these individuals. IEQ Indoor Environmental Quality (2005). A project of the National Institute of Building Sciences.

<https://www.access-board.gov/research/building/indoor-environmental-quality/#ieq-indoor-environmental-quality-project>

7. **(2021) American Medical Association House of Delegates: Proposed DRAFT resolution 506 (Jun-21)**, introduced by Pennsylvania, which states:

“Whereas Industry propaganda is masking and mitigating the scientific evidence showing concerning biological effect to pulsated microwave and millimeter wave electromagnetic fields (EMF), the type of radiation emitted from all of our wireless devices (cell phones, cell phone towers, WiFi, computers, smart TV, smart meters, Bluetooth, etc); and

Whereas, Most citizens are under the false impression that there are bonafide safety guidelines set forth by the FCC. The safety guidelines, established in 1996 under the leadership of telecommunications lobbyist Tom Wheeler, are ONLY based on an erroneous assumption that microwaves are dangerous when they heat liquids up (so-called “thermal” EMF), much like a microwave oven; and

Whereas, Now there is overwhelming scientific evidence that non-thermal EMFs can cause significant health effects at levels that are orders of magnitudes lower than those allowed by these FCC guidelines; and

Whereas, The data shows that fetuses and children are far more vulnerable to these effects, as they have higher surface to volume ratios, high densities of stem cells, a developing brain, and tissue with greater extracellular water leading to deeper penetration effects; and

Whereas, Based on the 1996 Telecommunications Act, local jurisdictions do not have the right to approve or disprove the placement of cell tower based on safety or health reasons. In the last two years, Verizon and AT&T have tried twice to convince the PA General Assembly to approve a bill that further preempts municipal rights for managing 5G cell towers in the public rights of way; therefore be it

RESOLVED, That our American Medical Association opposes legislation that blocks the public’s right to guard its own safety and health regarding cell tower placement (Directive to Take Action), and be it further

RESOLVED, That our AMA promote ways to reduce radiation exposure from wireless devices, especially for pregnant women and children (wired devices preferable to wireless, shielding, etc.). (Directive to Take Action)”

...” <https://www.ama-assn.org/system/files/2021-05/j21-506.pdf>

The AUTHOR’S STATEMENT OF PRIORITY further stated

“With the pervasiveness of wireless communication in our present-day society, the resolution is concerned with the possible effects of EMF (electromagnetic field) on humans, particularly the more vulnerable such as children and fetuses.

It is felt that the standards for such safety, established in 1996, were biased by lobbyist, and exclusive of other scientific criteria. Furthermore, the telecommunications act of 1996 usurps local jurisdiction on the placement of telecommunication towers.

It is therefore requested that our AMA oppose legislation that may block the public's access to know in these matters and foster shielding of EMF effects from wireless devices."

This resolution was not passed, silencing the problem. Now hospitals use wireless extensively, blocking access for people disabled by EMR Syndrome in contrast to what is specified in the National Council on Disability Framework to Eliminate Disparities in Health. It is stated, on page 19 of the proceedings from this delegation:

"Now, the AMA's historic work on advocacy is really well known, and you'll also be familiar with AMA's innovation ecosystem sculpted over the last decade. In fact, the AMA was named Digital Health and Innovation Nonprofit of the Year for 2020 by an influential group of technology and business leaders. In addition, CB Insights, which provides market analytics to companies and investors, named their top 27 corporate innovation labs in healthcare for 2020. Health2047, our independently operating innovation company in Silicon Valley, ranked second among this distinguished group."

<https://www.ama-assn.org/system/files/j21-call-to-order.pdf>

[Proceedings of the June 2021 Special Meeting of the House of Delegates | American Medical Association](#)

8. **NH State Commission on 5G:** shows the harmful effects of EMR.

<https://gc.nh.gov/statstudcomm/committees/1474/reports/5G%20final%20report.pdf>

9. **EMF Scientist Appeal:** 250 experts from 42 countries have asked the UN to protect the health of humans and the environment from electromagnetic radiation (www.EMFScientist.org). "Smart" meters emit pulses of such electromagnetic radiation, in many cases, every 3 seconds.

10. **The International Appeal to Stop 5G on Earth and in Space**

(<https://www.5gspaceappeal.org>) has now been translated into 30 languages. It has been signed, as of 9/16/2019, by more than 142,000 individuals and more than 1,100 organizations from 207 countries and territories. Signers include:

- i. 3,381 scientists
- ii. 1,913 medical doctors
- iii. 5,848 engineers
- iv. 3,525 psychologists, psychotherapists and social workers
- v. 3,052 nurses
- vi. beekeepers are a new category

11. The Baby Safe Project - (www.babysafeproject.org)

Hugh Taylor MD, Yale University: 258 physicians, scientists, and educators have signed the Joint Statement on Pregnancy and Wireless Radiation urging the protection of pregnant women and their unborn babies from harm.

12. Swisscom AG patent filed 2003

“When ... human blood cells are irradiated with electromagnetic fields, clear damage to hereditary material has been demonstrated and there have been indications of an increased cancer risk ... These findings indicate that the genotoxic effect of electromagnetic radiation is elicited via a non-thermal pathway.”

[https://www.dropbox.com/scl/fi/2y22tamnj0kpugqbxovv1/SwissCom-Patent-application-2003-2004-WO2004075583A1-1-1-1.pdf?rlkey=0by3avch16qhi2yg3rs01t7ve&e=1&dl=0](https://www.dropbox.com/scl/fi/2y22tamnj0kpugqbxovv1/SwissCom-Patent-application-2003-2004-WO2004075583A1-1-1.pdf?rlkey=0by3avch16qhi2yg3rs01t7ve&e=1&dl=0)

13. National Call For Safe Technology – A platform for change by joining together groups from across the US, Europe, and Canada. They have acquired sign-ons from 60 to 100+ groups and individuals, thousands of people, to more than a dozen federal submissions to various government agencies.

Biological Hazards of Wireless Radiation – Executive Summary

“The FCC’s standards for wireless radiation were established back in 1996, and have not been reviewed, updated or verified despite significant changes in the wireless technology in use today. The FCC’s standards relate solely to wireless radiation’s thermal impacts on a body (e.g. how the body reacts to being heated), and do not consider other known adverse biological impacts of non-thermal levels of RF radiation (such as damage to DNA or other changes to cells). The FCC’s limits were established long before the existence of 2G, 3G, 4G, or 5G technology. Congress eliminated the EPA’s funding for electromagnetic research in 1996, knee capping the EPA from studying biological impacts of RF radiation for nearly 30 years. At the very least, the FCC’s standards should be reconsidered (FCC is under federal court order to do so but has not) given current technology. Wireless radiation, also referred to as radio frequency (RF) radiation, produces biological effects, and evidence of its hazards are clear and convincing, yet the hazards are not generally

publicized, and the hazards are unnecessary to reap the benefits of wireless technology.”

<https://thenationalcall.org/resources-2/>