

Wireless frequencies, radio frequency (RF) radiation and electromagnetic frequencies have been allowed to proliferate in our environment with little regard for health and environmental safety.

A growing number of the US population are experiencing debilitation due to the manmade radio frequency radiation and electromagnetic fields in our environment.

The guidelines for public exposure for microwave radiation has essentially not changed in the U.S. since the 1960s? Did you know that exposure limits (“recommendations” set by the FCC) only relate to *heating* effects due to microwave radiation and fail to acknowledge >10,000 independent studies describing **adverse effects** from microwave radiation, including mechanisms of action [1 - 23]. Finally, did you know that Washington State Prof. Martin Pall, world renowned biochemist and expert of microwave effects on cells and organisms, recently stated directly to NIH, “Putting in tens of millions of 5G antennae without a single biological test of safety has got to be about the stupidest idea anyone has had in the history of the world”? <https://youtu.be/kBsUWbUB6PE>

Why is the FCC allowing multiple towers and antennae to be placed next to schools, daycares, hospitals, parks, and homes that far exceed the power necessary to make “five-bar” cellular connections?

Radiofrequency Electromagnetic Microwave Radiation Exposures

We are constantly bombarded with pulsed, data-modulated, Radiofrequency Electromagnetic Microwave Radiation (RF-EMR) exposures due to the proliferation of cellular wireless, radio and television signals. The emergence of densified 4G/5G will exponentially increase these RF-EMR exposures, resulting in scientifically-established melatonin-suppression, immuno-suppression, immediate and direct neurological damages and acceleration of the growth of cancerous tumors. (In the table, below, $\mu\text{W}/\text{m}^2$ is millionths of a Watt spread over a one-square-meter area and **x** is a multiplier).

Power Output Scale	Consequences on Human Health (based on thousands of published studies)	$\mu\text{W}/\text{m}^2$
0.0005x	EEG altered in humans; alters brain waves	0.000001
1	FIVE BARS ON CELL PHONE	0.002
15,000x	Sleep disorders, weakness, fatigue, pain	30
50,000x	Human sensation	100
500,000x	Decreased cell growth, humans	1,000
600,000x	Childhood leukemia	1,200
1,250,000x	Impaired motor function, reaction time, memory, attention	2,500
3,750,000x	Altered white blood cells, humans	7,500
5,000,000x	Headache, dizziness, fatigue, weakness, insomnia, humans	10,000
15,000,000x	Microwave hearing	30,000
25,000,000x	Leukemia, skin, melanoma, bladder cancer	50,000
50,000,000x	Impaired memory, visual reaction time, humans	100,000
5,000,000,000x	FCC Maximum Permissible RF-EMR Exposure Guidelines, General Pop.	10,000,000

Conclusion: The measurements above explain why **close proximity** to the proposed million+ of microwave cell towers for the U.S. would be hazardous to the health of U.S. citizens. We need only **0.002 $\mu\text{W}/\text{M}^2$ (-85 dBm)** of RF microwave radiation for wireless telecommunications service. A locality can, therefore, set a **maximum output limit** from all frequencies/ antennas from Wireless Telecommunications Facilities (WTFs) in the public rights-of-way or in close proximity to where people live, sleep and heal at **0.1 Watt of Effective Radiated Power (ERP)** because that provides -85 dBm signal strength at a ½-mile down the street, with five bars on a cell phone and the **capacity needed** for everyone to make a call.

A typical WTF in the public rights-of-way outputs Effective Radiated Power at 1,500-7,500 watts ERP, which is between 15,000 and 75,000 times more power than is necessary to make “five-bar” cellular connections.

The above information is from: "Radiofrequency Electromagnetic Microwave Radiation Exposures." *Scientists for Wired Technology*, <https://scientists4wiredtech.com/>. Accessed 15 Oct. 2026.

Below are multiple references that demonstrate the harmful effects of manmade RF radiation and electromagnetic frequencies.

- [1] [Army](#) (Friedman 2006, 20 pages): Bioeffects of Selected Non Lethal Weapons <https://tinyurl.com/udbkh8j>
- [2] [Army](#) (Adams and Williams 1976, 35 pages): Biological Effects of Electromagnetic Radiation and Microwaves--Eurasian Communist Countries <https://tinyurl.com/tuclavh>
- [3] [Naval Medical Research Institute](#) (Z Glaser, 1971, 106 pages). Bibliography of >2000 papers Reporting Biological Phenomena ("Effect") and Clinical Manifestations Attributed to Microwave and Radio-Frequency Radiation <https://apps.dtic.mil/docs/citations/AD0750271>
- [4] [Naval Medical Research Institute](#) (Z Glaser and Brown, 1976, 172 pages). Bibliography of biological phenomena {Effects'} and clinical manifestations attributed to microwave and radio-frequency radiation: compilation and integration of report and seven supplements. <https://ehtrust.org/wp-content/uploads/Naval-MRI-Glaser-Report-1976.pdf>
- [5] [Airforce](#) (Bolen, 1994, 32 Pages, House Report). Radiofrequency/**Microwave Radiation Effects and Safety Standards**: A Review <https://apps.dtic.mil/dtic/tr/fulltext/u2/a282886.pdf>
- [6] [NASA](#) (I.R. Petrov 1970, 229 pp). Influence of **Microwave Radiation on the Organism of Man & Animals** https://www.orsaa.org/uploads/6/7/7/9/67791943/influence_of_microwave_radiation_on_the_organism_of_man_and_animals.pdf
- [7] [NASA](#) (Raines 1981, 125 pages). Electromagnetic field **interactions with the human body**: observed effects and theories. <https://ntrs.nasa.gov/archive/nasa/casi.ntrs.nasa.gov/19810017132.pdf>
- [8] [CIA](#) (Vrachebnoye 1977/2012, 4 pages). **Biological effects** of millimeter radiowaves. <https://tinyurl.com/wfokpt5>
- [9] [CIA](#) (Guo, 1977, 68 pages) Translations on USSR Science and Technology Biomedical Sciences **Effects of Nonionizing Electromagnetic Radiation** <https://www.cia.gov/library/readingroom/docs/CIA-RDP88B01125R000300120005-6.pdf>
- [10] [EPA](#) (Elder and Cahill, 1984, 278 pages) Biological Effects of Radiofrequency Radiation (includes mechanisms) <https://tinyurl.com/reofn8v>
- [11] [DOD](#) (1978, Burner, 46 pages). Biological Effects of Microwaves: Future Research Directions. 1968 Symposium on Microwave Power. International Power Institute. <https://www.worldcat.org/title/biological-effects-of-microwaves-future-research-directions/oclc/434113>
- [12] [Ford Foundation](#) (Bergman, 1965, 82 pages). "Effect of Microwaves on The Central Nervous System." https://www.usa-anti-communist.com/pdf/Effect_of_Microwaves_on_The_Central_Nervous_System_Ford_1965.pdf
- [13] [WHO](#) (Warsaw, 1973). Biologic Effects and Health Hazards of Microwave Radiation. Compilation of papers from international conference in Warsaw on Health Effects of Microwaves. Top 60 scientists report findings of low-level microwave exposure on human and animals. <https://www.emfoff.com/symposium/>
- [14] [NIH](#) (National Toxicology Program, 2018) Cell Phone Radiofrequency Radiation Study. **Largest study (\$30 Million) ever on biological effects of cell phone radiation.** Toxicology and carcinogenesis studies in B6C3F1/N **mice** exposed to whole-body radio frequency radiation at a frequency (1,900 MHz) and modulations (GSM and CDMA) used by cell phones

https://ntp.niehs.nih.gov/ntp/htdocs/lt_rpts/tr596_508.pdf

[15] NIH (National Toxicology Program, 2018)

Toxicology and carcinogenesis studies in Sprague Dawley SD **rats** exposed to whole-body radio frequency radiation at a frequency (900 MHz) and modulations (GSM and CDMA) used by cell phones

https://ntp.niehs.nih.gov/ntp/about_ntp/trpanel/2018/march/tr595peerdraft.pdf

[16] NIH (National Toxicology Program) 2020

Evaluation of the **genotoxicity** of cell phone radiofrequency radiation in male and female rats and mice following subchronic exposure.

<https://onlinelibrary.wiley.com/doi/epdf/10.1002/em.22343>

[17] Ramazzini Institute (2018). World's largest animal study on cell tower radiation confirms cancer link

<https://ehtrust.org/worlds-largest-animal-study-on-cell-tower-radiation-confirms-cancer-link/>

[18] [Toxicology Letters](#) (2020). **Adverse health effects** of 5G mobile networking technology under real-life conditions.

<https://iervn.files.wordpress.com/2020/02/adverse-health-effects-of-5g-mobile-networking-technology-under-real-life-conditions.pdf>

[19] IEEE (2020) Electromagnetic Radiation due to Cellular, Wi-Fi and Bluetooth technologies: **How safe are we?**

<https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=9016183> Note: IEEE retracted article without explanation

[20] IEEE (2015) The Human Body and mm-Wave Wireless Communication Systems: Interactions and Implications

<https://arxiv.org/ftp/arxiv/papers/1503/1503.05944.pdf>

[21] NIH (1974, McRee, 7 pages). Biological Effects of Microwave Radiation.

<https://www.tandfonline.com/doi/pdf/10.1080/00022470.1974.10469899>

[22] In: D. Clements-Croome (Ed.). 2004. Electromagnetic Environments and Health in Buildings. Spon Press, London, 535 pp. Chapter 10: Biological Effects of Low Frequency Electromagnetic Fields by Magda Havas

[23] What Is Making People Near Data Centers Sick (and What Could Fix It) by A Midwestern Doctor

Recommended Links: Harmful effects of low power microwave radiation (including 4G & 5G)

Sharon Goldberg, MD: Testimony at Michigan Legislature [14 min]: <https://www.youtube.com/watch?v=CK0AliMe-KA>

Paul Heroux, PhD: Testimony at Michigan Legislature [8 min]: https://youtu.be/2Jl7-9_FRYc
Department of Epidemiology, Biostatistics, and Occupational Health, Miguel University

Martin Blank, PhD. Columbia University, Physiology and Cellular Biophysics.

Public appeal regarding low-level microwave radiation: <https://vimeo.com/123468632>

Blank M, R Goodman. 2009 Electromagnetic fields stress living cells. *Pathophysiology*. 16:71-78 (2009)

Dr. Nicholas Gonzalez, MD. Renowned New York City Physician

Health Risks from Electromagnetic Fields. <https://vimeo.com/142196113>

Frank Clegg, ex-President of Microsoft Canada: Wireless Tech Forum Making Technology Safe [10 min]

<https://www.youtube.com/watch?v=S6BYly7Fr1U>

Dr. Devra Davis, PhD. What Brain and Sperm Share and Why Care. TEDxJacksonHole [15 min]

https://www.youtube.com/watch?v=Pm5Oc5s4_8M

Dr. Devra Davis, PhD (Nov. 19, 2019). 5G Health Effects: University of California San Francisco [40 min]
https://www.youtube.com/watch?v=nmp_OTT05Tw

Health Effects of EMF Radiation – Prof. Olle Johansson, PhD (renowned expert in microwaves, biology, and medicine)
<https://youtu.be/lvN6zE6XNmM>

Dafna Tachover, Attorney and Founder of We Are The Evidence. Testifies in Opposition to 5G in MI [45 min]. <https://www.youtube.com/watch?v=e6JMjyXre3U>
Renowned Professor Martin Pall, PhD (Biochemistry, WSU) warning to NIH and CDC (2019):
<https://youtu.be/kBsUWbUB6PE>

City Council (Maui County, 2019): Overview of problems with 5G for laymen 11/6/19 [20 min]
<https://youtu.be/MeE7xLuff2k?t=504>

John Kitson (Candidate for MP in UK) at 5G UKIP Conference [25 min]
<https://youtu.be/8SyTaoyuMPQ>

Sharon Goldberg, MD: One-on-One Interview (health concerns + 5G). <https://youtu.be/1Qt5B39LB7c> [60 min]

Russell Witte, PhD (Prof of Medical Imaging, University of Arizona). The **Body Electric and Microwave Radiation**.

<https://www.youtube.com/watch?v=qN6CEs0krKM>

A Rationale for Biologically-based Public Exposure Standards for Electromagnetic Fields
<https://bioinitiative.org/>

Scientific Research On Wireless Health Effects: Peer Reviewed Scientific Research On Wireless Radiation

<https://ehtrust.org/science/>

<https://ehtrust.org/key-issues/cell-phoneswireless/5g-internet-everything/20-quick-facts-what-you-need-to-know-about-5g-wireless-and-small-cells/>

Physicians for Safe Technology: Health Effects of Digital Technology

<https://mdsafetech.org/conversion-and-exposure-limits-emr-emf/>

5G: Compelling Evidence for 8 Distinct Types of Harm Caused by EMF Exposures and Mechanism that Causes Them

Martin L. Pall, PhD, Professor Emeritus of Biochemistry and Basic Medical Sciences, Washington State University

<https://www.ehtrust.org/wp-content/uploads/5g-emf-hazards-dr-martin-l.-pall-eu-emf2018-6-11us3.pdf>

Martin L. Pall, PhD, Professor Emeritus of Biochemistry and Basic Medical Sciences, Washington State University

Non-thermal Effects of Microwave EMFs <https://www.ehtrust.org/wp-content/uploads/142-Reviews-Pall-PhD.pdf>

Professor University College Cork (2019). On the Clear Evidence of the Risks to Children from Smartphone and WiFi Radio Frequency Radiation. <https://tinyurl.com/wwb4ymo>

Search Engine for microwave radiation studies (>35,000, most peer-reviewed): <https://www.emf-portal.org/en>

We do not need more studies to prove harm. We need the FCC to do its job to protect Americans from harmful, life destroying manmade frequencies. Fiber optics, rather than radio

frequency radiation can provide both cellular and internet connection. The data centers that are supposedly supporting the AI that require wireless frequencies for function can be located in remote, cold areas. Why are they being placed in small towns next to homes?

Why isn't the FCC protecting the American people and especially our children from the proven harmful effects of RF radiation and electromagnetic frequencies?