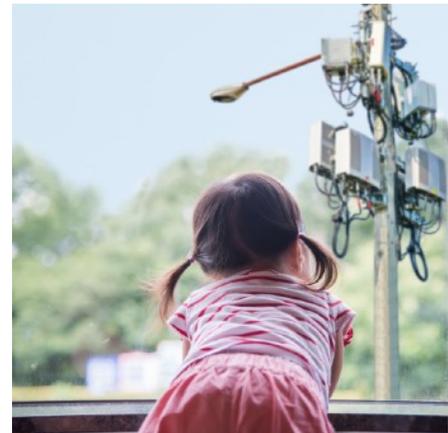


# 5G Technology vs. Science and Freedom of Choice



5G is the latest generation of wireless technology utilizing radiofrequency (RF) radiation. It adds higher frequencies in the millimeter and sub-millimeter range to transmit large amounts of data, but it works best over short distances, requiring close proximity to users and a dense deployment of small cell antennas in neighborhoods across America.

- Human exposure guidelines for RF radiation used by the Federal Communications Commission (FCC) are more than 25 years old and address the thermal effects (heating of tissue), not other biological effects at non-thermal levels which have now been firmly established. The guidelines have been under intense scrutiny by the research community, and the subject of several lawsuits, with no resolution, creating an uncertain regulatory environment.
- Over the last 20 years a robust body of independent science has emerged, showing significant biological impacts, including cancer, neurological and cognitive harm, heart abnormalities, reproductive effects and microwave sickness among other serious health problems. Populations especially at risk include pregnant women, children, the elderly, individuals with implanted medical devices, and those with cardiac or neurological problems.\*
- More than 250 medical and public health professionals have signed the International EMF Scientists Appeal, urging government officials to consider the latest science on RF radiation and human health and harm to animals and plants.
- Freedom of choice is a fundamental American value. The FCC and the telecom industry should not force American citizens to endure involuntary exposure to powerful RF radiation 24/7 in their own homes or apartments.
- Major insurance companies have refused to insure telecoms against losses from personal liability claims related to exposure to RF radiation. Swiss Re, the second-largest reinsurance company in the world, has classified 5G as a “high impact” liability risk due to potential adverse health impacts.
- Local governments across the country are busy strengthening their municipal codes to protect their communities. Many are rejecting applications for 5G “small cell” antenna installations near homes and schools on the basis of aesthetics, safety, privacy, property values, security, lack of insurance and a failure by applicants to prove a significant gap in personal wireless service coverage.



*Children are especially vulnerable to wireless radiation*

Revised 5-22

\*A digest of recent independent scientific studies documenting biological harm from exposure to RF radiation can be found at [www.AmericansForResponsibleTech.org/scientific-studies](http://www.AmericansForResponsibleTech.org/scientific-studies)

**The notion that exposure to radiofrequency (RF) radiation is not harmful to humans, which has been the underlying principle of all federal legislation and regulations regarding wireless technologies for more than twenty five years, has now been proven false.**

---

**Recent and Significant Health Studies on RF Radiation\***

**The National Institutes of Health (NIH) study.** This \$30 million-dollar study, conducted by the National Toxicology Program (NTP) of the NIH, was designed to determine whether exposure to RF radiation emitted by cell phones and other wireless devices could cause cancer. A review of the data by independent experts showed that the causal relationship was much stronger than previously thought. Despite industry spin, experts have labeled this study as "clear evidence" of the link between RF radiation and carcinogenicity.

**The Ramazzini Institute Study.** This study found that lab animals exposed to RF radiation emitted by distant cell towers had a greater chance of developing heart tumors than those that were not exposed. This study, funded in part by the U.S. government, was the first large-scale study to show clear evidence of cancer risk from far-field exposures.

**Yale University researchers** led by Dr. Hugh Taylor, Chair of the Department of Obstetrics, Gynecology and Reproductive Sciences, conducted a groundbreaking study (Aldad, *et. al*, 2012) where they found that pregnant laboratory mice exposed to ordinary cell phone radiation produced offspring that were more hyperactive and had poorer memories compared to a control group that was not exposed. They concluded that cell phone radiation had damaged neurons in the prefrontal cortex of the brain.

**An article published in Pub Med** titled "*Risks to Health and Well Being from Radiofrequency Radiation emitted by Cell Phones and Other Wireless Devices*" (Miller, et al, 2019) urged the World Health Organization to re-evaluate and upgrade its classification of the human carcinogenicity of RF radiation and implored governments, public health authorities and physicians/allied health professionals to support measures to reduce all exposures to RF radiation.

**Reproductive Health Studies.** Several recent studies have been conducted to investigate the direct influence of RF radiation on sperm. The conclusion of virtually all independent studies is that men who carried their phones in a pocket or on the belt were more likely to have lower sperm counts and/or more inactive or less mobile sperm. These findings corroborate similar results in laboratory animals.



This document was produced for Americans for Responsible Technology  
by Grassroots Communications, Inc. a non-profit organization.  
A Tool Kit with this and other documents is available at [AmericansForResponsibleTech.org](http://AmericansForResponsibleTech.org)