

5G Technology vs. Science and Freedom of Choice



5G is the next generation of wireless technology. It uses new types of radio-frequency (RF) microwave radiation to transmit large amounts of data, but it works best over short distances, requiring closer proximity to users and the dense deployment of antennas.

The rollout of 5G will mean the deployment of a vast new network of antennas in neighborhoods all across America.

- Human exposure guidelines for RF microwave radiation used by the FCC are more than twenty years old, and address only **thermal, not biological** impacts of exposure, which have now been firmly established. The guidelines have been the subject of an open FCC docket since 2013 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 from exposure to RF microwave radiation, including “clear evidence” of 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, or cardiac or neurological problems.
- More than **250 medical and public health professionals** have signed a joint statement urging government officials to consider the latest science on microwave radiation and human health, especially as it may be resulting in **abnormal brain development in unborn children**.
- **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 wireless radiation 24/7 in their own homes.
- **Installing 5G antennas in residential areas is not required for public safety or national security.** The real purpose of the 5G rollout is to allow telecom companies to compete with cable companies to stream video, and to a lesser extent, to increase the capacity of “smart devices” and enable the “Internet of Things” (IOT). **5G is not a regulated public utility.**



Children are especially at risk from wireless radiation

* A complete Digest of Independent Science on Public Health Concerns Regarding Wireless Radiation is available at <http://grassrootsinfo.org/emergingscience.php>.

The notion that exposure to radio-frequency microwave 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 years, has now been proven false.

Recent and Significant Health Studies on Wireless Microwave Radiation*

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

The Ramazzini Institute Study. This study found that lab animals exposed to the radio-frequency radiation emitted by distant cell towers had a greater chance of developing heart tumors than those which 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.

Cancer Epidemiology Update. This recent (September, 2018) study shows that the current scientific evidence supports the conclusion that RF microwave radiation is a proven cause of cancer. The paper reviews animal experimental evidence and human epidemiology studies (case-control, cohort, time trend and case studies) published after the World Health Organization's International Agency for Research on Cancer (IARC) categorized RF microwave radiation as a possible human carcinogen (Group 2B) in 2011.

Reproductive Health Studies. Several recent studies have been conducted to investigate the direct influence of electromagnetic 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.

* A Digest of Independent Science on Public Health Concerns Regarding Wireless Radiation, containing hundreds of peer-reviewed, published studies like these, is available at <http://grassrootsinfo.org/emergingscience.php>.



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