

Cell Tower Removed From Schoolyard Due to Cluster of Cancer Cases

CBS News <https://www.youtube.com/watch?v=psDrvMwbq48>

Written by [Dr. Joseph Mercola Fact Checked](#)

Story at-a-glance

- A cluster of cancer cases among young children at Weston Elementary School in Ripon, California, led to the shutdown and planned relocation of a Sprint cell tower
- The FCC revised its rules relating to the rollout of 5G technology in September 2018, limiting cities' rights to control the placement of 5G antennas
- Los Angeles and other cities sued to overturn the FCC's new rules, but January 10, 2019, the U.S. Court of Appeals for the Tenth Circuit sided with the FCC, which means citizens will not be able to prevent installation of 5G cell bases outside their homes
- 5G technology relies primarily on the bandwidth of the millimeter wave (MMW), which is primarily between 30 gigahertz (GHz) and 300GHz, known to penetrate 1 to 2 millimeters of human skin tissue
- MMW has been linked to a number of potential health problems, including eye damage, impacted heart rate variability (an indicator of stress), arrhythmias, pain, suppressed immune function, and depressed growth and increased antibiotic resistance in bacteria

A cluster of cancer cases among young children at Weston Elementary School in Ripon, California, has reignited the conversation about whether electromagnetic field (EMF) radiation from cell towers might be a contributing factor.¹ In 2016, at the age of 10, Kyle Prime was diagnosed with kidney cancer. Five months later, his classmate, Mason Ferrulli, was diagnosed with brain cancer.

This year, two more children at the school have received cancer diagnoses. Three teachers have also been diagnosed with various forms of cancer since 2016, along with two preschool-age children that live near the school, and a former student, who was diagnosed with brain cancer at the age of 22.^{2,3}

The parents of Prime and Ferrulli believe the Sprint cellphone tower located on campus might have played a role, even though tests reveal it's functioning normally and emitting radiation below the government standard.

"It is classified as a possible carcinogen.⁴ That tells us that there is some evidence out there. We're not naive to the fact that there could be other components out there — other environmental influences... the bottom line that we feel in regards to this tower is it doesn't belong there... if there's any indications that its unsafe," Monica Ferrulli told CBS News.⁵

Cellphone Radiation Safety Guidelines Are Outdated

Indeed, for those of you who are familiar with the health effects of EMFs and the way the government safety standards are set, such results are little proof of safety.

As noted by Joel Moskowitz, director of the Center for Family and Community Health at UC Berkeley (an area that has taken a stricter stance on EMF awareness and safety), the U.S. Federal Communications Commission's (FCC) "guidelines for cellphone radiation adopted in 1996 are outdated and were mostly based on work done by industry-paid scientists."⁶

Fortunately, while Sprint adamantly denies any possibility of harm to the community, the company has turned the tower off and says it will move the tower to another location. On the downside, any respite the area might get from this action is likely to be temporary, as the nationwide rollout of 5G draws near.⁷

5G Rollout Will Exponentially Increase EMF Exposures

Whether EMF can cause serious adverse effects is a question that is only going to grow stronger over time, especially in light of the [5G rollout](#). As noted in the *The Modesto Bee*:⁸

"Ripon and many other cities are preparing for the wireless industry's conversion to 5G technology, designed to provide highspeed Internet service for smartphones. The rollout involves the installation of hundreds, if not thousands, of 'small cell' devices that will expose people to radiofrequency waves in cities.

Because the 5G technology for wireless carriers will use 'millimeter' waves that travel short distances, around 200 small cell antennas may be needed in a city of Ripon's size, while the estimate for San Jose is more than 4,000."

What's worse, the FCC revised its rules relating to the rollout of 5G technology in September 2018, limiting cities' rights to control the placement of 5G antennas. Los Angeles and other cities sued to overturn the FCC's new rules, but January 10, 2019, the U.S. Court of Appeals for the Tenth Circuit sided with the FCC.⁹ In an email to [Governor.com](http://www.governor.gov), Brian Namey, a spokesperson for the National Association of Counties, said:¹⁰

"We are concerned that the FCC's ruling overlooks community decision-making and significantly impedes counties' ability to ensure public safety and well-being. We share the FCC's goal of expanding broadband access for every American; however, a one-size-fits-all approach will not achieve that goal."

What You Need to Know About 5G

https://www.youtube.com/watch?v=GEx_d0SjvS0

Unlike the 4G technology currently in use, which relies on 90-foot cell towers with about a dozen antenna ports on each, the 5G system uses "small cell" facilities or bases, each with about 100 antenna ports.¹¹ These cell bases will be mounted to already existing infrastructure such as utility poles.

Ultimately, many if not most homeowners can expect to end up with a 5G cell base mounted right outside or very near their home. Workplaces and educational institutions will also be saturated with MMWs.

Once installed in your neighborhood, you won't have a choice to opt out of continuous 5G exposure, and research compiled by EMF coach and author Lloyd Burrell¹² and others^{13,14} suggests the proliferation of 5G could turn into nothing short of a public health disaster.

Seeing how many are already struggling with [electromagnetic hypersensitivity](#), saturating cities and suburban areas with MMW radiation will undoubtedly worsen their plight, and add many new sufferers.

5G (5th Generation) technology relies primarily on the bandwidth of the millimeter wave (MMW), which is primarily between 30 gigahertz (GHz) and 300GHz.¹⁵ The MMW is known to penetrate 1 to 2 millimeters of human skin tissue^{16,17} and has been linked to a number of potential health problems, including:^{18,19,20,21,22}

Eye problems such as lens opacity in rats, which is linked to the production of cataracts,²³ and eye damage in rabbits^{24,25}

Impacted heart rate variability, an indicator of stress, in rats^{26,27,28} and heart rate changes (arrhythmias) in frogs^{29,30}

Pain³¹ — MMW is actually what's used in crowd control weapons (Active Denial Systems) by the U.S. Department of Defense, as it has the ability to cause a severe burning sensation³²

Suppressed immune function³³

Depressed growth and increased antibiotic resistance in bacteria³⁴

Doctors and Scientists Warn of 5G Hazards and Urge Caution

While MMWs have not been widely used before, it's already been suggested that sweat ducts in human skin act as antennae when they come in contact with MMWs.³⁵ In a 2016 letter to the FCC, Dr. Yael Stein

of the Hadassah Medical Center in Jerusalem, Israel, who has studied 5G MMW technology and its interaction with the human body, writes:³⁶

"Computer simulations have demonstrated that sweat glands concentrate sub-terahertz waves in human skin. Humans could sense these waves as heat. The use of sub-terahertz (millimeter wave) communications technology (cellphones, Wi-Fi, antennas) could cause humans to percept physical pain via nociceptors.

Potentially, if G5 Wi-Fi is spread in the public domain we may expect more of the health effects currently seen with RF/ microwave frequencies including many more cases of hypersensitivity (EHS), as well as many new complaints of physical pain and a yet unknown variety of neurologic disturbances.

It will be possible to show a causal relationship between G5 technology and these specific health effects. The affected individuals may be eligible for compensation ... Respected members of the FCC and U.S. Senate Committees, please protect Public Health and vote against exposure of the public to harmful G5 technology."

In 2015, 247 scientists engaged in the study of biological and health effects of nonionizing EMFs across the world signed an international appeal to the United Nations,³⁷ calling for protection from nonionizing EMF exposure due to evidence of health effects even at low levels.

Two years later, in 2017, more than 180 doctors and scientists from 35 countries signed a petition³⁸ to enact a moratorium on the rollout of 5G due to the potential risks to wildlife and human health.

20 Facts About 5G

Potential Risks to Human Health from Future Sub-MM Communication Systems: Paul Ben-Ishai, PhD

https://www.youtube.com/watch?time_continue=2&v=VuVtGldYXK4

In this video, Paul Ben Ishai, Ph.D., a senior lecturer with the department of physics at Ariel University in Israel, reviews the potential risks to human health from sub-MM communication systems. The Environmental Health Trust has also published a list³⁹ of 20 facts you need to know about 5G wireless. These include:

5G coverage requires "small cell" antennas to be placed in neighborhoods everywhere.

Millions of small cells must be built into people's front yards.

The radiation from 5G small cells is not minor, and will increase [EMF radiation](#) near homes, causing aesthetic deterioration of the environment in addition to health risks.

5G will not replace current [wireless technology](#) but add to it, increasing exposure exponentially.

Community authority is being overruled at every level of government in the name of boosting cellphone coverage and internet speeds.

Cellphone companies have confirmed that 5G small cells will work at a distance of 3,000 feet and do not need to be placed every 100 feet, necessitating them being placed near homes.

Scientists worldwide are calling for a halt to the rollout of 5G.

Cumulative daily radiation exposure is associated with serious health effects, including cancer,^{40,41} altered brain development in children and reproductive damage in men.

Indeed, thousands of studies showing biological effects from low-intensity EMF, including over 1,800 referenced in the report's conclusion, were summarized in the BioInitiative Report⁴² (2007 and 2012), demonstrating immune system effects, neurological effects, cognitive effects and much more. Another important study,⁴³ funded by the U.S. government, was published in the Journal of the American Medical Association in 2011.

Using a positron emission tomography or PET scan capable of detecting alterations in glucose, the researchers determined that cellphone radiation triggers your brain cells to metabolize glucose at an increased rate.

Glucose metabolism equates to cell activation, so the findings indicate that radiation from your cellphone has a well-defined measurable influence on your brain. Essentially, each time you put a cellphone up to your ear, you're artificially activating your brain cells.

Multiple papers have concluded wireless radiation is a human carcinogen; the International Agency for Research on Cancer classified cellphones as a Group 2B "possible carcinogen" in 2011,⁴⁴ and two recent studies (one by the U.S. National Toxicology Program (NTP)⁴⁵ and one by the Ramazzini Institute in Italy⁴⁶) confirm its carcinogenic potential.

The NTP study found heart tumors (malignant schwannomas) in male rats, "similar to acoustic neuromas, a benign tumor in people involving the nerve that connects the ear to the brain, which some studies have linked to cellphone use."

According to experts, 5G small cell wireless streaming bills do not make financial sense.

Antennas near homes also decrease property values.

Microwave antennas in front yards pose several worker and public safety hazards.

Wireless companies warn investors of risks, but do not inform people living near cellphone towers.

Antennas near homes will cause a deterioration of sleep for the occupants, resulting in decreased performance and health.

Cellphone radiation has been shown to have an adverse impact on birds, bees, trees and plants.

Many U.S. cities and entire countries are voting to halt 5G.

The Federal Communications Commission does not monitor radiation exposures from cell installations and many cell towers already violate radiation limits.

The International Association of Firefighters officially oppose cell towers on fire stations, and have done so since 2004, after research showed firefighters with antennas on their stations suffered neurological damage, including memory problems, intermittent confusion and feelings of weakness.⁴⁷

The American Academy of Pediatrics and many other medical organizations are calling for federal action to protect children from EMF exposures, citing research showing that living near mobile phone base stations is associated with an increased risk for headaches, memory problems, dizziness, depression and sleep disturbances.

Research⁴⁸ by Martin Pall, Ph.D., published in 2016 detail how, when VGCCs are activated in the brain, they release neurotransmitters and neuroendocrine hormones. Hence, consequences of chronic EMF exposure to the brain also include anxiety, depression, autism and Alzheimer's.

Preliminary results from the largest long-term study^{49,50,51} of brain development and youth health in the U.S., the Adolescent Brain Cognitive Development (ABCD) Study,⁵² also reveals the brains of the most prolific users of [electronic devices](#) look different compared to those who use smartphones, tablets and video games less frequently.

Children who use electronic devices for seven hours or more each day have premature thinning of the brain cortex, the outer brain layer that processes information from the five physical senses (taste, touch, sight, smell and sound). As little as two hours of screen time per day may impact cognition, resulting in lower scores on thinking and language tests.

Fiber optic connections is the solution and the safe alternative to boost internet speed and reliability.

Learn More About the Health Risks of 5G

You can download a two-page fact sheet⁵³ on 5G from the Environmental Health Trust. On their website, you can also access a long list of published scientific studies showing cause for concern.⁵⁴

In "5G Wireless Telecommunications Expansion: Public Health and Environmental Implications," published in Environmental Research in August 2018, Dr. Cindy Russell, executive director of Physicians for Safe Technology,⁵⁵ writes:⁵⁶

"Like other common toxic exposures, the effects of radiofrequency electromagnetic radiation (RF EMR) will be problematic if not impossible to sort out epidemiologically as there no longer remains an unexposed control group.

This is especially important considering these effects are likely magnified by synergistic toxic exposures and other common health risk behaviors. Effects can also be nonlinear.

Because this is the first generation to have cradle-to-grave life span exposure to this level of man-made microwave (RF EMR) radiofrequencies, it will be years or decades before the true health consequences are known. Precaution in the roll out of this new technology is strongly indicated."

Health Effects of EMF Exposure in General

Even without the addition of 5G, most people are already living in a proverbial sea of microwave radiation, and there's ample evidence suggesting this unnatural level of exposure is harming our health. For example, research has shown EMFs from cellphones, laptops, tablets, Wi-Fi, [smart meters](#), baby monitors and other wireless devices.⁵⁷

Create excess oxidative stress — EMFs activate voltage gated calcium channels located in the outer membrane of your cells.^{58,59,60,61,62} Once activated, the VGCCs allow an abnormal influx of calcium ions into the cell. The excess calcium triggers a chemical cascade that results in the creation of peroxynitrite, extremely potent oxidant stressors believed to be a root cause for many of today's chronic diseases.

Inside your body, peroxynitrite modifies tyrosine molecules in proteins to create a new substance, nitrotyrosine and nitration of structural protein.⁶³ Changes from nitration are visible in human biopsy of atherosclerosis, myocardial ischemia, [inflammatory bowel disease](#), amyotrophic lateral sclerosis and septic lung disease.⁶⁴ Over time, the cellular and mitochondrial damage being generated can set the stage and contribute to any number of health problems, including cancer.

Open the blood-brain barrier, allowing toxins to enter your brain.

Fragment DNA — Studies have shown EMFs cause DNA fragmentation. Significant oxidative stress from peroxynitrites may also result in single-strand breaks of DNA.⁶⁵

Damage mitochondria, and impair proton flow and ATP production — The enzyme ATP synthase — which passes currents of protons through a water channel, similar to current passing through a wire — generates energy in the form ATP from ADP, using this flow of protons.

Magnetic fields can change the transparency of the water channel to protons, thereby reducing the current. As a result, you get less ATP, which can have system wide consequences, from promoting chronic disease and infertility to lowering intelligence.

Alter cellular function due to excessive charge — In a previous interview, Alasdair Philips, founder of the Powerwatch,⁶⁶ explained how [EMF exposure](#) alters cellular function by way of excessive charges. Essentially, the cell functions as a gel, held together by electric charge. When the charge becomes excessive due to a massive influx of electrons, the function of the cell is disrupted.

Raise the risk for abnormal cell growth and cancer, including leukemia and cancer of the brain, acoustic nerve, salivary gland, eyes, testes, thyroid and breast — As early as 2011, the evidence was strong enough for the International Agency for Research on Cancer, the cancer research arm of the World Health Organization, to declare cellphones a Group 2B "possible carcinogen."⁶⁷

Since then, a number of studies have found support for EMF having carcinogenic potential, including two recent studies by the National Toxicology Program (NTP, an interagency research program under the auspices of the National Institute of Environmental Health Sciences),^{68,69,70} which found clear evidence for heart tumors in male rats exposed to 2G and 3G cellphone radiation.

Corroborating evidence has been published by the Ramazzini Institute. The Ramazzini study⁷¹ reproduced and clearly supports the NTP's findings, showing a clear link between cellphone radiation and Schwann cell tumors (schwannomas)^{72,73,74} — but at a much lower power level than that used by NTP.

Has neurological effects — Studies dating back to the 1950s and '60s show the nervous system is the organ most sensitive to EMFs. Some of these studies show massive changes in the structure of neurons, including cell death and synaptic dysfunction. Consequences of chronic EMF exposure to the brain include [anxiety](#), [depression](#), [autism](#) and [Alzheimer's disease](#), which Martin Pall, Ph.D., details in a 2016 paper.⁷⁵

Contributes to reproductive problems in both sexes — For example, prenatal exposure to magnetic fields can nearly triple a pregnant woman's risk of miscarriage.⁷⁶ Several other studies have come to similar conclusions.^{77,78,79,80,81} In men, studies show [EMF radiation from cellphones and laptops](#) reduces sperm motility and viability,^{82,83} and increases sperm DNA fragmentation.⁸⁴

[Alters your microbiome](#), turning what might otherwise be beneficial microbes pathogenic. This too can have far-ranging health effects, since we now know your microbiome plays an important role in health.

Remedial Strategies to Lower EMF Exposure

Below are several suggestions that will help reduce your EMF exposure. You can also find guidance and solutions for mitigating electric and magnetic fields at the end of "Healthy Wiring Practices,"⁸⁵ a document created by building biologist [Oram Miller, whom I've interviewed](#) on this topic. In this document, he also discusses specific workarounds for various devices, including cellphones, MacBooks, Roku and Apple TV.

Nighttime remediation

Use filters to remove voltage transients from your electricity and use meters to confirm that they are in a safe range.

Use a battery-powered alarm clock, ideally one without any light. I use a talking clock for the visually impaired.⁸⁶

Consider moving your baby's bed into your room instead of using a wireless baby monitor. Alternatively, use a hard-wired monitor.

If you must use Wi-Fi, shut it off when not in use, especially at night when you are sleeping. Ideally, work toward hardwiring your house so you can eliminate Wi-Fi altogether. It's important to realize that if you have a Wi-Fi router, you have a cellphone tower inside your home.

Ideally, you'd eliminate your Wi-Fi and simply use a wired connection. If you absolutely must have a router, you can place it inside a shielded bag when not in use. You can find shielded items online, or make your own using Swiss Shield fabric. If you have a notebook without any Ethernet ports, a USB Ethernet adapter will allow you to connect to the internet with a wired connection.

For more extensive shielding, you can consider painting your bedroom walls and ceiling with special shielding paint, which will block RF from outside sources, such as cell towers, smart meters and radio/TV towers. Windows can be covered with metal window screen or film. For your bed, consider a shielding bed canopy.

Daytime strategies to reduce unnecessary EMF exposure

To reduce EMF exposure during the daytime, consider using Stetzer filters to decrease the level of dirty electricity or electromagnetic interference being generated. You can also take these with you to work or when you travel. This may be the single best strategy to reduce the damage from EMF exposure since it appears that most of it is generated by the frequencies that the filters remove.

Connect your desktop computer to the internet via a wired Ethernet connection and be sure to put your desktop in airplane mode. Also avoid wireless keyboards, trackballs, mice, game systems, printers and portable house phones. Opt for the wired versions.

Avoid carrying your cellphone on your body unless in airplane mode and never sleep with it in your bedroom unless it is in airplane mode. Even in airplane mode it can emit signals, which is why I put my phone in a Faraday bag.⁸⁷

When using your cellphone, use the speaker phone and hold the phone at least 3 feet away from you. Seek to radically decrease your time on the cellphone. I typically use my cellphone less than 30 minutes a month, and mostly when traveling. Instead, use VoIP software phones that you can use while connected to the internet via a wired connection, or better yet, use a landline telephone.

General household remediation

If you still use a microwave oven, consider replacing it with a steam convection oven, which will heat your food as quickly and far more safely.

Avoid using "smart" appliances and thermostats that depend on wireless signaling. This would include all new "smart" TVs. They are called smart because they emit a Wi-Fi signal and, unlike your computer, you cannot shut the Wi-Fi signal off. Consider using a large computer monitor as your TV instead, as they don't emit Wi-Fi.

Replace CFL bulbs with incandescent bulbs. Ideally remove all fluorescent lights from your house. Not only do they emit unhealthy light, but more importantly, they will actually transfer current to your body just being close to the bulbs.

Dimmer switches are a source of dirty electricity, so consider installing regular on/off switches rather than dimmer switches.

Refuse smart meters as long as you can, or add a shield to an existing smart meter, some of which have been shown to reduce radiation by 98 to 99 percent.⁸⁸