

What You Need to Know About Wireless Radiation and Your Baby



THE BABYSAFE
PROJECT

INTRODUCTION

The beautiful and awe-inspiring process by which a few cells develop into a new life is truly miraculous. As if following some invisible instructions, the intricate and complex steps for the creation of a new life unfold, forming delicate organs and vital systems and making billions of important connections and patterns in the brain alone.

Your body is the first home for this new life, and pregnancy triggers some instructions for you as well. Your body provides a protected and warm space for your baby to grow, sharing important nutrients and preparing you to nourish your baby beginning immediately after birth.

Protecting your baby from any possible harm is a strong and natural instinct and every stage of your baby's development will be affected by the choices you make and the environments in which you live. And those choices you make are at the same time becoming more difficult and more important.



Today, scientists and medical professionals around the world are working to understand more about how a developing human life is affected by environmental exposures, including the food we eat, the air we breathe, the water we drink, and the chemicals and wireless radiation which are becoming almost unavoidable in the products we use and in the surroundings in which we live and work. Identifying and avoiding all of them can seem overwhelming, but knowing the risks and the steps you can take to reduce your exposures is something you can do.

WIRELESS RADIATION

While there are many things yet to be discovered about the important relationship between your developing baby and your own environmental exposures, we do know that your body can provide only a certain degree of protection. Another thing we know is that the impact of wireless radiation, or radiofrequency (RF) radiation, on your baby varies greatly and is associated with the proximity, the amount and the frequency of exposure.

RF radiation is a type of non-ionizing electromagnetic radiation that is used to provide the many telecommunications services we use everyday. Some of the common sources of RF radiation are cell phones and cordless phones, computers, iPads and tablets, wireless networks like Wi-Fi, baby monitors, smart meters and wireless security devices.

Decades ago, when exposure thresholds were established, the thermal or heating effects on human tissue were the only concern. However, we now know that RF radiation can cause biological effects even at levels below thermal thresholds, including cancer, reproductive and neurological harm, and DNA damage. And yet, despite a growing body of independent, peer-reviewed research, regulatory agencies in the U.S. have not changed their thermal-only standard. The International Agency for Research on Cancer of the World Health Organization has classified wireless radiation as possibly carcinogenic to humans.

A source of constant RF radiation is wireless infrastructure. Consumer demand for better connectivity and the latest wireless conveniences has resulted in the build-out of hundreds of thousands of rooftop, pole-mounted and strand-mounted small cell antennas placed in close proximity to private homes, apartments, schools, office buildings and retail and recreation areas. These antennas, as well as cell towers and hot spots, are emitting RF radiation around the clock and the public has very little power over their location.



Generally speaking, *proximity* is the most important factor in determining the amount of wireless radiation to which you and your baby are exposed. Radiation levels fall off dramatically as you distance yourself from the source.

Reducing Your Exposure to Wireless Radiation

- Minimize your use of cell phones. Use a landline or corded phone whenever possible, especially at home. Don't keep your cell phone next to your bed.
- When talking on a cell phone, do not hold it directly against your head. Use the speaker setting or an "air tube" headset.
- Avoid carrying your cell phone in a pocket or a bra. Even cell phone manufacturers warn you not to hold your phone against your body. Place your phone on airplane mode if you must carry it in a pocket.
- Avoid placing your cell phone, wireless laptop or tablet on or near your abdomen. Don't text while holding your phone against your body.
- Avoid using your cell phone in cars, trains, planes and elevators. Cell phones increase radiation output inside of vehicles.
- Radiation exposure increases dramatically when you have weak signals on your phone. Wait until your signal bars are strong before making a call.
- Avoid using cordless phones, which also expose you (and your baby) to radiation, especially where you sleep. Corded phones do not emit radiation.
- Streaming videos and playing games online emit higher levels of wireless radiation. Download and then view or play with your device in "airplane" mode.
- Whenever possible, connect to your router with Ethernet cables and disable the Wi-Fi feature on routers, modems and other personal devices.
- Turn off your home Wi-Fi router when not in use, especially while sleeping.
- Avoid prolonged or direct exposure to Wi-Fi routers at home, school or work.
- If there is a wireless utility meter (smart meter) on a nearby exterior wall or a router on a shared wall with an adjacent apartment, avoid spending time in that location and sleep as far away as possible.

ABOUT THE SCIENCE

Dr. Hugh Taylor, Chair of the Department of Obstetrics, Gynecology and Reproductive Sciences at Yale University School of Medicine and his team of researchers conducted a ground-breaking 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.

The work of the Yale researchers follows a steady progression of scientific studies that demonstrate neurological and behavioral effects from wireless radiation exposure. A review of the scientific literature on radiofrequency/microwave radiation going back decades conducted by the U. S. Air Force Materiel Command (Bolen 1994) concluded that “behavior may be the most sensitive biological component to RF/Microwave radiation.” Two additional examples are:

Scientists at the University of Washington demonstrated DNA breaks in brain cells of laboratory animals resulting from exposure to microwave radiation (Lai, et al 1995).

UCLA researchers (Divan, et al 2008) studied 13,000 mothers and children and found that prenatal exposure to cell phones was associated with a higher risk for behavioral problems and hyperactivity in children.

A multi-national study (Birks, et al 2017) using data from five countries (Denmark, Korea, the Netherlands, Norway and Spain) looked at maternal cell phone use during pregnancy and childhood behavioral problems. It concluded that cell phone use during pregnancy may be associated with an increased risk for behavioral problems, particularly hyperactivity/inattention problems, in the offspring. This association was fairly consistent across cohorts and between cohorts with retrospectively and prospectively collected cell phone use data.

A study conducted by the Kaiser Permanente Division of Research in Oakland, California (Li, et al 2017) showed that pregnant women exposed to high radiation levels from sources like cell phones, wireless devices, cell towers and other electromagnetic fields miscarried at nearly three times the rate as those exposed to low levels. For the study, more than 900 pregnant women in the San Francisco area carried meters that measured their exposure to electromagnetic field radiation 24 hours a day.

Two other important studies worth noting...

A 10 year \$30 million dollar study initiated in 1999 by the National Toxicology Program (NTP) of the National Institutes of Health exposed laboratory animals to wireless radiation from cell phones. The preliminary findings of the study were released in 2016 and reviewed in 2018 by a panel of scientific experts who declared that the study showed “clear evidence of carcinogenic activity in the schwannoma cells of the heart and some evidence of an association with malignant gliomas in the brain.” Dr. Otis Brawley, American Cancer Society’s Chief Medical Officer at that time stated, “The NTP report linking radiofrequency radiation to two types of cancer marks a paradigm shift in our understanding of radiation and cancer.”

The Ramazzini Institute in Italy, a cancer research agency which is partially funded by U.S. taxpayers, also released their findings in 2018 on a long-term life span study of RF emissions from radio base station antennas, which were consistent with and reinforced the results of the NTP study.

“We want people to start rethinking the assumption that magnetic-field exposure is safe. We really need more research because everybody is exposed, including the genetically vulnerable and fetuses. I hope this study makes us rethink the notion that magnetic field non-ionizing radiation exposure is safe or has no health risk. This is certainly something we can’t just ignore.”

- Dr. De-Kun Li
Senior Research Scientist
Kaiser Permanente Division of Research
Oakland, CA

For a more comprehensive listing of scientific studies regarding wireless radiation, pregnancy and its biological effects, please visit our website BabySafeProject.org.

Government agencies, professional societies and public health organizations around the world calling for further research on wireless radiation include:

United States Environmental Protection Agency (EPA)

American Academy of Environmental Medicine (AAEM)

National Cancer Institute (NCI)

American Academy of Pediatrics (AAP)

American Cancer Society (ACS)

National Institute of Environmental Health Sciences (NIEHS)

International Agency for Research on Cancer (IARC)

International Commission for Electromagnetic Safety (ICEMS)

European Parliament and European Environment Agency (EEA)



“Current FCC standards do not account for the unique vulnerability and use patterns specific to pregnant women and children. It is essential that any new standards for cell phones and other wireless devices be based on protecting the youngest and most vulnerable population to ensure they are safeguarded throughout their lifetimes.”

- American Academy of Pediatrics

This ubiquitous and ever-growing wireless world that we live in means that wireless radiation is all around us. But you can take easy steps to reduce your exposure. As mentioned previously, keeping a safe distance from transmitters and keeping your personal wireless devices away from your body is relatively easy to do. The amount of time you spend using wireless devices is important. Also, remember that exposure is cumulative.

We hope that you will take the time to learn more about protecting your baby from wireless radiation by visiting our website, BabySafeProject.org.

“Most pregnant women understand that they should stay away from cigarette smoke, avoid alcohol and be careful about eating potentially contaminated foods of any kind. The weight of evidence clearly supports the need to protect pregnant women from wireless radiation exposures as well.”

- Dr. Devra Davis

Founder and President, Environmental Health Trust

“It is so simple to move your cell phone away from your abdomen when you're pregnant. Why not do it? There's essentially no downside to being cautious and protecting your baby.”

- Dr. Hugh Taylor, Yale University

Chair, Obstetrics, Gynecology & Reproductive Sciences

Chief of Obstetrics and Gynecology

Yale-New Haven Hospital

Joint Statement on Pregnancy and Wireless Radiation

We join together as physicians, scientists and academics to express our concerns about the risks that wireless radiation poses to pregnancy and to urge pregnant women to limit their exposures.

We recognize that the exquisite systems that direct the development of human life are vulnerable to environmental insults, and that even minute exposures during critical windows of development may have serious and life-long consequences.

We know that the scientific process demands a thorough and exhaustive examination of the possible impact of wireless radiation on health; however, we believe substantial evidence of risk, rather than absolute proof of harm, must be the trigger for action to protect public health.

We call on the research community to conduct more studies to identify the mechanisms by which a fetus could be affected by wireless radiation. We call on our elected leaders to support such research and to advance policies and regulations that limit exposures for pregnant women. We call on industry to implement and explore technologies and designs that will reduce radiation exposures until such research is carried out.

We affirm our role as health and science professionals to inform the public about the potential dangers associated with early-life exposures to wireless radiation, and invite all professionals engaged in obstetric, pediatric, and environmental health advocacy to join us in our quest to ensure the safety and health of future generations.

For a current list of medical doctors, researchers and other health professionals who have signed the Joint Statement, please visit

BabySafeProject.org

For more information about pregnancy and wireless radiation
and to obtain additional copies of this brochure please visit

BabySafeProject.org

#KnowYourExposure

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