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Electromagnetic Fields

Also called: EMFs

Electric and magnetic fields (EMFs), also called radiation [<https://medlineplus.gov/radiationexposure.html>] , are areas of energy that surround electrical devices. Everyday sources of EMFs include:

- Power lines
- Electrical wiring
- Microwave ovens
- Computers
- Cell phones

Some people worry about EMF exposure and cancer. Some studies have found a link between EMF exposure and a higher risk of childhood leukemia, but other studies have not. Other studies have not found proof that EMF exposure causes other childhood cancers. Studies in adults did not prove that EMF exposure causes cancer.

Some people worry that cell (wireless) phones cause cancer or other health problems. The phones do give off radiofrequency energy (RF), a form of electromagnetic radiation. So far, scientific evidence has not found a link between cell phone use and health problems in humans. However, scientists need to do more research on this before they can say for sure. If you are worried about avoiding any possible risks, you can limit your exposure by:



- Reducing the amount of time you spend using your cell phone
- Use speaker mode or a headset to place more distance between your head and the cell phone

NIH: National Institute of Environmental Health Sciences

Start Here

- Electric and Magnetic Fields [<https://www.niehs.nih.gov/health/topics/agents/emf>]
 (National Institute of Environmental Health Sciences)

Related Issues

- Cell Phones and Cancer Risk [<https://www.cancer.gov/about-cancer/causes-prevention/risk/radiation/cell-phones-fact-sheet>]  (National Cancer Institute)
Also in Spanish [<https://www.cancer.gov/espanol/cancer/causas-prevencion/riesgo/radiacion/hoja-informativa-telefonos-celulares>]
- Electromagnetic Fields and Cancer [<https://www.cancer.gov/about-cancer/causes-prevention/risk/radiation/electromagnetic-fields-fact-sheet>]  (National Cancer Institute)
Also in Spanish [<https://www.cancer.gov/espanol/cancer/causas-prevencion/riesgo/radiacion/hoja-informativa-campos-electromagneticos>]

Specifics


- Cell Phone Towers [<https://www.cancer.org/cancer/risk-prevention/radiation-exposure/cellular-phone-towers.html>]
(American Cancer Society)

- Cell Phones [<https://www.fda.gov/radiation-emitting-products/home-business-and-entertainment-products/cell-phones>] (Food and Drug Administration) - **PDF**
- Do Cell Phones Pose a Health Hazard? [<https://www.fda.gov/radiation-emitting-products/cell-phones/do-cell-phones-pose-health-hazard>] (Food and Drug Administration)
- Facts About Cell Phones and Your Health [<https://www.cdc.gov/radiation-health/data-research/facts-stats/cell-phones.html>] (Centers for Disease Control and Prevention)
- Microwave Ovens [<https://www.fda.gov/radiation-emitting-products/resources-you-radiation-emitting-products/microwave-ovens>] (Food and Drug Administration)

Statistics and Research

- Scientific Evidence for Cell Phone Safety [<https://www.fda.gov/radiation-emitting-products/cell-phones/scientific-evidence-cell-phone-safety>] (Food and Drug Administration)

Clinical Trials


- ClinicalTrials.gov: Electromagnetic Fields [<https://clinicaltrials.gov/search?cond=%22Electromagnetic+Fields%22&aggFilters=status:not%20rec>]  (National Institutes of Health)

Journal Articles


References and abstracts from MEDLINE/PubMed (National Library of Medicine)

- Article: Electric Field Measurement in Radiative Hyperthermia Applications. [<https://www.ncbi.nlm.nih.gov/pubmed/40732521>]
- Article: Pulsed electromagnetic stimulation promotes neuronal maturation by up-regulating cholesterol biosynthesis. [<https://www.ncbi.nlm.nih.gov/pubmed/40713855>]
- Article: Impact of Radiofrequency Electromagnetic Fields on Cardiac Activity at Rest: A... [<https://www.ncbi.nlm.nih.gov/pubmed/40662412>]
- Electromagnetic Fields -- see more articles [<https://pubmed.ncbi.nlm.nih.gov/?term=%22Electromagnetic+Fields%22%5Bmajr%3Anoexp%5D+AND+humans%5Bmh%5D+AND+english%5Bla%5D+AND+%22last+1+Year%22+%5Bedat%5D+NOT+%28letter%5Bpt%5D+OR+case+reports%5Bpt%5D+OR+editorial%5Bpt%5D+OR+comment%5Bpt%5D%29+AND+free+full+text%5Bsb%5D+>]

Find an Expert

- Food and Drug Administration [<https://www.fda.gov/>]
- International EMF Project [<https://www.who.int/initiatives/the-international-emf-project>] (World Health Organization)
- National Institute of Environmental Health Sciences [<https://www.niehs.nih.gov/>] 
Also in Spanish [<https://www.niehs.nih.gov/health/scied/teachers/educacion>]

Children

- What Are Electric and Magnetic Fields? (EMF) [<https://kids.niehs.nih.gov/topics/pollution/emf>]  (National Institute of Environmental Health Sciences)



MEDICAL ENCYCLOPEDIA

Cell phones and cancer [<https://medlineplus.gov/ency/article/007151.htm>]

National Institutes of Health

The primary NIH organization for research on *Electromagnetic Fields* is the National Institute of Environmental Health Sciences [<http://www.niehs.nih.gov/>]

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