Are EMFs Hazardous to Our Health?

Can electromagnetic fields (EMF) from power lines, home wiring, airport and military radar, substations, transformers, computers and appliances cause brain tumors, leukemia, birth defects, miscarriages, chronic fatigue, headaches, cataracts, heart problems, stress. nausea, chest pain, forgetfulness, cancer and other health problems? …

Dr. David Carpenter, Dean at the School of Public Health, State University of New York believes it is likely that up to 30% of all childhood cancers come from exposure to EMFs. The Environmental Protection Agency (EPA) warns "There is reason for concern" and advises prudent avoidance".

EPA Says the Threat Is Real

In a draft report issued in March 1990, the EPA recommended that EMFs be classified as a Class B carcinogen -- -a "probable human carcinogen and joined the ranks of formaldehyde, DDT, dioxins and PCBs. …

Power Lines

An enormous amount of electricity is created at power generating stations and sent across the country through wires that carry high voltages. … Power companies know which power line configurations are best for reducing EMFs but most don't feel the evidence supports costly changes in the way they deliver electricity.

…EMFs near a **transformer** can be quite high, but due to its small structure, the field strength diminishes rapidly with distance, as it does from any point source. For this reason, having a transformer located near your home is usually not a major source of concern,….

Home Wiring

Many times a particular room will have a higher EMF reading. …Sometimes, the source of a high magnetic field is incorrect wiring. If you suspect that your home is wired improperly, obtain the services of a licensed electrician. …

Computers are a complicated subject. Know this: EMFs radiate from all sides of the computer. Thus, you must not only be concerned with sitting in front of the monitor but also if you are sitting near a computer or if a computer is operating in a nearby room.

The Swedish safety standard, effective 711/90, specifies a maximum of 0.25 mG at 50 cm from the display. Many US manufactured computers have EMFs of 5 - 100 mG at this distance. And know this too: the screens placed over monitors do NOT block EMFs. Not even a lead screen will block ELF and VLF magnetic fields…

Electric Blankets and Waterbeds

Electric blankets create a magnetic field that penetrates about 6-7 inches into the body. Thus it is not surprising that an epidemiological study has linked electric blankets with miscarriages and childhood leukemia.

This pioneering work was performed by Dr. Nancy Wertheimer and Ed Leeper, who originally discovered that magnetic fields were linked to childhood leukemia. Similar health effects have been noted with users of many electric blankets and waterbed heaters will emit EMFs even when turned off.

The devices must be unplugged to delete the EMF exposure Additionally, there is the issue regarding the vibrations that are generated by sleeping on standing water. There is less hard data in this area but some experts are concerned about the consequences.

Electric clocks have a very high magnetic field, as much as 5 to 10 mG up to three feet away. If you are using a bedside clock, you are probably sleeping in an EMF equivalent to that of a powerline Studies have linked high rates of brain tumors with chronic exposure to magnetic fields, so it is wise to place all clocks and other electrical devices (such as telephones and answering devices) at least 6 feet from your bed.

Fluorescent lights produce much more EMFs than incandescent bulbs. A typical fluorescent lamp of a office ceiling have readings of 160 to 200 mg 1 inch away.

Microwave ovens and radar from military installations and airports emit two types of radiation -- microwave and ELF. Microwaves are measured in milliwatt per centimeter squared (mW/cm2) As of 1/1/93, the U.S. safety limit for microwave exposure is 1 mW/cm2, down from a previous 10 mW/cm2. The Russian safety limit is .01 mW/cm2. All microwave ovens leak and exceed the Russian safety limit. In addition, recent Russian studies have shown that normal microwave cooking coverts food protein molecules into carcinogenic substances.

When measuring microwaves from military and airport radar sources, 100% accurate readings can only be found with extremely expensive digital peak-hold meters. Why? Because analog devices begin to drop their reading immediately after the radar sweep passes. Thus, while an analog meter can show whether or not you are being exposed to radar EMFs, analog meters can't show your true exposure. Although thousands of dollars to purchase, digital-hold meters capable of accurately detecting radar EMFs can be rented for several hundred to over a thousand dollars per month.

Telephones can emit surprisingly strong EMFs, especially from the handset. …

… **Answering machines**, particular those with adapter plugs (mini-transformers), give off high levels of EMFs.

Electric razors and hair dryers emit EMFs as high as 200 to 400 mG. This seems alarming, but we don't know if this is worse (or better) than a chronic exposure to a 2-3 mG field. Some EMF consultants recommend that hair dryers not be used on children as the high fields are held close to their rapidly developing brain and nervous system.

Prudent Avoidance

Electricity is an inseparable part of our modern day society. This means that EMFs will continue to be all around us. But as Discover Magazine postulated, aside from making our life easier, is electricity also making our lives shorter? Most experts agree that limited, non-chronic exposure to EMFs is not a threat. For example, it is probably acceptable for a person to be near a toaster in the morning.

BUT, it is not advisable for a person to sleep under an electric blanket, up close, live near a powerline/substation, and sleep in a room where the power enters the home. This person is under an extreme case of chronic exposure. This condition, unfortunately, applies to millions of Americans.

If you wish to follows the EPA's advice and practice "prudent avoidance" then the following advice is offered:

Measure your home, work and school environments with a Gauss meter Measure EMFs both inside and outside your home. **Don't** let your children play near power lines, transformers, radar domes and microwave towers.

Avoid areas where the field is above 1 mG. Measure the EMFs from appliances both when they are operating and when they are turned off. Some appliances (like TVs) are still drawing current even when they are off.

Don't sleep under an electric blanket or on a waterbed. If you insist on using these, unplug them before going to bed (don't just turn it off). Even though there is no magnetic field when they are turned off, there may still be a high electric field.

Don't sit too close to your TV set. Distance yourself at least 6 feet away. …

Rearrange your office and home area so that you are not exposed to EMFs from the sides/backs of electric appliances and computers. In the home, it is best that all major electrical appliances, such as computers, TVs, refrigerators etc, be placed up against outside walls. That way you are not creating an EMF field in the adjoining room.

Don't sit too close to your computer. Computer monitors vary greatly in the strength of their EMFs, so you should check yours with a meter. Don't stand close to your microwave oven. Move all electrical appliances at least 6 feet from your bed. **Eliminate** wires running under your bed. Eliminate dimmers and 3-way switches.

Be wary of cordless appliances such as electric toothbrushes and razors. …

And last, but not least, always always always **remember that EMFs pass right through walls**. The EMF you are reading on your Gauss meter could be radiating from the next room...or from outside your home.

Additional Radiation Info:

Eyeglass frames should ideally be made from plastic with no wires in them, otherwise they can serve as an antenna to focus the radio and cellular phone waves directly into your brain.

What EMF Level Is Safe?

There's a heated debate as to what electromagnetic field (EMF) level is considered safe. Since the experts have not come to an consensus, you'll have to decide for yourself... Many government and utility documents report the usual ambient level of 60-Hz magnetic field to be 0.5 mG.

Thus, any reading higher than 0.5 mG is above the "usual" ambient exposure. Many experts and public officials, as well as the few governments that have made an effort to offer public protection, have adopted the 3 mG cutoff point. The EPA has proposed a safety standard of 1 mG. Sweden has set a maximum safety limit of 1 mG.

Dr. Robert Becker, an MD who has been studying the effects of EMFs for 20 years, states a 1mG safety limit in his book *Cross Currents*. When electricians try to solve a magnetic field problem they do their best to drop the level to 1 mG or below.

Dr. Nancy Wertheimer, a Ph.D. epidemiologist who has been studying EMFs for 20 years, has been looking at the epidemiological data in a different way -- she is trying to associate EMF levels with health rather than disease. The level she is coming up with is a cut off of 1 mG. Russian researchers claim that 1/1000ths of a mG should be the standard.

The BioElectric Body believes that there are several stages of health between "optimum wellness", "degenerative disease" and "Cancer". Thus, we maintain our own living and sleeping quarters at 0.5mG and below.

Recommended Reading

Cross Currents: The Perils of Electropollution. The Promise of Electromedicine Robert 0. Becker, M.D. Jeremy P. Tarcher, Inc., 1990

Currents of Death: The Attempt to Cover Up the Threat to Your Health Paul Brodeur Simon and Schuster, 1989

Electromagnetic Man: Health & Hazard in the Electrical Environment Cyril W. Smith & Simon Best St. Martin's Press. Inc. 1989

Excerpted by Marie Paas, DC. Read the full article at http://www.mercola.com/article/emf/emf_dangers.htm