

Electromagnetic Fields

What are electromagnetic fields?

Electric and magnetic fields surround anything that uses or carries electricity. These lines of force are called electromagnetic fields (EMF).

The magnetic component of EMF is measured in milligauss. Background levels (the levels we are all commonly exposed to) usually range between 0.1 and 4 milligauss.

How can I be exposed to electromagnetic fields?

Functioning electrical appliances and power lines, produce EMF. Even the earth produces small amounts of EMF. Therefore, everyone is exposed to this form of energy. The highest EMF exposure can occur using appliances such as electric blankets, microwave ovens, and hair dryers.

Moving a short distance away from an appliance or power line will greatly reduce the strength of the electromagnetic field. For example, the EMF strength of an electric can opener at 6 inches is about 600 milligauss, but at 4 feet away, it's only 2 milligauss.

What are the effects of exposure to electromagnetic fields?

The effects of electromagnetic fields on human health are not well understood. Some studies show a relationship between exposure to EMF and the development of cancer, while other studies do not.

When scientists investigated the relationship between EMF and other effects on humans (e.g., miscarriage), their results were also mixed. A panel of experts recently reviewed all of the studies on EMF; they concluded there is not enough evidence to prove that EMF cause health problems other than a possible association with cancer.

Until more is known about the effects of EMF, prudent avoidance is advised.

How can I avoid being exposed to electromagnetic fields?

- Standing a short distance away from appliances while they are in use can significantly reduce EMF exposure. Move clocks and radios a few feet away from your bed. The strength of the EMF decreases dramatically when you increase the distance between you and the appliance.
- One way to reduce your exposure from an electric blanket is to warm the bed prior to getting in, and turning it off before going to sleep.
- Have electrical wiring checked and don't allow children to play around transformers or power lines.
- Allow your hair to air dry for a few minutes before using a hair dryer. This will reduce the time needed to dry it.

What should I do if I suspect a problem?

If you suspect that you are being exposed to high levels of EMF, limit your exposure. Follow the suggested guidelines above to reduce your EMF exposure. Contact your public utility company or local health department to find out how to measure the EMF in and around your home. EMF detectors are available from some electronic stores.

For more information

- Contact the Wisconsin Division of Public Health, Bureau of Environmental Health, PO Box 2659, Madison, WI 53701-2659, (608) 266-1120; or
- Visit the department's website, www.dhs.state.wi.us/eh



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