

## U.S. NATIONAL CANCER INSTITUTE ON EMF

The U.S. National Cancer Institute (NCI) is one of the National Institutes of Health and is a leading public health research authority on the causes, development, prevention and treatment of cancer.

The NCI has evaluated the scientific research related to very low frequency electromagnetic fields (EMF), including power frequency fields, and cancer, and has found that:

“Extremely low frequency (ELF) EMFs are produced by power lines, wiring, and electrical appliances.”

“Numerous epidemiologic studies and comprehensive reviews of the scientific literature have evaluated possible associations between exposure to ELF magnetic fields and risk of cancer in children.”

“Most of the research has focused on leukemia and brain tumors, the two most common cancers in children. Studies have examined associations of these cancers with living near power lines, with magnetic fields in the home, and with exposure of parents to high levels of magnetic fields in the workplace.”

“Currently, researchers conclude that **there is little evidence** that exposure to ELF-EMFs from power lines causes leukemia, brain tumors, or any other cancers in children.”

“No mechanism by which ELF-EMFs could cause cancer has been identified. Unlike high-energy (ionizing) radiation, ELF-EMFs are low energy and non-ionizing and cannot damage DNA or cells directly.”

“Studies of animals exposed to ELF-EMFs have not provided any indications that ELF-EMF exposure is associated with cancer, and no mechanism has been identified by which such fields could cause cancer.”

“Several early epidemiologic studies raised the possibility of an association between certain cancers, especially childhood cancers, and ELF-EMFs. Most subsequent studies have not shown such an association, but scientists have continued to investigate the possibility that one exists.”

Source: “Magnetic Field Exposure and Cancer.” National Cancer Institute Fact Sheet, 11/3/14. <http://www.cancer.gov/cancertopics/factsheet/Risk/magnetic-fields>