

HIGH VOLTAGE POWER LINES & LEUKEMIA (1993-1999 Studies)

The Myth:

Overhead high voltage power lines and associated electromagnetic fields (EMFs) have not been shown to have any impacts on the occurrence of leukemia.

The Facts:

- On the basis of the job held the longest by Swedish men during the 10-year period before diagnosis, Floderus et al. (1993) found an association between EMFs and chronic lymphocytic leukemia (cancer of the white blood cells). The risk increased with increasing level of EMF exposure.
- Electric utility workers exposed to above-normal EMFs in Ontario, Quebec and France were studied. Workers had higher risk for non-lymph related leukemia and white blood cell leukemia, with risks varying from 2.3 to 3.2 times the expected, depending on exposure levels (Thériault et al. 1994).
- A higher risk of childhood leukemia was found among Swedish and Danish children living within 300m of transmission lines and exposed to above-normal EMF levels (Feychting et al. 1995). Risks varied from 2 to 5 times the expected, increasing with higher EMF exposure levels.



- On the basis of one of the most complete cancer data sets in Canada, Miller et al. (1996) studied the association of a variety of cancers and exposure to electric and magnetic fields for Ontario electric utility workers. In total, 260 unique job titles at 140 different work sites were sampled. The incidence of leukemia (several types) in utility workers was 4.3 to 5.5 times the expected. Within each level of magnetic field exposure, there was increasing risk with increasing exposure to electric fields.
- Michaelis et al. (1997) studied childhood leukemia in north-western Germany and found an increased risk of 3.2 times the expected for children exposed to EMFs.



- A childhood leukemia study in Los Angeles County supported the hypothesis that magnetic fields from electrical lines are causally related to childhood leukemia, with risks varying from 2.0 to 2.2 times the expected (Thomas et al. 1999).



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