Occupational and Residential Magnetic Field Exposure and Breast Cancer in Females

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Précis: Exposure to magnetic fields was not associated with increased risk of breast cancer in women

Introduction
Analyses of exposure to magnetic fields and female breast cancer have yielded conflicting results. In both human and laboratory experiments, exposure to magnetic fields may result in higher levels of circulating estrogen, which could increase proliferation of breast stem cells (American Journal of Epidemiology 1987 Apr; 125(4): 556-61). In this study, the researchers evaluated the association of occupational and residential magnetic field exposure with breast cancer in females.

Method
The researchers determined occupational and residential exposure to magnetic fields for Swedish women with breast cancer who lived within 300 meters of transmission lines, which incidentally generate magnetic fields.

Results
- There was no significant increase in cancer risk among women exposed to magnetic fields in their occupation or at home.

Discussion
In this study, there was no evidence that occupational or residential exposure to magnetic fields generated by power lines was associated with increased breast cancer risk in women. Exposure assessment of magnetic fields will continue to be explored. Sources of exposure, including residential power distribution and appliance use, need to be considered and serious consideration should be given to the time period(s) of exposure that are potentially of greatest etiologic relevance.