

Publication

A meta-analysis on residential exposure to magnetic fields and the risk of amyotrophic lateral sclerosis

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Amyotrophic lateral sclerosis (ALS) is caused by the gradual degeneration and death of motor neurons, with mostly unknown etiology. Some risk factors have been suggested for this disease including extremely low frequency magnetic fields (ELF-MF) exposure. This meta-analysis assesses the association of residential exposure to ELF-MF with the risk of ALS. Five studies have addressed the risk of ALS in relation to overhead power lines. A pooled relative risk (RR) of 0.71 [95% confidence interval (CI): 0.48, 1.07] for the most exposed population group (either <200 m distance from high voltage power lines or >0.1 μ T) was found. Little heterogeneity ($I^2=0.00\%$, $p=0.67$) and indication for publication bias (PBegg's test=0.22; PEgger's test=0.19) was seen. Overall, we found no evidence for an association between residential exposure to ELF-MF and the risk of ALS, although the number of exposed cases is low.

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