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A study of childhood acute lymphoblastic leukaemia (ALL) and 16.7 Hz magnetic fields in Germany. Exposure at this frequency is dominated by its use in electrified railways.

489 ALL cases and 1240 controls were studied (participation rate = 58%) between 1990 and 1994. Controls were taken from a general population register.

Exposures were measured by performing a 24-hour measurement in the bedroom of the residence of longest duration prior to diagnosis or selection from the register.

Exposure classifications were as follows:

Low	Medium	High
$\leq 0.1$ micro Tesla	$>0.1$ and $\leq 0.2$ micro Tesla	$> 0.2$ micro Tesla



The lowest exposure category was used as the reference population for the calculation of odds ratios.

Socioeconomic status was biased towards rich controls. Corrected for.

Median, peak and nocturnal exposures were tested for any association with ALL. None of these produced a statistically significant association.

Highest OR = 1.9 (95% CI = 0.4, 9.0) for highest median exposure group. This is not statistically significant.

#### Comment

Many of the usual sources of bias were properly accounted for or avoided in this study. However the low response rate does cast doubt over the generalisability of this result as does the small numbers of cases and controls in the highest exposure category.

No association between exposure to 16.7Hz magnetic fields and ALL was found. Exposure at 16.7 Hz may be uncommon, but is known in other countries e.g. Switzerland.