

# Pylons 'may be a leukaemia risk'

**Living too close to overhead power lines appears to increase the risk of childhood leukaemia, researchers say.**

A major study found children who had lived within 200m of high voltage lines at birth had a 70% higher risk of leukaemia than those 600m or more away.

But the Oxford University team stressed that there are no accepted biological reasons for the results and that they may, therefore, be chance.

Alternatively, it may be down to the environments where pylons are located.

And they said it did not resolve the debate about whether it was unsafe to live next to power lines.

Around 1% of homes in the UK are estimated to be within 200m of high voltage National Grid power lines.

The researchers said their findings showed living in such close proximity to power lines at birth could account for five extra cases of childhood leukaemia in a total of around 400 that occur in a year - a total of 1%.

The British Medical Journal study did not look at level of exposure to magnetic fields.

But other scientists who have considered the issue have suggested that low frequency magnetic fields, such as those caused by the production of electricity, could possibly be linked to cancer.

However, others have disputed this link. And experts agree that there are likely to be many factors involved in leukaemia, including genes and the environment.

Even if the apparent risk was found to be real, the number of cases of leukaemia that would result would be very few, said the authors.

## The study

The latest study was carried out by Dr Gerald Draper and colleagues from the Childhood Cancer Research Group at Oxford University, and Dr John Swanson, a scientific adviser at National Grid Transco.



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Cancer Research UK

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It looked at more than 29,000 children with cancer, including 9,700 with leukaemia, born between 1962 and 1995, and a control group of healthy youngsters in England and Wales.

The researchers measured the distance from children's home addresses at birth from the nearest high voltage power line.

They found that 64 children with leukaemia lived within 200m of the line, while 258 lived between 200-600m away.

Overall, youngsters living within 200m of the lines were about 70% more likely to develop leukaemia, and those living between 200 and 600m away about 20% more likely to develop leukaemia than those who lived beyond 600m from high voltage pylons.

Although the trend was definite, the researchers said they could not reasonably explain why it occurred.

For this reason, they caution that it might be down to factors other than the pylons themselves, such as the type of people who live near pylons or the general environment where pylons are located, which they plan to investigate.

## **Debate**

Eddie O'Gorman, chairman of the UK charity Children with Leukaemia, said: "There is now a clear case for immediate government action.

"Planning controls must be introduced to stop houses and schools being built close to high voltage overhead power lines."

But Professor John Toy, Cancer Research UK's Medical Director, said: "People who currently live or have lived near power lines in the past need not panic about this research. The triggers that cause childhood leukaemia are most likely a random course of events over which a parent has no control.

A spokesman from the Health Protection Agency said the study findings suggested that at least some of the increased leukaemia risk might be associated with factors other than electromagnetic fields.

Dr David Grant, of Leukaemia Research, said: "We recognise there is a lot of public anxiety and concern about living close to pylons and exposure to power-frequency magnetic fields.

"There is no reason why anyone should be advised to move house on the basis of these new results."

**Proposed causes of  
childhood leukaemia**  
**Genetic susceptibility**  
**Immune system damage**  
**by chemicals, infections or**  
**radiation before the baby**  
**is born**  
**Abnormal immune system**  
**development by lack of**  
**exposure to infections**  
**early in a child's life**

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There are around 7,000km of high voltage power lines involved in the transmission of electricity across England and Wales, and 21,800 steel pylons.