

## High voltage health alarm

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**LIVING near high-voltage power lines, especially in childhood, may increase the risk of leukemia or lymphoma, Tasmanian research reveals.**

A study of more than 800 Tasmanian patients tracked how close they lived to high-voltage lines through their lives.

Adults who lived within 300 metres of a line during their first 15 years had triple the risk of lymphoproliferative or myeloproliferative disorders (LPD or MPD).

These include Hodgkin and non-Hodgkin lymphoma, multiple myeloma and several leukemias.

Those who lived near high-voltage lines from birth to five years had a five-fold increase.

The study by Hobart oncologist Ray Lowenthal, nurse Deirdre Tuck and UK doctor Isabelle Bray is in September's *Internal Medicine Journal*, published by the Royal Australasian College of Physicians.

"Although recognising that this study has limitations, the results raise the possibility that prolonged residence close to high-voltage power lines, especially early in life, may increase the risk of the development of MPD and LPD later," the authors say.

The study showed a "dose-response effect", so the risk went up the closer people lived to lines, the longer the exposure or higher the voltage.

It adjusted for other risk factors including low socio-economic status and jobs in farming, foundry work, mining and female hairdressing.

They said their results demanded further research, including animal experiments on newborns and in utero.

"It is not the final answer, it is not a perfect study by any means," Dr Lowenthal said.

"We found interesting evidence that needs to be studied by other people and confirmed in other studies, but the results were certainly unexpected."

Transend, which owns and operates Tasmania's electricity transmission system, said it welcomed the report.

"The electricity industry here in Tasmania and around the world monitors this issue and supports scientific research into electric and magnetic fields (EMFs) and their health effects," Transend chief executive officer Richard Bevan said.

He said Transend designed its equipment in accordance with health and safety guidelines, including putting lines in easements, or land corridors, up to 60 metres wide.

"This is a prudent safety measure that ensures lines are at a safe distance from houses, schools, other buildings and structures."

He said the Australian Radiation Protection and Nuclear Safety Agency concluded that on balance the evidence did not indicate that exposure to 50 Hz electric and magnetic fields around the home, office or near transmission lines was a health hazard.

"All electrical equipment gives off EMFs, including domestic appliances and electrical wiring in homes as well as power lines in the street," Mr Bevan said.

The authors noted that studies already showed an association between EMFs and childhood leukemia.

This study looked at adult disorders.

They tracked 854 people aged from birth to 94 diagnosed in Tasmania between 1972 and 1980 as well as control subjects picked randomly.