# Shock wave

**Typical Electro-magnetic-field levels for power transmission lines (in milliGauss - mG)**

115 kV

At source: 29.7 mG
15 m - 6.5 mG
30 m - 1.7 mG
61 m - 0.4 mG
91 m - 0.2 mG

230 kV

At source: 29.7 mG
15 m - 57.5 mG
30 m - 19.5 mG
61 m - 1.8 mG
91 m - 0.8 mG

500 kV

At source: 29.7 mG
15 m -86.7 mG
30 m - 12.6 mG
61 m - 3.2 mG
91 m - 1.4 mG

**What the levels mean to your health**

2 mG: level at which electromagnetic waves have been linked to childhood leukemia

12 mG: level at which electromagnetic waves have been associated with increased growth of human breast cancer cells in vitro

16 mG: level at which electromagnetic waves have been associated with increased risk of spontaneous abortions

20 to 150 mG: level at which electromagnetic waves have been associated with chromosomal aberrations in lymph nodes

**T.O. TROUBLE SPOTS**

Number of downtown intersections measured in recently released study: 106

Mean magnetic field level at downtown intersections: 19. 5 mG

Ten intersections with highest mean magnetic field levels:

Yonge and Edward: 43 mG

Yonge and King: 42 mG

Yonge and Wellington: 30 mG

Yonge and St. Joseph: 30 mG

Yonge and Breadalbane: 30 mG

Yonge and St. Mary: 27 mG

Yonge and Wellesley: 26 mG

Yonge and College: 24 mG

Yonge and Grosvenor: 23 mG

Yonge and Adelaide: 21 mG

**WIRED WORLD**

Kilometres of transmission and distribution lines in Ontario Hydro power grid: 142,300

Number of distribution stations: 928

Number of transmission stations: 256

Number of transformers (grey cylinders that sit atop posts): 425,000

Kilometres of underground cable: 270

**REAL SHOCKERS**

Typical magnetic field level of low-voltage distribution lines : 30 mG (milliGauss)

Typical magnetic field level of high-voltage transmission lines: 60 to 90 mG

Typical magnetic field level of a television set: 20 mG

Typical magnetic field level of a hair dryer: 70 mG

Typical magnetic field level in Ontario homes : 1 to 4 mG

Typical magnetic field level at the edge of Hydro One transmission line rights-of-way: 50 mG

Typical magnetic field level outside generating stations and substations: 2,700 mG

**WHAT HEALTH CANADA SAYS**

At this time, Canadian government guidelines are not necessary because scientific evidence is not strong enough to conclude that typical exposures to electromagnetic fields cause health problems.

**WHAT THE WORLD HEALTH ORGANIZATION SAYS**

Electromagnetic fields are a "possible human carcinogen." In populations exposed to average magnetic fields in excess of 3 to 4 mG, twice as many children might develop leukemia compared to a population with lower exposures.

**WHAT HYDRO ONE SAYS**

"There will always be individual studies claiming that there are health effects or that there aren't. There's a possibility of there being something there. But there's a huge amount of noise in the data. We are certainly concerned about our workers. But we feel pretty comfortable with where things are at."

Roger Glass, Hydro One, manager of health and safety

**WHAT AUTHOR OF LATEST STUDY SAYS**

"There are significant health concerns. The results we found on street corners (throughout the province) are higher than most electrical occupations. We should start doing things to minimize our exposure now."

Magda Havas, environmental and resource studies, Trent University. A lot has been said about the danger of cellphones, but according to a new study, it's nothing compared to the way we're bathed in electromagnetic fields by the wiring on our city streets. When are governments going to start taking this science seriously?

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