

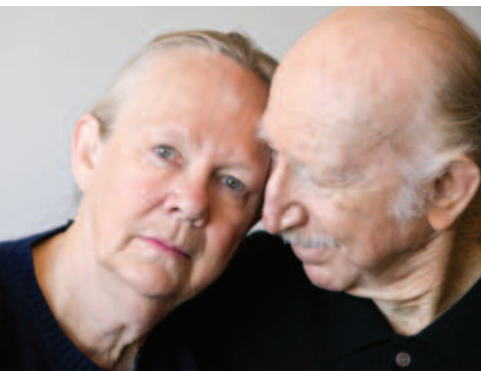
## HIGH VOLTAGE POWER LINES & OTHER HEALTH PROBLEMS

### The Myth:

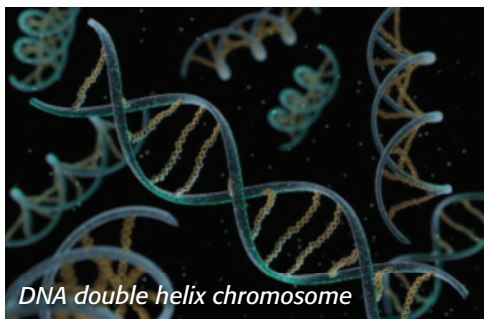
Overhead high voltage power lines and associated electromagnetic fields (EMFs) have no impact on the incidence of Lou Gehrig's disease, sterility, and other health problems.

### The Facts:

- On the basis of epidemiological (population health and illness) findings, an association exists between Lou Gehrig's disease and occupational EMF exposure (Ahlbom et al. 2001).
- Based on a nation-wide mortality study in Denmark of over 21,000 men employed in utility companies and with above-average exposure to EMFs, Johansen and Olsen (1998) found a 2-fold increase in mortality from Lou Gehrig's disease.
- Evidence that people employed in electrical occupations have an increased risk of developing Lou Gehrig's disease is even stronger than for Alzheimer's disease or Parkinson's disease (The Advisory Group on Non-Ionising Radiation 2001). (See Fact Sheet No. 3 for information on Alzheimer's disease.)



- Effects of EMF exposure on male rat sexual organ development were studied by Khaki et al. (2008a, 2008b). In one of the studies, male rats were exposed to 50-Hz EMFs while they were embryos and for 5 weeks following birth. Prostate gland cells of animals were negatively abnormal in several ways. In the second study, when male rats were exposed to 50-Hz EMFs for 2 months following birth, cells in their seminal vesicles (glands that secrete part of the semen)



DNA double helix chromosome

- were seriously altered. The authors concluded with the suggestion that EMFs are able to interrupt the normal production of sperm and can probably cause sterility in men.
- The U.S. Food and Drug Administration indicates that interference from EMFs can affect various medical devices including cardiac pacemakers and implantable defibrillators. Overhead high voltage power lines produce EMFs strong enough to interfere with some models of pacemakers and defibrillators.
- Studies have been conducted to determine whether EMF exposure can change the genetic material of organisms. Researchers experimenting with cells have found that EMF exposure appears to inhibit the cell's ability to repair normal DNA damage (EMFRAPID 2002).
- A group of French subjects exposed to above-normal EMFs had significant decreases in sexual urges, and increases in physical fatigue, physical weakness, feeling of faintness, extreme depression, and irritability (Bonhomme-Faivre et al. 1998).

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