

## MELATONIN AND HIGH VOLTAGE POWER LINES

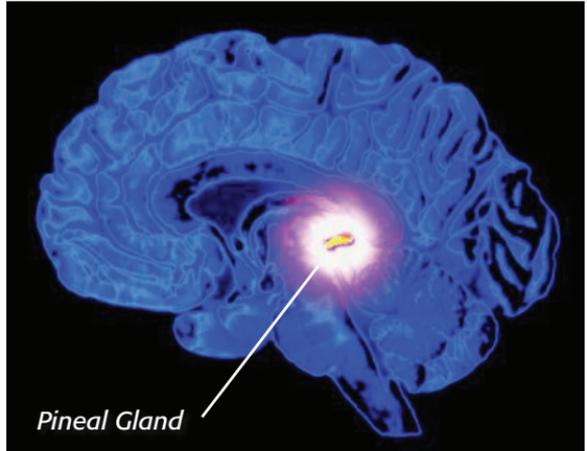
### The Myth:

Scientists cannot figure out exactly how electromagnetic fields (EMFs) are causally correlated so strongly to cancer, Alzheimer's disease and many other health problems.

### The Facts:

- Melatonin is a hormone produced primarily in the pineal gland of the brain at night and is one of the body's most powerful natural defenses against cancer, Alzheimer's and Lou Gehrig's disease, brain damage, infectious diseases, immune system disorders, cardiovascular diseases, depression, headaches, migraines, mood and sleep disorders, Parkinson's disease, Attention Deficit Hyperactivity Disorder, sexual dysfunction, infertility, obesity and many other health problems.
- Significant research has been conducted by many scientists who report that EMF exposure reduces melatonin production and secretion. Cherry (2001) has summarized much of this research, including a long list of references from peer-reviewed publications, and has reported that EMFs are genotoxic (substances that cause genetic damage).
- Multiple evidence from independent laboratories indicates that extremely low frequency (ELF) EMFs, such as those emitted from overhead high voltage power lines, cause damage to cell chromosomes and strand breaks in DNA that cells are not able to repair because EMFs have caused a reduction in melatonin (Cherry 2001).
- The negative effects of EMFs on melatonin have been known for many years. For example, exposure to EMFs reduced melatonin levels at night in laboratory animals (Reiter et al. 1988, Wilson et al. 1983).

- A decrease in production of melatonin at night in women exposed to magnetic fields (Davis et al. 2001, Levallois et al. 2001) and the inhibition of the cancer fighting action of melatonin by magnetic fields (Ishido et al. 2001), significantly adds to our understanding of how exposure to power line frequency magnetic fields may result in adverse health effects (Henshaw and Fewes 2004).



- In summary, reduced melatonin from 50/60 Hz EMF exposure is the core biological mechanism or explanation (Cherry 2001) for many, if not the majority, of the documented negative health impacts of EMFs. The researcher indicates that the studies reviewed strongly confirm that ELF EMFs are genotoxic and carcinogenic, and he concludes that EMFs need to be strongly minimized to reduce the serious documented health effects.

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