



## Electricity paralyses the Immune System

During the general debate over the health effects of the different electrical fields from two opposing interest groups, on one side the electrosmog producers and on the other the people affected, the threshold limit skeptics receive almost through the back door help of a branch of unexpected scientific research that did not actually had the goal to begin with, to investigate the health risks of electricity – the research into melatonin.

Scientists recognize from pineal gland research that electromagnetic fields can interfere strongly with the gland that it no longer produces the extremely important hormone melatonin or else has limited function. This hormone has a multiplicity of different effects on our bodies, possibly the most important of which is to control and optimize the human immune system, and in doing so ensuring resistance against cancer and to protect our cells from radiation damage. During the course of the research into melatonin, which began some 30 years ago, it became apparent that there is a relationship between sleep disturbances and severe diseases like AIDS, cancer, multiple sclerosis, diabetes, heart disease, Parkinson, Alzheimer, etc. The victims of these diseases had one thing in common; their melatonin level was noticeably low. It was not the disease however, that was the reason for the low melatonin levels, rather the low levels were the cause of the disease in the first place. It turned out that a low level of melatonin in the blood weakened the immune system to such an extent that it could no longer fulfill its role of protecting the body from pathogenic germs and cell-destroying molecules, such as free radicals.

It is an indication of how potent melatonin is that in the body the levels that occur are measured in nanograms that are billionths of a gram, and the pineal gland produces it in trillionths of a gram. Maybe as a result of these unimaginable small amounts it took a long time for this hormone to be discovered. In time, scientists realized the significance of melatonin in the prevention of diseases. Now, special attention was directed toward the search for the factors that influenced the pineal gland so much that the melatonin production was either limited or completely stopped. The cause of the disturbance was identified as chemicals, which are present in different medications, in practically all pain killers, heart supplements, beta blockers, blood-pressure medication, sleeping pills and sedatives.

The fact that there was a significant relationship between electromagnetic fields, radiation and certain illnesses was known since the first epidemiological examinations in the Seventies. They showed statistically significant results: Men in "Electrical careers", telephone technicians, electricians and power plant workers, all got cancer six times more frequently than others; and for female workers in electrical power stations, the mortality rate due to breast cancer was forty times higher than for other professions.

Research results from Robert Liburdy at the University of California reveal that electromagnetic fields do not only reduce or block the production of melatonin, but they also impede the functional capability of the melatonin. The melatonin loses its cancer impedance function as a result of the field influence.



The fact that the impairment of the pineal gland and the subsequently occurring repression of melatonin production, as well as the loss of effectiveness are caused by thermal effects up to now this fact has not yet been alleged by the advocates of the side, who want to see the health effects of electrical fields restricted exclusively to the thermal effects. When one considers that the small pineal gland lies almost exactly in the centre of the head, under the brain stem, the influence of thermal effects appears absurd. **It remains incomprehensible then that despite this knowledge, non-thermal effects that in this case undoubtedly are present, are not taken into consideration for the recommendation of threshold limits.**

A laboratory test has shown that the strength of the electromagnetic field in no way determines the non-thermal effects. In the test, human tumor cells were exposed to a low dose magnetic field of 12 Milligauss. This is equivalent to the field density in front of an electric oven when the front plate is turned on high level. One part of the tumor cells were primed with melatonin, which normally impedes the growth of their growth, the other part was not primed. After seven days, it was observed that the tumor cells cultivated with melatonin displayed a similar growth rate as the unprimed cells. The relatively weak electromagnetic field was sufficient to block the protective function of the melatonin.

The melatonin research shows:

"No specified low radiation dose can be considered to be absolutely safe."

Russel J. Reiter, Professor for Endocrinology at the University of Texas

The German Nobel prize winners Bert Sakmann and Erwin Neher have proved through many years of research that extremely low electrical currents of only millionths of ampere control all functions of the organism. In this way, disturbances from electromagnetic fields lead, above all, to impairment of the brain function.

Electromagnetic fields with very low, but apparently very potent biological frequencies, represent a potential source of danger as these fields occur wherever a lamp or device needs electricity, a transformer or power supply unit is turned on – and that is often in the immediate vicinity of homes or workplaces.

Nancy Wertheimer, a researcher from Denver, discovered over twenty years ago in a study about Leukemia cases, that the death rate for children who lived near transformer stations was two or three times higher. Since then, cancer researchers have connected melanoma (skin cancer), lymphoma (lymph node cancer), brain tumors, prostate and breast cancer with electromagnetic fields. New investigations proved evidence of connections with depression, Alzheimer and spontaneous miscarriage, in addition to sudden infant death.

It has been adequately investigated and documented that there is a direct correlation between natural magnetic fields, which are produced by geomagnetic activities, and an increase in heart attacks. There is nothing to be said that artificially generated magnetic fields do not have effects on health.



It is striking that there have been parallel developments of electrification of the environment and the increase in certain illnesses. For an American in 1940, the risk of contracting breast cancer up to the age of 85 lay at 1:20; today, the odds are 1:8! Germany is not far behind this development.

Dr. Sam Koslov from John-Hopkins University, USA, in a conference of the American Environmental Agency (EPA) reported a possible connection between the influence of micro-waves and the development of Alzheimer disease. This leads to slow progressive changes to the brain with decreasing concentration ability and memory disturbances. Studies show that the long term effects of fluorescent lights can have similar effects. For example hair loss, vegetative features, fatigue, irritability, nervousness and burning eyes. The cause of this appears to be a type of flicker effect, that occurs due to the switching on and off of 100 times per second, 100 hertz, and which exists for every fluorescent tube. We do not consciously notice it because of the fast switching impulses – we are however nevertheless affected by it.

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