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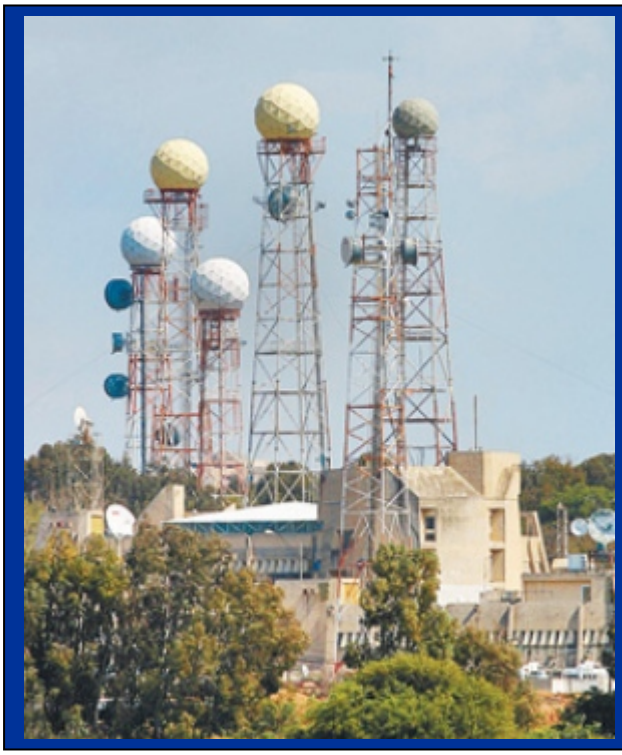
IDF soldiers exposed to radiation risk developing cancer within 10 years

Study shows that found that there can be very short latency periods between the time of exposure to electromagnetic radiation during military service and development of cancer.

By Dan Even

A new study has found that soldiers exposed to electromagnetic radiation during military service are at heightened risk of developing cancer within 10 years or less after their first exposure.

Although most of the study's patients came into contact with electromagnetic fields during their military service, the Israel Defense Forces has not recognized any of them as having cancer resulting from occupational exposure to radiation.



An array of antennas at an IDF base neat Glilot Junction

Photo by: David Bachar

The study, conducted by researchers from the Hebrew University's Braun School of Public Health and Community Medicine, found that there can be very short latency periods between the time of exposure and development of cancer in people with intense or prolonged

exposure to electromagnetic fields - emitted, for instance, by antennas and radar or communications equipment - in the course of their work.

Previous studies have described excess cancer risks from these high occupational exposures, but none have addressed the issue of short latency periods from high exposure to EMFs. The study was conducted by Dr. Yael Stein, Prof. Elihu D. Richter and researcher Or Levy-Nativ.

The study points to the need for better understanding of the carcinogenic potency of EMF and better protective measures against them.

"These young men and women are the nation's eyes and ears," wrote Prof. Richter in a letter to the attorney general, Yehuda Weinstein. "Our results state the case for protecting those who are protecting us. This means recognizing their risks now and taking action to protect them from high exposures to radio frequency/microwaves."

In the past two decades, 47 cancer patients - including eight with multiple primary cancer sites - came to the school's Unit of Occupational and Environmental Medicine with histories of prior occupational exposure to various types and intensities of EMFs. In 15 cases, the period between first exposure and diagnosis was less than five years, and in 12 cases the latency periods ranged from five to 10 years.

The periods of exposure to EMFs among the group of patients ranged from five months to 33 years.

Most of the patients were in their early 20s and had extremely short latent periods. Of those with a latency period of five years or less, there were eight hemolymphatic cancers and nine solid tumors that included testis, head and neck (including brain) and gastrointestinal tract, including two with two primary cancers.

While the research did not prove that there was a clear statistical connection between exposure to EMFs and the onset of cancer in the patients who were included in the study, the researchers claim that the patterns of latency for different types of tumors suggest a coherent and biologically plausible pattern in relation to the onset of exposure to EMFs.

The study was recently published in the European Journal of Oncology. The article does not mention the IDF as an occupational factor that increases the likelihood of developing cancer, but 80 percent of the research subjects were exposed to EMFs during their army service.

According to Dr. Stein, "High exposure to EMFs occurs with tasks involving fixing of radar equipment, sitting in vehicles with antennas and communication equipment, carrying radio equipment on the waist or back all day, or working in offices located very close to powerful transmitting antennae, or situation rooms that are packed full of communications equipment and radios."

Stein, who is doing a doctorate on modeling of EMF exposure sources and penetration into the body, emphasized that she and her colleagues are not calling for an end to the use of radiation-emitting equipment. Rather, she advocated the use of technological developments such as radiation-blocking fabrics or plastic shields in order to reduce exposure to EMFs.

Lloyd Morgan of the Environmental Health Trust, a U.S. scientific watchdog group, wrote, "The importance of this paper cannot be overstated. It suggests that a shift is required toward a new paradigm that non-ionizing radiation could be a universal carcinogen similar to ionizing radiation."