Imagine a tiny, light-sensitive gland nestled deep within the middle of your brain. That’s exactly where you’ll find the pineal gland.

Once dismissed as useless, it is now considered to be one of the most important glands in the body, primarily because it secretes the hormone melatonin.

Melatonin plays a crucial role in the health of the body. Our wake/sleep cycles are regulated by melatonin, and you need this hormone to achieve deep, regenerative sleep. However, you must sleep at night and in total darkness in order for melatonin to be secreted.

Melatonin’s cancer connection
Only recently have scientists discovered that melatonin is a powerful breast cancer fighter. It protects the body in several ways. First, it is a potent antioxidant, five times more powerful than vitamin C and twice as strong as vitamin E.

Second, melatonin can control the timing and release of estrogen, a hormone involved in the development of breast cancer. Last, melatonin initiates an anticancer signal to breast cancer cells; 90 percent of human breast cancers have specific receptors for this signal. Studies have found that breast tumours are active during the day but will “sleep” at night when exposed to melatonin. The nighttime release of melatonin creates the signal capable of slowing breast cancer growth by as much as 70 percent.

Women with breast cancer can have as little as one-tenth the melatonin levels of healthy women, which may help to explain why some women nightshift workers have shown up to a 60 percent increased risk of breast cancer compared with dayshift workers.

Ensuring proper melatonin production is essential for breast cancer protection, as melatonin prevents the initiation of breast cancer, slows tumour growth, and prevents metastasis of tumours.
EMFs inhibit melatonin

Our modern world is awash in electro-pollution. Exposure to man-made electromagnetic fields (EMFs) from power lines, cell phones, radar, microwaves, satellites, computers, electric appliances, and Wi-Fi hot spots is now far greater than it was in our grandparents' time. Some health advocates have gone so far as to state that the greatest polluting element in the earth's environment is the proliferation of electromagnetic fields.

The unrelenting exposure to high levels of EMFs poses another danger: EMFs inhibit the essential nocturnal synthesis of melatonin. Studies have shown that breast cancer cells that had stopped growing when treated with melatonin actually resumed proliferation when exposed to strong EMFs.

Magnetic fields have the ability to disrupt cell-signalling systems, our internal communications network, which determines how cells respond to their environment. This mechanism has helped to explain why reduced melatonin levels from EMFs contribute to a number of cancers, including breast cancer, prostate cancer, melanoma, and ovarian malignancies.

It is now known that melatonin suppression occurs at frequencies not far above those of common household appliances, in ranges of 50 to 60 Hz. For example, enough continuous EMF exposures are emitted by bedside cordless-phone base stations or digital clocks to suppress melatonin production. A 1998 study reported a 43-percent increased risk for breast cancer in women who had occupational exposures to the EMFs emitted by mainframe computers.

Cell phones present a double whammy to our bodies. In addition to emitting disruptive EMFs, cell phones pulse microwave energy, which may interfere with neurological functioning. Therefore, continual cell phone use may decrease the pineal gland's production of melatonin.

When it comes to EMFs, it is best to put precautionary principles into practice: reduce exposure and limit cell phone use as much as possible; minimize the effects of EMFs by using protective devices on your cell phone and electrical appliances; and strengthen your immune system by including antioxidant nutrients such as green tea, resveratrol, selenium, and vitamins A, C, and E.

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