alternatives

MACK IN THE CENTER of your head, right about where your spinal column meets your brain, there's a pea-sized gland whose purpose stumped scientists for centuries. For the longest time, all anyone knew about the pineal gland was that it responded to light. Some speculated the pineal was a vestigial third eye. Philosopher René Descartes proposed that it was the seat of the soul.

Finally, in 1958, researchers discovered that the pineal gland produced a hormone called melatonin. Since then, melatonin has been tried—with varying degrees of success—as a cure for jet lag, an all-purpose sleep aid, a libido booster, and a potion to reverse aging. Last spring, a group of cancer researchers meeting at the National Institutes of Health considered the biggest, most surprising claim yet for melatonin: It may be useful in preventing and treating breast cancer.

The prevention part of this theory got its start in 1985 as the brainchild of epidemiologist Richard Stevens of the University of Connecticut Health Center. Stevens knew—as all epidemiologists know—that breast cancer is a disease of civilization: Women in industrialized nations have a five to seven times greater risk of developing the disease than women in underdeveloped countries do. Other researchers have wondered whether a high-fat diet might be to blame, or modern women's more leisurely path to childbearing and the breastfeeding that's known to protect against breast cancer.

But Stevens had seen studies in which rats had their pineal gland removed, only to become particularly vulnerable to breast-cancer-causing chemicals. He knew, too, that light—both natural and electric—is nearly as effective as surgery in stopping the flow of melatonin. Stevens says, "Melatonin is the chemical expression of darkness in our bodies." In societies with few or no electric lights, women produce melatonin from sundown to daybreak. By contrast, a woman who starts her day with Bryant Gumbel and ends it with David Letterman's smirking sign-off halves her melatonin-producing hours. That's a chronic disruption of the natural pineal cycle, says Stevens, and, theoretically, it could raise the risk of breast cancer.

Other researchers found Stevens's idea compelling but tough to investigate. In 1991, epidemiologist Robert Hahn (now at the Centers for Disease Control and Prevention) hit on a way to put the theory to a partial test. The optic nerves of profoundly blind women don't respond to light, so their pineal glands produce melatonin on a regular schedule. If melatonin protects

Some researchers are asking a troublesome question: Could a habit of late nights and early mornings raise a woman's risk of breast cancer?

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against breast cancer, Hahn reasoned, then blindness should be somewhat protective as well. Indeed, when he checked thousands of hospital records, he found the likelihood of a blind woman having breast cancer was about half that of women with sight.

Since then, epidemiologists in Norway and Sweden have analyzed their cancer registries, finding that the worse one's sight is, the lower the risk of cancer. German researchers even investigated cancer rates above the Arctic Circle, reasoning that the long nights may boost melatonin production; again, the results suggested that the hormone plays a protective role.

Start your day with Bryant Gumbel and end it with David Letterman's smirking sign-off, and you could be cutting your melatonin levels by half.

Exciting, no question about it. But other scientists at the NIH conference had even more surprising news: Doses of melatonin might radically improve the treatment of breast cancer. According to Steven Hill, an oncologist at Tulane University in New Orleans, petri-dish studies with human cancer cells suggest that melatonin blocks estrogen receptors on the tumor cells, starving the tumor of the hormone that spurs its growth. (About half of all breast cancers are estrogen-sensitive.) It doesn't take much melatonin to do the job, either. "The amount the pineal gland makes at night was enough to arrest cancer cells," says David Blask, a cancer researcher at the Bassett Research Institute in Cooperstown, New York, who has done related work.

Hill and others have also tested melatonin in combination with standard anti-estrogen drugs. In test tubes, Hill dosed breast cancer cells with retinoid acid, a chemotherapy drug with vicious side effects. He gave some of the cells a melatonin bath beforehand. Those cancer cells, Hill found, were more easily killed

Web Wary
Type in carpal tunnel syndrome on Lycos or Yahoo and you'll be rewarded with a plethora of alternative and mainstream medical advice. But beware. Scientists at the University of Pennsylvania did just that, checking out the first fifty sites from each of five search engines. Seventy-five were duplicates. Of the rest, 63 percent were merely fronts for businesses, which were often selling controversial cures. About one in seven sites contained misleading information.

MOOD-LIFTING NEWS
Want to use herbs to manage your state of mind? A new study at the University of California, Los Angeles, suggests the use of St. John's wort, ginkgo, and ginseng to improve mood. One respondent with depression took ginkgo and ginseng and, in a year's time, had a 60 percent reduction in symptoms. Another says ginseng and St. John's wort improved her mood. Her doctor referred her to Dr. Stephen H. Saper, a psychiatrist at the UCLA School of Medicine, who says these herbal supplements should be tried in combination with traditional antidepressants. He cautions that these natural remedies can have side effects, so check with your doctor before taking them.
andrew weil
on women's health

Whether prayer can help patients get better has been a matter of contention in certain medical circles. The latest salvo comes from a study published in the Archives of Internal Medicine. It was designed to find out whether prayer could help patients hospitalized with heart problems. The 990 patients were randomly assigned to two groups. Those in one got standard care and were prayed for by people who didn’t know them, those in the second group got only the usual care. None of the patients were told that the study was being conducted. It turned out that those who were prayed for experienced less pain and were more likely to recover.

Your case is somewhat different because you knew your friends were praying for you. Any benefits from the prayers could be explained as the result of your belief in them. In other words, you may have had what we call a “placebo” response to the prayers (which doesn’t diminish their value for your recovery).

If further studies support the findings of the most recent one, the medical community will have to rethink the issue of “distant healing” and the effects of prayer on the physical world. In any case, based on what we know now, prayer certainly can’t hurt.

ELIMINATE THE TRIGGER
IF YOUR COUGHING IS PROMPTED BY A VIRUS
IF YOU HAVE A PRODUCTIVE COUGH (BRINGING UP MUCUS), FIRST SEE YOUR DOCTOR TO FIND OUT IF YOU HAVE A BACTERIAL INFECTION, IF SO, YOU MAY NEED ANTIBIOTICS.

If your cough is dry, drink lots of fluids to keep your throat moist. Steam inhalations can also be very helpful. Add some sage or eucalyptus (a handful of leaves or a teaspoon of essential oil) to a pot of hot water. Drape a towel over your head, lean over the pot, and breathe deeply.

You could also try taking a dropperful of tincture of mullein (a plant in the figwort family) in a little warm water every four hours. If that doesn’t work, your best bet is an over-the-counter remedy containing dextromethorphan, which suppresses the cough reflex.

When you’ve got a persistent cough that isn’t due to a cold, flu, or other type of infection, think about what may be causing it. Is your cough worse at home or at work? The problem could be dust, cigarette smoke, or heaters that dry and irritate your throat. In addition to drinking plenty of fluids, consider getting a humidifier.

Since your cough recurs every winter, you might be allergic to something in the indoor air. If so, an air filter system could help. Or you could opt for a less expensive solution: Invest in some houseplants. Peace lily, spider plant, Chinese evergreen, and golden pothos can make a dramatic difference in indoor air quality. [For more on this topic, see “Just Ask Me” on page 18.]

Place them throughout your living space, ideally in spots where air circulates.

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Melatonin and Breast Cancer

by the retinoid acid, suggesting that melatonin might allow patients to use lower doses of the debilitating medicine. A few studies have been done in humans. In Milan, Italy, oncologist Paolo Lissoni administered one of several powerful antineoplastic agents alone or alongside melatonin to 250 patients with metastic cancer that had failed to respond to treatment. The patients getting the combo therapy experienced fewer and milder side effects. And compared with patients on the chemo-only treatment, twice as many of the patients getting melatonin survived a year or more.

"Lissoni’s clinical trials are small," says Blask, "but if you take all his studies in aggregate, melatonin looks promising." Despite the good news, no one is ready to recommend melatonin for cancer patients just yet. "I get calls all the time from cancer patients who are looking for something new," says Blask. "I never recommend that they take melatonin. The only studies done in the U.S. have been on animals, so we really don’t know what the proper dose would be."

And no one is suggesting the worried well use melatonin in hopes of breast cancer prevention, either. In fact, Hill advises caution. "It’s a hormone, not an herb or a food. It could have all kinds of side effects," he says. Some studies have suggested too much melatonin can disrupt menstruation, for instance. "You wouldn’t take estrogen without a doctor’s guidance," says Hill. "Well, melatonin is the same thing, a powerful hormone. My belief is, don’t take it until we know more about it."

There are a few perfectly safe ways to get more melatonin. First, don’t drink to excess. In recent research, Stevens has found that alcohol can depress melatonin production. "More than three drinks can do it," he says. And get outdoors every day. "Sunlight seems to reset your circadian clock, and that’s key to maintaining a healthy hormonal rhythm." Of course, a good night’s sleep is critical. Blask’s work suggests it can goad the pineal gland into producing enough melatonin to prevent tumors from growing. Says Hill: "Go to bed earlier. Will that cure breast cancer? Probably not. But you never know—it may ward off some cases."