

A SAD story: Seasonal Affective Disorder

The gloom of winter seems to get inside some people, the dark affecting their mood as well as their days. In the late 1990s, the American Psychiatric Association (APA) recognized these winter blues as seasonal affective disorder, a name that seems to have been coined with its acronym, SAD, very much in mind. Light therapy, which involves sitting in front of bright, artificial light for a half an hour or so each day, lifts the mood of some people who suffer from the condition. But antidepressant medications may work just as well. There's also evidence, some of it anecdotal, that people with SAD will feel better if they get outside more, open up window shades, brighten up their indoor living spaces — in sum, take steps to increase their exposure to light overall. The same may be true for the many of us who don't meet the criteria for a SAD diagnosis, but who still get blue during these short days of winter.

Feel like hibernating?

People troubled by depression usually experience their dark moods in an on-again, off-again fashion. In that respect, SAD differs only in that the oscillations follow a seasonal schedule, with the depression usually coming on in the fall and lasting through the spring. There is a summertime version of the disorder, but it affects far fewer people. SAD sufferers get depressed at other times of the year, but the APA's definition requires that the seasonal episodes "substantially outnumber" the nonseasonal ones. And, strictly speaking, the diagnosis requires two straight years without any out-of-season depressions. The winter version of SAD is often compared to hibernation. People lack energy, sleep more than usual, crave sweets and starchy food, and gain weight. They may withdraw socially and have a hard time concentrating. Some describe a heavy feeling in the arms and legs.

Out of sync

Experts debate whether a causal relationship has been proved, but there's certainly circumstantial evidence that lack of sunlight in winter triggers SAD. The fact that light therapy is a remedy is one clue to a connection. Epidemiologic evidence showing that SAD is more common and lasts longer among people living at high latitudes is another. Exactly how lack of light can influence our moods is an open question. Light, of course, is the stimulus for vision: it excites cells in the retina in the back of the eye that send signals to the areas of the brain that create and process visual thought. But there are neural pathways from the retina to other parts of the brain, including the suprachiasmatic nucleus, a part of the hypothalamus that helps put many of our physiological processes (sleeping, body temperature) on a circadian, or 24-hour, cycle. So, according to one theory, people with SAD are out of phase with their biological clocks: awake and active when their internal timers, guided by the suprachiasmatic nucleus, would rather that they be snug in bed. Another theory: a lack of, or insensitivity to, light disrupts brain processes influenced by serotonin and dopamine, brain chemicals that play a role in setting our mood. It's also possible that other parts of the brain and body are involved in biological timekeeping, so even if a suprachiasmatic nucleus and related structures get in sync with winter, they're overruled, so people remain out of phase.

Lighten up

Studies of light therapy for SAD go back to the 1980s, but many have been small, short, or flawed in significant ways. Researchers conducting a meta-analysis found only 20 studies of the 64 published met their standards. Still, we can safely say that light therapy does help some people with SAD. Most studies have found it to be more effective first thing in the morning than later in the day. Most studies suggest SAD sufferers need about 30 to 45 minutes of exposure to a 10,000-lux light source daily for light therapy to be effective. Lux is a measure of light intensity; 10,000 is about the intensity of light from the sun at dawn. In most homes in the evening, 300- to 500-lux light is the norm. Light therapy has been tested as a treatment for several other conditions, including bulimia nervosa (which sometimes overlaps with SAD), postpartum depression, and Parkinson's disease.

Pills instead

Light therapy takes time and some discipline: people have to sit in front of those lights pretty much every day. Antidepressant medication would be a lot more convenient. In 2006 the FDA approved Wellbutrin, a brand of bupropion, as a treatment for SAD. A number of studies have shown that fluoxetine (Prozac), sertraline (Zoloft), and other drugs in the selective serotonin reuptake inhibitor (SSRI) class of antidepressants might help SAD patients. People take melatonin for jet lag, but it might be useful for SAD, too. Oregon researchers have reported that taking melatonin pills in the afternoon helped some SAD patients by resetting their biological clocks.