



sunlight exposure and health

Mind-Body-Mood Advisor: Bright Light Does More than Banish Depression

From trouble sleeping to overeating, the darker days of winter may be affecting your health more than you realize.

By Jeffrey Rossman, PhD

what you can do:

Aim for 30 minutes of sunlight exposure a day; schedule some outdoor time when the sun's out, use a bright-light fixture when it's not.

RODALE NEWS, LENOX, MA—Are you getting enough light? If you're like most of us, you may not be. Even without record-setting blizzards like we saw last week, more and more Americans are spending less and less time outdoors. As we spend more time indoors, we are becoming increasingly deprived of the bright-sunlight exposure that is essential to our health and well-being. The resulting light deficiency can cause fatigue, irritability, depression, carbohydrate craving, sleep problems, and weight gain. Getting 30 minutes of sunlight exposure a day can dramatically improve these symptoms. Exposure to sunlight immediately boosts levels of neurotransmitters that produce a feeling of relaxed well-being. In addition, long-term exposure to sunlight raises levels of vitamin D, an essential nutrient that most Americans are deficient in.

THE DETAILS: If you live in a northern state, by this time of year you may be experiencing significant light deprivation, thanks to both shorter days and more time spent indoors. Most people in northern states feel more irritable and sluggish in the winter, and studies also show that people who live in sunny climates tend to feel happier than people in darker environments. In fact, a recent survey of 1.3 million Americans found that those who live in the sunniest U.S. states tend to report the highest levels of happiness. The seven happiest states in the 50-state survey were all in the Sun Belt: Louisiana, Hawaii, Florida, Tennessee, Arizona, South Carolina, and Mississippi.

Although light deprivation is more prevalent in the winter, it does occur year round. People who suffer from Seasonal Affective Disorder, or winter depression, often experience symptoms of depression at other times of year if they don't get enough light, and they benefit dramatically from high-intensity light exposure. People with nonseasonal depression, and those suffering a variety of other conditions, have also been found to improve with exposure to high-intensity light. Light therapy can be helpful for PMS, depression during pregnancy, bulimia, and insomnia.

How does it work? Bright light absorbed through the eyes stimulates production of serotonin, the same neurotransmitter that's boosted by the type of antidepressant medication called selective serotonin reuptake inhibitors (SSRIs). The effect can be quite remarkable. For treating depression, bright light works faster—usually within a week—with fewer side effects than medication.

Read on for advice about bringing more healthy-sunlight exposure into your life.

On a snowy, rainy, or cloudy day, it may not be practical or possible to get 30 minutes of exposure to bright sunlight. If you're sensitive to the effects of light deficiency, using a high-intensity [light box](#) can provide the boost you need. This is a convenient and reliable way to receive your daily dose of bright light when sunlight or outdoor time isn't available. To receive maximum benefit, the light fixture needs to provide 10,000 lux of light at a distance of two feet. That brightness is equivalent to being outside on a sunny day. The light does not need to be full-spectrum light. In fact, it should filter out potentially harmful ultraviolet rays.

Bright light improves sleep, as well, by helping to set your biological clock. When bright light comes in through the eyes, it signals the brain to be alert. And it triggers the pineal gland to delay the release of melatonin, the body's sleepiness hormone. Those who have trouble falling asleep at bedtime or waking up in the morning can benefit from bright-light exposure in the morning to put their sleep/wake cycle back on track. Similarly, those who wake up too early are often helped by bright-light exposure in the late afternoon.

WHAT IT MEANS: *Sunlight can have a powerful effect on our mood and our health. Perhaps because we see it almost every day, we take its effects for granted. It's on those days when we don't get much of it, though, that its importance is most apparent. Here are some ways to make sure you get the sunlight you need:*

- **Try to get at least 30 minutes of sunlight a day**, even if you have to bundle up against the cold. Walking or jogging outside on a sunny day is an ideal way to combine exercise and light exposure. Of course there will be days when you can't get the outdoor time you need, but the more days you get some sun, the better you'll feel.
- **Do not wear sunglasses** when trying to receive the mood-boosting effects of sunlight. The light needs to be absorbed through your eyes. Don't leave your eyes unprotected in bright or direct sunlight, though, or in lots of sun reflecting off of snow and ice.
- **Consider using a high-intensity light fixture or light box** to receive the benefit of bright light when you can't get sunlight for an extended period of time. There are many high-intensity lights available, ranging in price from \$100 to \$500. Some of the best models are in the low-\$100 price range, so research your purchase carefully. In selecting a model, choose a fixture that has an adjustable stand. It is best if the light is just above eye level, shining down towards your eyes from a distance of 18 to 24 inches. You should not look directly into the light. You can read the newspaper, work on the computer, watch TV, eat breakfast, or jog on a treadmill, as long as the light is directly in front of you and shining slightly above eye level.

• **Don't use the lamp too close to your bedtime.** Late-night exposure to bright light can energize you and make it difficult to get to sleep. As mentioned above, you may find that exposure in the early morning or late afternoon will help you adjust your sleep/wake cycle.

• **Take vitamin D supplements if you are D deficient.** Our bodies produce this vitamin upon exposure to sunlight, so a lack of sunlight can also mean a lack of vitamin D. A simple blood test ordered by your doctor can determine your vitamin D level. Recent research suggests that most people living in northern climates have low vitamin-D levels and can benefit from supplementation. Some foods contain vitamin D, but it can be hard to get enough from food sources alone. See our story on the newest vitamin D guidelines, and our vitamin D topic page.

• **To learn more** about the health- and mood-enhancing effects of bright light, visit the website of the Center for Environmental Therapeutics.