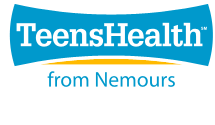
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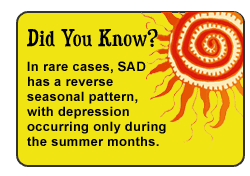
**Seasonal Affective Disorder**

Maggie started off her junior year of high school with great energy. She had no trouble keeping up with her schoolwork and was involved in several after-school activities. But after the Thanksgiving break, she began to have difficulty getting through her assigned reading and had to work harder to apply herself. She couldn't concentrate in class, and after school all she wanted to do was sleep.

Maggie's grades began to drop and she rarely felt like socializing. Even though Maggie was always punctual before, she began to have trouble getting up on time and was absent or late from school many days during the winter.

At first, Maggie's parents thought she was slacking off. They were upset with her, but figured it was just a phase — especially since her energy finally seemed to return in the spring. But when the same thing happened the following November, they took Maggie to the doctor, who diagnosed her with a type of depression called **seasonal affective disorder**.

**What Is Seasonal Affective Disorder?**

Seasonal affective disorder (SAD) is a form of [depression](http://kidshealth.org/en/teens/depression.html) that appears at the same time each year. With SAD, a person typically has symptoms of depression and unexplained fatigue as winter approaches and daylight hours become shorter. When spring returns and days become longer again, people with SAD experience relief from their symptoms, returning to their usual mood and energy level.

**What Causes SAD?**

Experts believe that, with SAD, depression is somehow triggered by the brain's response to decreased daylight exposure. No one really understands how and why this happens. Current theories about what causes SAD focus on the role that sunlight might play in the brain's production of key chemicals.

Experts think that two specific chemicals in the brain, melatonin and serotonin  may be involved in SAD. These two chemicals help regulate a person's sleep-wake cycles, energy, and mood. Shorter days and longer hours of darkness in fall and winter may cause increased levels of melatonin and decreased levels of serotonin, creating the biological conditions for depression.

Melatonin is linked to sleep. The body produces it in greater quantities when it's dark or when days are shorter. This increased production of melatonin can cause a person to feel sleepy and lethargic.

With serotonin, it's the reverse — serotonin production goes up when a person is exposed to sunlight, so it's likely that a person will have *lower* levels of serotonin during the winter when the days are shorter. Low levels of serotonin are associated with depression, whereas increasing the availability of serotonin helps to combat depression.

**What Are the Symptoms of SAD?**

Someone with SAD will show several particular changes from the way he or she normally feels and acts. These changes occur in a predictable seasonal pattern. The symptoms of SAD are the same as symptoms of depression, and a person with SAD may notice several or all of these symptoms:

* **Changes in mood.** A person may feel sad or be in an irritable mood most of the time for at least 2 weeks during a specific time of year. During that time, a guy or girl may feel a sense of hopelessness or worthlessness. As part of the mood change that goes with SAD, people can be self-critical; they may also be more sensitive than usual to criticism and cry or get upset more often or more easily.
* **Lack of enjoyment.** Someone with SAD may lose interest in things he or she normally likes to do and may seem unable to enjoy things as before. People with SAD can also feel like they no longer do certain tasks as well as they used to, and they may have feelings of dissatisfaction or guilt. A person with SAD may seem to lose interest in friends and may stop participating in social activities.
* **Low energy.** Unusual tiredness or unexplained fatigue is also part of SAD and can cause people to feel low on energy.
* **Changes in sleep.** A person may sleep much more than usual. Excessive sleeping can make it impossible for a student to get up and get ready for school in the morning.
* **Changes in eating.** Changes in eating and appetite related to SAD may include cravings for simple carbohydrates (think comfort foods and sugary foods) and the tendency to overeat. Because of this change in eating, SAD can result in weight gain during the winter months.
* **Difficulty concentrating.** SAD can affect concentration, too, interfering with a person's school performance and grades. A student may have more trouble than usual completing assignments on time or seem to lack his or her usual motivation. Someone with SAD may notice that his or her grades may drop, and teachers may comment that the student seems less motivated or is making less effort in school.
* **Less time socializing.** People with SAD may spend less time with friends, in social activities, or in extracurricular activities.

The problems caused by SAD, such as lower-than-usual grades or less energy for socializing with friends, can affect self-esteem and leave a person feeling disappointed, isolated, and lonely — especially if he or she doesn't realize what's causing the changes in energy, mood, and motivation.

Like other forms of depression, the symptoms of SAD can be mild, severe, or anywhere in between. Milder symptoms interfere less with someone's ability to participate in everyday activities, but stronger symptoms can interfere much more. It's the seasonal pattern of SAD — the fact that symptoms occur only for a few months each winter (for at least 2 years in a row) but not during other seasons — that distinguishes SAD from other forms of depression.

**Who Gets SAD?**

SAD can affect adults, teens, and children. It's estimated that about 6 in every 100 people (6%) experience SAD.

The number of people with SAD varies from region to region. One study of SAD in the United States found the rates of SAD were seven times higher among people in New Hampshire than in Florida, suggesting that the farther people live from the equator, the more likely they are to develop SAD.

Interestingly, when people who get SAD travel to areas far south of the equator that have longer daylight hours during winter months, they do not get their seasonal symptoms. This supports the theory that SAD is related to light exposure.

Most people don't get seasonal depression, even if they live in areas where days are shorter during winter months. Experts don't fully understand why certain people are more likely to experience SAD than others. It may be that they're more sensitive than others to variations in light, and therefore may experience more dramatic shifts in hormone production according to their exposure to light.

Like other forms of depression, females are about four times more likely than males to develop SAD. People with relatives who have experienced depression are also more likely to develop it. Individual biology, brain chemistry, family history, environment, and life experiences may also make certain individuals more prone to SAD and other forms of depression.

Researchers are continuing to investigate what leads to SAD, as well as why some people are more likely than others to experience it.

**How Is SAD Diagnosed and Treated?**

Doctors and mental health professionals make a diagnosis of SAD after a careful evaluation. A medical checkup is also important to make sure that symptoms aren't due to a medical condition that needs treatment. Tiredness, fatigue, and low energy could be a sign of another medical condition such as [hypothyroidism](http://kidshealth.org/en/teens/thyroid.html), hypoglycemia, or [mononucleosis](http://kidshealth.org/en/teens/mononucleosis.html). Other medical conditions can cause appetite changes, sleep changes, or extreme fatigue.

Once a person's been diagnosed with SAD, doctors may recommend one of several treatments:

**Increased Light Exposure**

Because the symptoms of SAD are triggered by lack of exposure to light, and they tend to go away on their own when available light increases, treatment for SAD often involves increased exposure to light during winter months. For someone with mild symptoms, it may be enough to spend more time outside during the daylight hours, perhaps by exercising outdoors or taking a daily walk. Full spectrum (daylight) lightbulbs that fit in regular lamps can help bring a bit more daylight into your home in winter months and might help with mild symptoms.

**Light Therapy**

Stronger symptoms of SAD may be treated with light therapy (also called **phototherapy**). Light therapy involves the use of a special light that simulates daylight. A special light box or panel is placed on a tabletop or desk, and the person sits in front of the light for a short period of time every day (45 minutes a day or so, usually in the morning). The person should occasionally glance at the light (the light has to be absorbed through the retinas in order to work), but not stare into it for long periods. Symptoms tend to improve within a few days in some cases or within a few weeks in others. Generally, doctors recommend the use of light therapy until enough sunlight is available outdoors.

Like any medical treatment, light treatment should only be used under the supervision of a doctor. People who have another type of depressive disorder, skin that's sensitive to light, or medical conditions that may make the eyes vulnerable to light damage should use light therapy with caution. The lights that are used for SAD phototherapy must filter out harmful UV rays. Tanning beds or booths should not be used to alleviate symptoms of SAD. Some mild side effects of phototherapy might include headache or eyestrain.

**Talk Therapy**

Talk therapy (psychotherapy) is also used to treat people with SAD. Talk therapy focuses on revising the negative thoughts and feelings associated with depression and helps ease the sense of isolation or loneliness that people with depression often feel. The support and guidance of a professional therapist can be helpful for someone experiencing SAD. Talk therapy can also help someone to learn about and understand their condition as well as learn what to do to prevent or minimize future bouts of seasonal depression.

**Medication**

Doctors may also prescribe medications for teens with SAD. Antidepressant medications help to regulate the balance of serotonin and other neurotransmitters in the brain that affect mood and energy. Medications need to be prescribed and monitored by a doctor. If your doctor prescribes medication for SAD or another form of depression, be sure to let him or her know about any other medications or remedies you may be taking, including over-the-counter or herbal medicines. These can interfere with prescription medications.

**Dealing With SAD**

When symptoms of SAD first develop, it can be confusing, both for the person with SAD and family and friends. Some parents or teachers may mistakenly think that teens with SAD are slacking off or not trying their best. If you think you're experiencing some of the symptoms of SAD, talk to a parent, guidance counselor, or other trusted adult about what you're feeling.

If you've been diagnosed with SAD, there are a few things you can do to help:

* Follow your doctor's recommendations for treatment.
* Learn all you can about SAD and explain the condition to others so they can work with you.
* Get plenty of exercise, especially outdoors. Exercise can be a mood lifter.
* Spend time with friends and loved ones who understand what you're going through — they can help provide you with personal contact and a sense of connection.
* Be patient. Don't expect your symptoms to go away immediately.
* Ask for help with homework and other assignments if you need it. If you feel you can't concentrate on things, remember that it's part of the disorder and that things will get better again. Talk to your teachers and work out a plan to get your assignments done.
* [Eat right](http://kidshealth.org/en/teens/healthy-snacks.html). It may be hard, but avoiding simple carbohydrates and sugary snacks and concentrating on plenty of whole grains, vegetables, and fruits can help you feel better in the long term.
* Develop a sleep routine. Regular bedtimes can help you reap the mental health benefits of daytime light.

Depression in any form can be serious. If you think you have symptoms of any type of depression, talk to someone who can help you get treatment.

Reviewed by: [D'Arcy Lyness, PhD](http://kidshealth.org/en/parents/reviewers.html#l)

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