

How can S.A.D. be treated?

In many ways, the treatment of SAD is similar to that of other major depressive episodes, utilizing antidepressant or mood stabilizing medication and/or psychotherapy. In addition, the exposure to bright light has been found to be an effective means of treating seasonal affective disorder. The individual sits in front of a bright light unit, a specialized, portable box which houses balanced spectrum fluorescent tubes. An individual's needs for light therapy specifies the duration of exposure and the optimal time of day. An individual should meet periodically with their health care professional and the dose of light therapy can be adjusted as needed.

How the light box works:

The light box provides a measured amount of balanced spectrum light equivalent to standing outdoors on a clear spring day. This has been shown to help regulate the body clock. Photobiologists point out that the light is registered by the eyes through the retina, which then transfers impulses to the hypothalamus in the brain to normalize the body clock function. The light from the box will help synchronize sleep/wake patterns with ones work and life style.

Who Suffers From S.A.D.

About 3/4 of S.A.D. sufferers are women, but S.A.D. affects men and children as well. The most typical age of onset is in the twenties, but other onsets are common such as during puberty, middle age, and old age. After women pass through menopause the numbers in men and women become equal. Susceptibility for S.A.D. appears to be inherited. Fifty percent of fibromyalgia patients see a seasonal worsening of their symptoms.

Factors Influencing Severity

S.A.D. can be experienced as an isolated disorder or may be experienced in conjunction with an existing mood disorder or chronic illness. The tendency toward S.A.D. or severity of the symptoms can be influenced by many factors, such as living in a northern latitude, recent cloudy weather patterns, family history of S.A.D., working in a windowless office, recent illness, or general life stresses.

What causes S.A.D.

Change in sunlight exposure is the key. The amount of day light exposure one receives and the changes in sunrise/sunset reducing the daylight hours in the fall and winter can affect sufferers of S.A.D. The most commonly believed hypothesis follows: although the body has natural daily rhythms, they are not fully precise and rely on the intensity of sunlight to provide adjusting cues. These cues originate in the retina at the back of the eye, creating signals which pass through the optic nerve to the mid brain, setting in motion a number of chemical changes. These changes include:

- 1) Increase in the neurotransmitter serotonin, necessary for a sense of well being.
- 2) Regulation and suppression of the hormone melatonin, which is a factor in normal sleep patterns and may influence sleeps recuperative benefits.

Basics of Bright Light Therapy Devices

The most common device used for bright light therapy is a fluorescent light box which produces a light intensity of 2,500 to 10,000 lux at a comfortable distance (1-2'). Light box intensity ratings are always at a given distance. Light weight portable boxes and those

mounted on a stand are available. Full-spectrum light is not necessary since intensity is most important, but a balanced-spectrum light minus UV-B emissions is considered ideal. Fewer headaches and eyestrain are associated with using balanced spectrum light. Most light boxes cost from \$250 to \$525. Light visors which using a battery pack, are worn on the head and allow for mobility. Light visors success rates appear to be somewhat lower. Dawn/dusk simulators are rheostat timers which are used in conjunction with a bedside lamp. These units gradually turn on the lamp light over a preset or variable period of time. Dawn/dusk simulators appear to be most effective for those with mild symptoms, for those who did not succeed with bright light therapy, and for those who have success with bright light therapy but still have difficulty waking up.

How Light Boxes Are Used

The light box is placed in front of the user at the recommended distance for the desired intensity. One should be directly in front of the unit as the light shines into the users eyes. The eyes need be open, and sunglasses should not be worn. Some may be instructed to look at the light box briefly at regular intervals. For many this doesn't seem to be necessary. The light box intensity of 10,000 lux is much brighter than normal indoor light which is usually 300-500 lux, but not as bright as summer sunlight which can be as bright as 100,000 lux.

Session Length

Exposure time is determined by the intensity of the light source. There are individual differences, but a 1/2 hour treatment at 10,000 lux or a 1 hour session at 5,000 lux once a day is the average. Most are comfortable with the 10,000 lux intensity level, and choose a unit that produces 10,000 lux at a usable and comfortable 13-16" distance from the light box. If eyestrain occurs it may be necessary to have shorter periodic sessions.

Bright Light Therapy Timing

The most successful treatments for S.A.D. involve identifying how the change in daylight shifts the person's daily circadian rhythms, especially in their sleep cycle. Most with S.A.D. symptoms show changes in their sleep/wake patterns and melatonin levels. Bright light is known to be a powerful regulator of melatonin and the sleep/wake cycle. S.A.D. and "Winter Blues" sufferers tend to show two common patterns in their sleep phase: Delayed or Advanced.

Session Timing for "Phase Delayed" Patients

About 80% show this pattern, this groups melatonin production and sleep period begin later at night, and moves into the normal morning waking hours. These patients have trouble waking up in the morning, and often feel sluggish for hours after awakening, even if they have slept longer than usual. Phototherapy sessions appear to be most effective for this group if placed between 6-8 am. Some experience a time during late afternoon or early evening that they become tired. Of those in the phase-delayed group about 50% have this tired time. Late evening arrives and the energy levels increase, which makes going to bed a normal time difficult. This may also result in poor sleep quality. For those, an optional second session of 5 to 10 minutes at 10,000 lux between 3-7 p.m. helps change this pattern and often improves sleep quality. This additional light may cause some users difficulty going to sleep.

