

Light Therapy



A natural treatment for seasonal (and non-seasonal) depression

Some people with depression notice a seasonal pattern to their mood. They become depressed as the sunlight fades in early or late fall and gradually feel better as winter turns to spring. These seasonal depressions often make people tired and hungry, craving sugars and fats.

Part of the cause of seasonal depression is a problem with the circadian rhythm, which is the body's internal clock that sets levels of energy, sleep and appetite. This clock is run by hormones and transmitters in the brain, such as melatonin. The brain uses sunlight to set this clock, and likewise people with seasonal depression can use artificial light to correct their circadian rhythm.

Light therapy treats seasonal depression with an effect as powerful as medication. It can also help antidepressants work better and can even work when used in the summertime.

Purchasing a Lightbox

Many companies advertise portable boxes, but these are usually too small to be useful. This problem is common when medical products, such as lightboxes, are not regulated by the FDA. Fortunately, a group of researchers in light therapy have stepped in to guide the public. Their group, the Center for Environmental Therapeutics (CET), has a useful web site at: www.cet.org.

For an affordable, well-researched choice, we recommend a Carex model (search for "Carex lightbox" on Amazon for \$105-\$150): Day-Light Classic (ASIN #B0009MFUWC), Classic-Plus (DL93011, pictured below). These all have the right specs and differ only in their base. The *Classic* has foldable legs (lighter and portable but less sturdy); the others have a larger base.

If purchasing a different brand, look for the following features in the lightbox:

Intensity: at least 2,000 lux; 10,000 lux is optimal

Screen Size: at least 12 x 17 inches

Wavelength: around 509 nm (White Light)

The bulbs should be replaced every 2 years (if using the Daylight search for *DL930 Replacement*



Bulb on Amazon; the box requires 3 bulbs and they are sold individually \$11 per bulb).

Using Your Light Box

You will need to sit directly under the lightbox for 1-2 hours a day to get the full effect. The box should hover over your head at an angle (e.g. 45 degrees) just like the sun. Try to stay within 12 inches of the light, but don't stare directly into it. The box should hover over your head at a 30-45

degree angle, much like the sun does. You can read, eat, or use a laptop while under it.

Light is good for mood, but only in the morning. Using the lightbox after 2:30pm can worsen mood by flipping the biological clock. Try to keep a regular sleep schedule and avoid staying up beyond 11pm.

To find out the optimal time to turn on the light, go to www.cet.org; links may change but currently click on *Therapeutic Resources and Tools* button, then *Self assessment tools* then *Your circadian rhythm type (AutoMEQ)*; answer the questions based on how you've felt recently and at the end it will tell you the best time to turn on the box (usually between 5:00 am and 8:15 am). If you cannot start it then that's ok – just get as close as you can. If you have trouble waking up to use the lightbox, try a dawn simulator, which improves energy by creating a virtual sunrise each morning: moodtreatmentcenter.com/dawnsimulator.pdf

It takes about 2 weeks for the full effects to the light to set in, but many people begin to feel better as early as 2-4 days after starting the light.

Use in Bipolar Depression

Light therapy is also effective in bipolar depression, but does have a risk of causing manic or agitated symptoms. That risk can be minimized by using the light between 12:00pm and 2:30pm. Start with 15 minutes under the box and increase by 15 minutes every week, towards an optimal time of 60 minutes under the box. If manic symptoms occur (e.g. agitation, insomnia, restlessness, racing thoughts, irritability), contact

your treatment team and lower the time under the box.

What month to start and end light therapy

Start the lightbox at least 2 weeks before you anticipate a seasonal dip in your mood. As the light increases in the spring, you can taper it down over 2 weeks by decreasing the time under the box (e.g. lowering by 15 minutes per week).

The sudden increase in light in March can trigger mania and agitation in people with bipolar disorder, so they may need to stop the lightbox in February. Blue-light filtering glasses can then be worn in the evening to prevent swings into springtime mania; read more at: moodtreatmentcenter.com/darktherapy.pdf

Side Effects and Precautions

Lightboxes are generally safe if they have a UV filter on the box. It is important not to stare directly into them as this can strain and even damage your eyes. Let your doctor know if you have any eye diseases. The most common side effect of the lightbox is headache.

More on Seasonal Affective Disorder

Seasonal Affective Disorder (SAD) typically comes on between ages 15 and 30. About 5% of people in the U.S. have S.A.D., and up to 20% have milder forms of the condition. The rates of SAD are surprisingly as high in North Carolina as they are in the North Eastern states. They start to go down around Columbia, SC and start to disappear down in Florida.

People also have seasonal mood shifts in the few weeks after the daylight savings shift in spring – we lose morning sun when the clock “springs” forward and it takes a little while to readjust. A good book on seasonal moods is *Reset Your Inner Clock* by Michael Terman, PhD.

–Chris Aiken, MD, adapted from *Bipolar, Not So Much* (Aiken & Phelps, WW Norton, 2017)