

## *Bright Light Therapy: A Non-Drug Way to Treat Depression and Sleep Problems*

### **What is bright light therapy?**

Bright light therapy (BLT) is a non-drug way to treat depression and sleep troubles.<sup>1</sup> BLT can be used to treat seasonal affective disorder (SAD), major depressive disorder (MDD), and bipolar disorder. It can also be used for sleep problems related to dementia, the sleep/wake cycle, and insomnia. BLT involves sitting in front of a light box for at least 30 minutes every morning. Light therapy can be used by both adults and children. It can be used alone or along with medications. BLT is safe, and people find it acceptable.<sup>1</sup>

### **Is BLT effective?**

- **Seasonal affective disorder (SAD)**

SAD is a condition in which people have low moods that appear in the fall or winter and improve in the spring or summer. People with SAD may also be very tired, sleep more, be hungrier, crave sugar, and gain weight.<sup>2</sup> About 2% of people who live in northern areas experience SAD.<sup>3</sup> Women have SAD more often than men.<sup>3</sup>

BLT is the treatment used first to treat SAD. BLT will help about 60-90% of people who use it correctly.<sup>4</sup> Some people find that it starts to help after only 2-4 days.<sup>4</sup> It may take up to 2-4 weeks for others.<sup>4</sup> A study compared no treatment for SAD, a fake treatment, and BLT. Depression was less severe in the people who used BLT.<sup>5</sup> A different study found that BLT reduced symptoms of depression by almost half in people with SAD.<sup>3</sup>

- **Major depressive disorder (MDD)**

MDD is a condition in which individuals suffer from long periods of such low mood that it affects their daily life. Unlike SAD, MDD does not change with the seasons. About 14% of people will experience MDD at some time during their lives. MDD is the second most common cause of disability worldwide.<sup>1</sup>

BLT is very effective for treating MDD. Fluoxetine (*Prozac*) is a medication often used to treat depression. One study found that BLT helped more than Fluoxetine did for major depression.<sup>1</sup> Depression symptoms disappeared in about 20% of people who received Fluoxetine. In contrast, symptoms disappeared in 44% of the people who used BLT. Symptoms disappeared in 59% of people who received both Fluoxetine and BLT at the same time.

Similar results were found when BLT was compared to Venlafaxine (*Effexor*) to treat severe MDD in patients who were hospitalized. (Venlafaxine is another medication commonly used to treat depression.) This study found that depression completely improved in 76% of individuals

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who received Venlafaxine and BLT together.<sup>6</sup> Depression completely improved in only 44% of patients who did not receive BLT. These two studies show that BLT along with medications can improve depression more than medications alone. Depression also improves faster when BLT is used in addition to medications.<sup>6</sup>

- **Bipolar disorder**

Bipolar disorder is a condition in which people have extreme mood swings from very low (depression) to very high (mania). These mood swings affect their energy, activities, ability to do daily tasks, and sleep. BLT can help improve depression in people with bipolar disorder. BLT is safe and effective for the low moods of bipolar disorder when used along with medications that help even out mood.<sup>7</sup> BLT can trigger a manic mood,<sup>4</sup> so if you think you might have bipolar disorder and are not on medications for it, talk with your health care professional before using BLT. Mania caused by BLT is rare.<sup>7</sup> While helpful, BLT may not help as much for bipolar disorder as it does for SAD and MDD.<sup>8</sup>

- **Sleep problems**

BLT is an effective treatment for some sleep conditions. These include difficulties with the sleep/wake cycle, insomnia, and sleep problems related to Alzheimer's disease and other types of dementia. BLT works best when it is combined with other treatments. Sleep improves the most if a person uses a light box of strong intensity (10,000 lux). BLT improves the sleep problems of women with Alzheimer's disease and other dementias more than it does for men with these conditions.<sup>9</sup>

- **BLT in children**

BLT is a safe and effective way to treat depression in children. Sleep quality also improves in children using BLT. BLT helps even if a child is taking medications. Overall, BLT is not as helpful for depression in children as it is for adults.<sup>10</sup>

### **How does BLT work?**

How BLT works is not fully understood. SAD is thought to occur because of a decrease in the amount of light a person is exposed to during the fall and winter months. Less light affects the sleep/wake clock in the brain. This changes how some chemicals in the brain (such as serotonin and melatonin) are produced. When these chemicals are not balanced, changes in mood and the symptoms of SAD and MDD can occur.

It is believed that the light used in BLT travels to the cells in the back of the eye. These cells send signals to the brain to change the production of brain chemicals. Low moods, then, improve with BLT because of changes in the balance of brain chemicals and changes in the sleep/wake cycle.<sup>1,2,7,11,12</sup>

### **What are the side effects of BLT?**

BLT is a safe treatment for depression and some sleep conditions. There are few side effects from using a light box and generally no long-term complications. The most common side effects



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are headaches, eye irritation, visual glare, and feeling “wired.” About 18% of people who use light therapy will have nausea.<sup>7</sup> Side effects usually decrease with time. Side effects will also decrease if the light box is used for shorter amounts of time or if a lower intensity light box is used.<sup>7</sup>

No known long-term eye problems occur from using a light box with a good ultraviolet (UV) light filter. Side effects such as blurry vision, eyestrain, and increased sensitivity to light are more likely to occur if the light box is too close to the eyes.<sup>7</sup> If you have an eye condition, talk with your eye doctor before starting BLT.<sup>13</sup>

BLT can trigger a manic mood.<sup>4</sup> If you have mood swings and are not on medications for bipolar disorder, talk with your health care professional before using BLT. Mania caused by BLT is rare.<sup>7</sup>

Fewer side effects occur when BLT and medications are used together to treat depression, rather than when either is used alone.<sup>1</sup> This suggests that using BLT while taking medications may help improve some of the side effects of medications.

### **What light box should I use?**

There are many different types of light boxes available. Light boxes can be purchased at most department stores and online. The price of a light box can range from forty to several hundred dollars. Bigger and more intense light boxes are usually more expensive. Unfortunately, most insurance companies currently do not cover the cost of a light box, but you can check with your insurance company to see if they cover it.

Use the following recommendations to choose a safe and effective box:

- **Make sure to get a box that is used to treat symptoms of depression.**  
Some skin conditions are treated with light boxes. These boxes are different than the ones used to treat depression. The light box to treat depression should have a UV filter. This will protect your skin and eyes from harmful UV rays while still giving you the light needed for BLT to be effective.<sup>7</sup>
- **A higher intensity box will require less time per day.**  
A 10,000-lux light box is recommended. The intensity of light boxes that work best range from 2,500-10,000 lux. You will need to use a 2,500-lux box longer each day compared to a 10,000-lux box. A box less than 2,500 lux will not be helpful. A box that has more than 10,000 lux is not more helpful and will still require 30 minutes daily. Your symptoms will improve quicker if you use a 10,000-lux box rather than one with 2,500 lux.<sup>7,13</sup>
- **If possible, choose a light box that emits white light.**  
Many wavelengths of light are used in light boxes. White light has been researched the most. Blue light may also be effective, but there is less research to support using blue light.<sup>13</sup> Also, white light causes fewer eye side effects than blue light.<sup>7</sup>
- **Choose the box with the largest light surface that is practical for your home and budget.**  
Light boxes with larger screens cause fewer eye side effects than do small ones.<sup>7</sup>



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[http://www.sadlightreview.com/day-light- 1](http://www.sadlightreview.com/day-light-1)

### **How to use a light box**

To receive the most benefit from your light box, it is important to use it properly.

- **When should I use my light box?**

Light boxes should be used every day.

- If you have SAD, use your light box daily throughout the fall and winter. You can stop in the spring and summer.
- If you have MDD, you will likely need to use your light box daily while you are feeling depressed, even in summer. If you stop using the box too early, your symptoms may return.<sup>4</sup>
- There are no clear guidelines on how to use the light box for sleep. If you use BLT for sleep, use the light box for as long as you feel it is helping you.

- **How do I use a light box?**

Sit in front of the light box every day. The instructions that come with the light box will tell you the distance to sit from the box. It is important that the light is in front of you and not behind you, so that the light can reach your eyes. Do not stare directly into the light. Just direct the light downward towards your face. Using your light box at a downward angle will help decrease eye side effects.<sup>7</sup>

- **What time of day should I use my light box?**

It is best to use your light box as early as possible in the morning after you wake up.<sup>2, 13</sup> Some studies have found that using the light box at night is also effective if you cannot find time in the morning. If you use the light box at night, you may find it more difficult to fall asleep at your regular bedtime.

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- **How long do I have to use it every day?**

How long you will need to use your light box will depend on the intensity of your box. For a 10,000-lux box 30 minutes every morning is effective. A 5,000-lux box will require 45-60 minutes daily. A 2,500-lux box will require you to use it for 2 hours daily to be effective.<sup>7,11,13</sup>

- **How long will BLT take to work?**

Some people find that BLT starts to help after only 2-4 days.<sup>4</sup> For others, it may take up to 2-4 weeks.<sup>4</sup> A good length of time to try the light box is 2-4 weeks. If your symptoms have not improved after 2-4 weeks of daily use, it may be a good idea to talk with your health care practitioner to discuss whether BLT is a good choice for you.<sup>4,7</sup>

- **Can I just sit outside instead of getting a light box?**

Bright sunlight emits about 110,000 lux. This means that if you live in a sunny area, being outdoors is a great way to get natural light. Getting natural light outside requires less time in the sun than sitting in front of a light box. Going outside to get natural sunlight may also encourage you to be more physically active, which is helpful for decreasing depression. However, if you live in an area that does not get a lot of sun year-round, a light box is a great option.<sup>14,15</sup>

If you choose to use natural sunlight: Try to get sunlight as early after waking as possible. That is the most helpful for treating depression. Also, damaging UV light is lower at that time of the day. You can protect your skin from UV rays that cause skin cancer by using sunscreen or clothing that covers your skin.<sup>13</sup>

- **Will the standard light bulbs I have in my house do the same thing?**

Indoor lighting, even if it seems very bright, is not strong enough to treat symptoms of depression. You can get natural sunlight by sitting next to a window in your home, but standard home light bulbs will not be helpful.<sup>13</sup>

### Summary of Bright Light Therapy

- Light boxes are an effective way to treat seasonal affective disorder, major depressive disorder, bipolar disorder, and sleep difficulties.
- Both adults and children can use light boxes safely.
- BLT is helpful by itself. Using BLT and medications together is even more effective.
- BLT has few side effects. They decrease over time.
- The best light box to use will have 10,000 lux, a UV filter, white light, and is the largest size that works for your home and budget.
- Use your light box for 30 minutes every day.
- Talk to your health care practitioner if you have questions or concerns about using a light box.



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**The information in this handout is for general education. It is not meant to be used by a patient alone. Please work with your health care practitioner to use this information in the best way possible to promote your health and happiness.**

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