How to Use Light Therapy in Bipolar Disorder

Light therapy can treat bipolar depression, but the protocol is different than the one employed for unipolar disorders. That’s the conclusion of a new study from the University of Pittsburgh that found a surprisingly large effect size for this intervention.1

By Chris Aiken, MD
1. The research

Light therapy’s role in bipolar disorder has been unclear for many years. Concerns about manic induction have limited its use, and the available studies have been small, inconclusive, and uncontrolled. This new study changes that. The authors randomized 46 patients with bipolar I (67%) or II (33%) depression to 6 weeks of light therapy or placebo, with a dim red light serving as the sham (placebo) treatment. All subjects were taking mood stabilizers and were free of recent mania, mixed states, and rapid cycling; most underwent the treatment in the fall or winter months. After 6 weeks, light therapy outperformed placebo with a remission rate of 68% vs 22% (See the figure in the next slide.).
Remission rates after 6 weeks of light therapy

- Light Therapy: 70%
- Placebo: 20%
2. Midday light

Traditional light therapy is done in the morning, usually between 5:00 and 8:00 AM, but in this study the light box was used at midday (between 12:00 and 2:30 PM). Midday light was thought to be less likely to destabilize mood and—based on pilot data—more likely to benefit bipolar patients than the early morning protocol.
3. A slow titration

Another difference from the unipolar protocol was that the light was slowly titrated, starting at 15 minutes per day and increasing by 15 minutes every week toward a target of 60 minutes. This may explain why it took 4 to 6 weeks for the light therapy to work in this trial. In unipolar studies, which begin with 30 to 60 minutes of light, benefits are seen after 1 to 2 weeks.

Judging from the results, these modifications reduced the potential for mood destabilization with light therapy. No patients cycled into hypomania, which can’t be said for earlier studies that relied on morning dosing or rapid titration.
4. Choosing a light box

The trouble with light boxes is that the small, attractive models perform well on the sales floor but usually don’t have the necessary qualities to treat depression. A good box needs to be large (at least 12 x 17 inches), bright (2000 to 10,000 lux of white light), and safe, with a UV filter to protect the eyes. This study used the Carex (or Uplift) Daylight Classic, which has the right specs and is recommended by the Center for Environmental Therapeutics, a nonprofit group of chronotherapy researchers. This model is also cost-effective ($110 to $140).
5. Practical tips

Patients need to sit under the light, no more than 1 foot away from the screen. Much like the sun, the light should hang above their head at a 45-degree angle and they should not stare directly into it. They can read, eat, surf the internet, or even exercise while under it (there’s an accessory that can hoist it over an exercise machine). The bulbs need to be changed every 3 years, even if they haven’t burned out (the therapeutic wavelengths diminish over time).
6. Weighing the evidence

A prominent psychiatrist once told me that his first reaction to light therapy was disbelief, but when the evidence proved him wrong, he learned “never to doubt things just because I didn’t understand them.” We don’t understand exactly how light therapy works, but we do know that it does—and with a robust effect. In 2 meta-analyses, its effect size weighed in at 0.8 for unipolar depression.[2,3] That metric wasn’t published in this study, but the one I calculated (0.7; 95% confidence interval: 0.1 to 1.3, based on the SIGH-ADS [Structured Interview Guide for the Hamilton Depression Rating Scale, Atypical Depression Supplement]), suggests it has meaningful benefits in bipolar disorder as well.
Light therapy has long been the subject of promise and peril in bipolar disorder, whose depressions tend to peak in the darker months but whose dangerous manias are often triggered by the rapid rise in sunlight that springtime brings. This study is small and needs replication, but its novel protocol paves the way for better answers for this difficult-to-treat disorder.
References


For further reading
About the author

Dr. Aiken is the Director of the Mood Treatment Center and an Instructor in Clinical Psychiatry at the Wake Forest University School of Medicine. He does not accept honoraria from pharmaceutical companies but receives honoraria from W.W. Norton & Co. for *Bipolar, Not So Much*, which he coauthored with James Phelps, MD.