

A SPECIAL REPORT  PERSONAL HEALTH

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### TREATMENTS

# Let There Be Light

*As more people become convinced that light therapy can cure an assortment of ills, companies are peddling at-home cures. Do the gadgets work?*

By VANESSA FUHRMANS

**A**DRIAN DAVIS REMEMBERS how, as a teenager in Alabama, her mood would turn as clouds rolled across the sky. "When they parted and the sun poked through, I'd suddenly feel a lot better," she recalls. Spending an afternoon at the windowless mall, on the other hand, made her feel glum and dizzy. And in the dark days of winter, she would often be near tears.

Realizing that daylight helped keep her depression at bay, Ms. Davis last year decided to create her own. Now, each morning at the orthodontist's office where she works in Athens, Ala., she flips on a box under her desk and basks in streams of light that approach the brightness of a sunny day. "I cannot believe how much better I feel," she says, "even during the summer," when there's no shortage of sunlight outdoors.

Ms. Davis, 31 years old, isn't alone in turning to daily baths of light year-round. Light therapy has long been used to treat the winter blues, a form of depression doctors have dubbed seasonal affective disorder. But a flurry of recent research

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### Brighter Outlook

Researchers report initial success in using light therapy to treat health problems beyond seasonal depression, but larger and lengthier studies are still under way. Where they see a ray of hope:

<b>Nonseasonal depression</b>	A number of studies show light therapy may relieve symptoms, in some cases nearly as effectively as in early trials of antidepressants.
<b>Sleep disorders</b>	Research suggests light therapy in the early morning hours can help night owls reset their clocks and get up earlier.
<b>Depression during pregnancy</b>	It's estimated that 5% to 10% of pregnant women suffer from depression, but most doctors advise against taking antidepressant drugs while pregnant. Several studies suggest light therapy may provide a safe alternative.
<b>Premenstrual syndrome</b>	Researchers have conducted small studies suggesting light therapy can reduce the seasonal depression-like symptoms of PMS, such as craving of carbohydrates and sleep.
<b>Dementia</b>	A recent study published in the British Medical Journal says older people with dementia who also suffer from symptoms of agitation, aggression, delusions and sleep disturbance might benefit from light therapy.
<b>Bulimia</b>	A handful of studies show a link between seasonal depression and bulimia in some patients. Particularly for those people, clinical evidence suggests light therapy can reduce the compulsion to binge and purge.
<b>Jet lag</b>	Light therapy in the evening or morning, depending on which way travelers are crossing a number of time zones, can help readjust the body clock faster.

suggests light is a far more versatile treatment, effective against depression and related conditions that aren't bound by the seasons, and even against some purely physical ailments, like arthritis.

Companies eager to market an array of light-beaming devices have been quick to respond. "Nu You Lighting" and "Brighten Your Life" are just a couple of the pun-filled slogans behind some of the

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dozens of light emitters on the market. Doctors warn that some of these devices aren't all that effective, and that those that do work need to be used correctly for maximum results. But the risks appear minimal for most people — most light emitters can't cause sunburns, for instance. And the benefits can be substantial, especially with some guidance from a physician or therapist.

"We know light can have incredible power, much like exercise," says Peter Fey, a psychiatrist and researcher at Johann Wolfgang Goethe University in Frankfurt, which helped pioneer much of the early research on light therapy in Europe.

### Pregnant Lift

In the U.S., Yale University researchers, in a small study published last year, found that 16 pregnant women who suffered from major depression saw a 49% improvement in symptoms, based on a standard scale used by doctors and researchers, after three weeks of daily one-hour baths of diffuse white fluorescent light. That response is comparable to the success rate in trials of antidepressant medication — which is especially welcome news for pregnant women, who are sometimes advised not to take the medications they normally might turn to, because of potential damage to their fetuses. The patients who continued the therapy saw the improvement in their symptoms reach 60% after two more weeks.

Though no studies directly comparing the effect of light with that of antidepressants have been conducted, the Yale study isn't the only one that suggests light can be as helpful as medication. Researchers at the University of California, San Diego, who compared light-therapy trials with separate antidepressant studies found the response rates to be similar. In fact, their comparisons indicated light may have at least one advantage: Patients in the studies they looked at typically began to respond to light within a week, while drugs needed as long as eight weeks to take effect.

Some studies suggest light may also be effective in treating depression-related syndromes such as eating disorders. At the University of British Columbia in Vancouver, doctors exposed 22 patients suffering from seasonal depression and bulimia to bright light for 30 minutes a day. After four weeks, the average number of eating binges was reduced by 50%, and purging incidents by 42%. Other research points to light-therapy benefits in treating dementia, insomnia and chronic fatigue syndrome.

Why does light, or lack thereof, have such a powerful effect on some people? The

prevailing theory is that exposure to bright light helps by boosting levels of serotonin, a chemical the body produces that makes us feel more calm and relaxed. When Australian scientists last year analyzed blood samples from 101 healthy men, they found the men's serotonin levels in the winter were one-fifth of what they were in the summer.

The effectiveness of light therapy for some people even in sunny seasons may be explained in part by lifestyles that keep people indoors most of the time, where standard lighting doesn't begin to approach the power of daylight. Air conditioning, subways, indoor shopping malls and other facets of modern life conspire to keep people from going outside. People in San Diego — a city renowned for its pleasantly warm, sunny weather — spend less than an hour a day outside on average, says Daniel Kripke, professor of psychiatry at the University of California, San Diego.

Whereas a bright, sunny day registers between 10,000 and 20,000 lux of light, most indoor settings are dimmer than 100 lux. Watching television in low light, as many people do for hours a day, provides about one lux of light. "Even when it's dark and gray, we still get significantly more light out here," says Dr. Fey on a rainy afternoon as he holds a lux-measuring device outside the window of his brightly lighted office.

### The Right Light

As research supporting the effectiveness of light therapy builds, so does the treatment's popularity. Some European hospitals already administer light therapy in combination with antidepressants for chronic depression. Now, doctors and patients are trying it in the U.S., too.

Ms. Davis discovered her light therapy's benefits beyond winter seven years ago, when she was pregnant with her son. Because she stopped her antidepressant medication during the pregnancy, her therapist suggested she try bright light at the psychiatric ward of a local hospital. The light helped, but the daily trips and the odd stares she got as she sat under the lamp made her stop after a while.

"If it's not something you can fit into your routine, you're probably not going to use it," says Ms. Davis, who now takes antidepressants in combination with her portable light therapy. Using the light while sitting at her desk at work is convenient, plus, "everyone thinks it's pretty interesting and wants to know more when they see that bright light shining," she says.

Think you could use a dose of light? Ideally, the first step is consulting a doctor

or therapist familiar with the treatment. They will be able to demonstrate which lights are best and how to use them. And a doctor's prescription is likely to increase your odds of getting some health-insurance coverage for the light device, which can cost \$200 to \$600.

With or without professional advice, a few guidelines can help you choose the right product in the fragmented market for light-therapy devices.

First, check to see whether the maker has conducted any research or whether its products have been used in independent studies. Makers of products that have been tested this way usually display that information on their Internet sites or supply phone numbers for inquiries.

Most research indicates the most effective lights are capable of emitting 10,000 lux — and at a reasonable distance. Many products claim they are that powerful, but check the fine print: If the range of the 10,000-lux light isn't at least a couple of feet, you probably won't find the product that useful. The box or lamp also should suit your routine: portable if you need to take it places, or easily perched on a desk or shelf so that you can sit comfortably underneath.

How much light you need depends on your condition, and is best decided with a doctor. A fairly standard treatment is a 30-minute daily session with a 10,000-lux light, or two to three hours at 2,500 lux. One thing to keep in mind is that the time of day for treatments is nearly as important as how much light you use. Though bright light at any part of the day will help many people with depression, some studies suggest many people may do better with morning light, particularly those who have trouble getting up in the morning.

Light therapy doesn't pose much of a danger, but it isn't entirely risk-free. Like all antidepressant treatments, too much bright light can trigger mania, making a person overly euphoric or hyperactive and prone to rash behavior. Mania is rarely provoked by light therapy, but doctors often advise that manic-depressive patients use it in conjunction with a mood stabilizer such as lithium or Depakote.

Most light-therapy products have diffusers that filter out ultraviolet rays, and so won't cause sunburns. Nor can staring into these lights burn the retina, as looking directly into the sun can, though it can be uncomfortable. In fact, doctors say that it's contact with the eye, not the skin, that produces the benefit of light therapy. Most recommend keeping the light source somewhere indirectly in the field of vision, or glancing at it regularly. ■■■