

Light and Dark Therapy

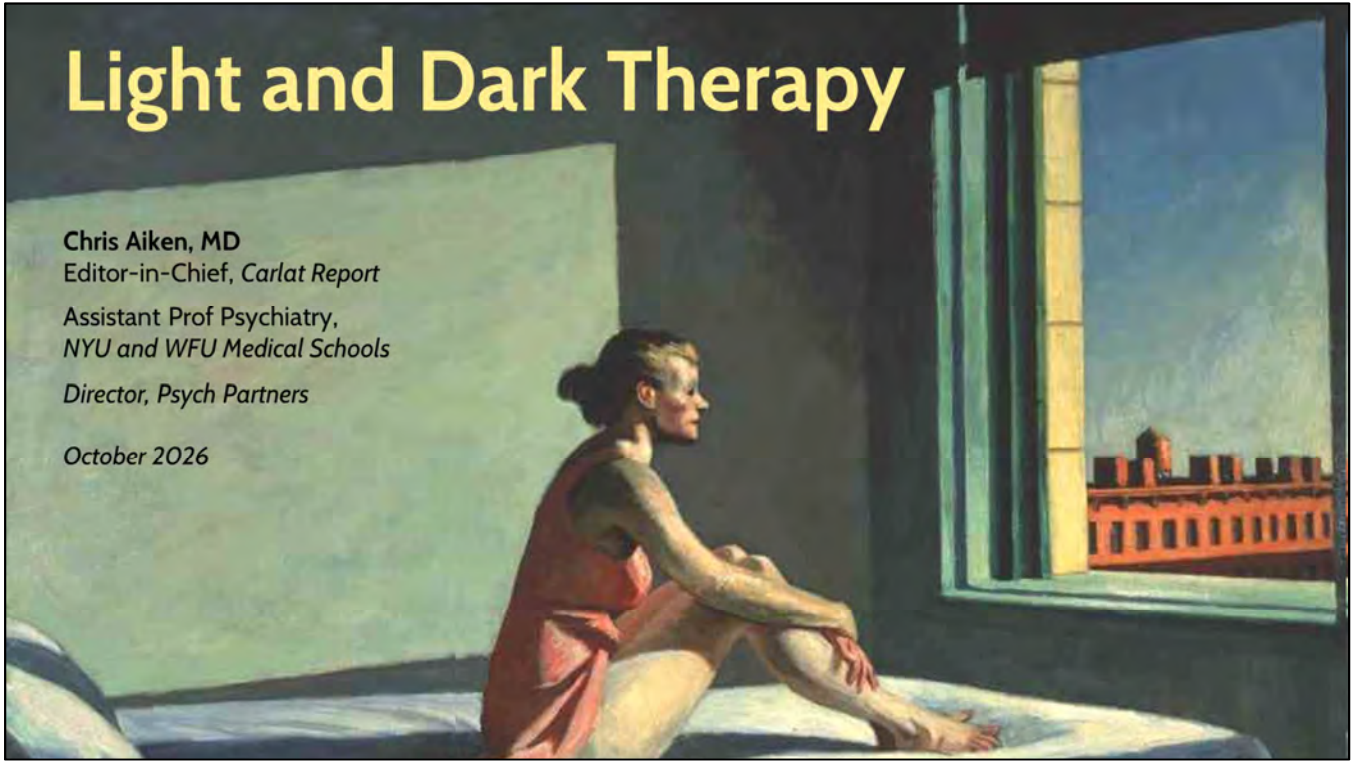
Chris Aiken, MD

Editor-in-Chief, *Carlat Report*

Assistant Prof Psychiatry,
NYU and WFU Medical Schools

Director, Psych Partners

October 2026



No conflicts

In compliance with the ACCME Standards of Commercial Support of CME, I do not have any relevant financial relationships to disclose in relation to this presentation.

Slides with notes:
chrisaikenmd.com/lighttherapyslides

Educational Objectives

As a result of participating in this activity, you should be able to:

1. Discuss the biological basis of light and dark exposure including the role of the SCN and Melatonin on the brain.
2. Guide patients toward correct timing and positioning of light therapy
3. Guide patients toward correct timing and use of dark therapy
4. Identify disorders that respond to light therapy
5. Identify disorders that respond to dark therapy
6. Troubleshoot common problems that arise during light and dark therapy

How Light Therapy Works

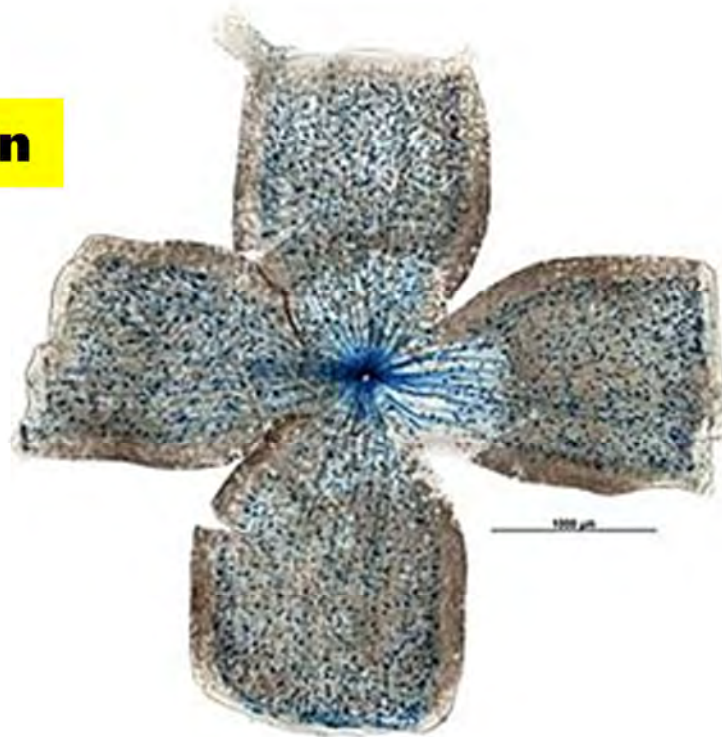
		
Genetics	Temperament	Chronic Stress
		
Substances	Medical	Circadian

Causes of depression are many

		
Genetics	Temperament	Chronic Stress
		
Substances	Medical	Circadian

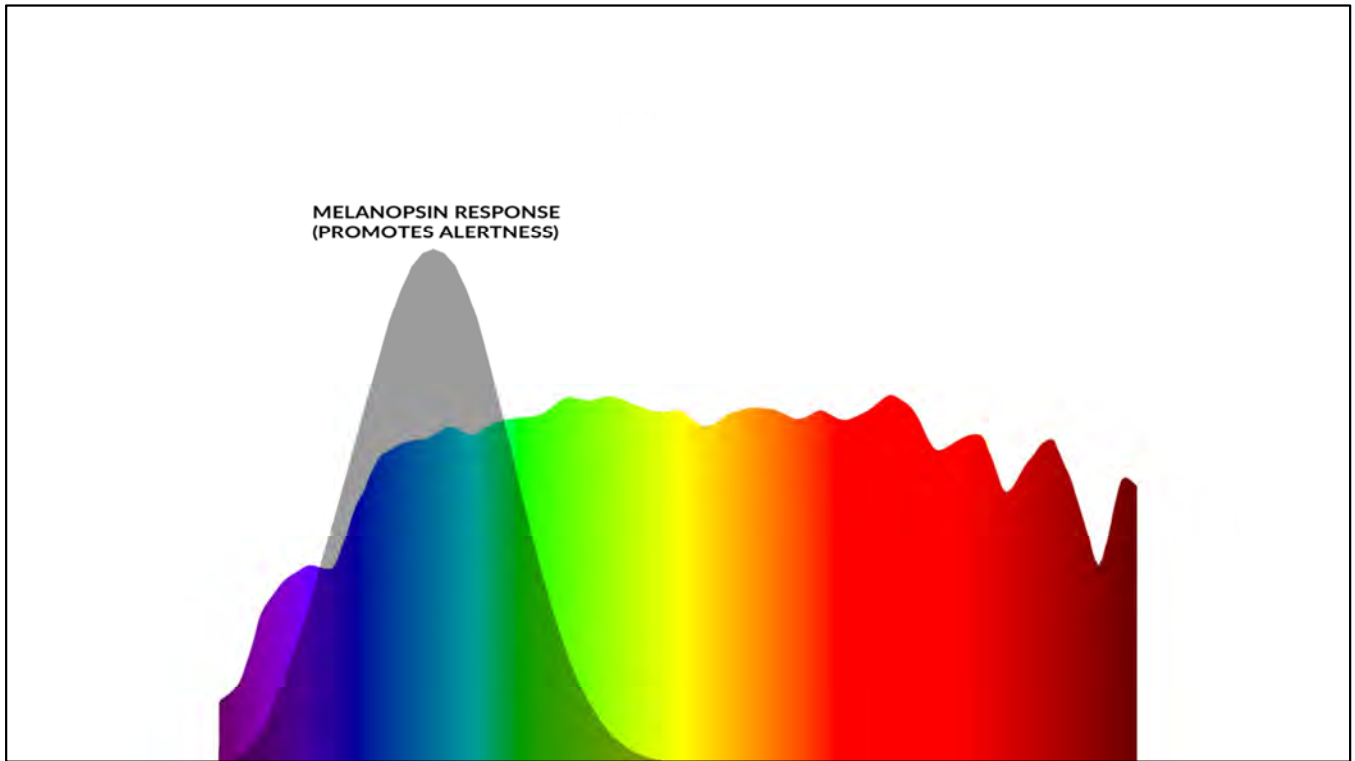
Light and circadian rhythms are involved in all of these causes

Melanopsin



The mechanism centers on the brain's internal clock. When bright light enters the eye, specialized retinal ganglion cells containing the pigment melanopsin send signals to the suprachiasmatic nucleus—the brain's master circadian pacemaker—which in turn regulates the timing of melatonin secretion, cortisol release, and the sleep-wake cycle. By resynchronizing these rhythms, light therapy corrects the circadian misalignment that underlies many psychiatric disorders. It also has direct effects on serotonin pathways and on brain regions involved in emotional processing, including the amygdala.

There are 3 photoreceptors in the eye: Cones for color vision, rods for black and white, and melanopsin, which transmits circadian information, encoding day and night. Light therapy works through melanopsin, a non-image-forming receptor, that projects to the suprachiasmatic nucleus and to subcortical and limbic brain regions. When bright light (typically ~10,000 lux) enters the eye, melanopsin transduces the information and signals downstream targets to reset circadian timing, suppress or shift melatonin, enhance alertness, and modulate mood circuits.



Melanopsin is maximally sensitive to short-wavelength blue light (~460–490 nm)



Morning light advances the clock (shifting sleep earlier), while evening light delays it. This is the basis for timing light to the specific circadian sleep disorder. Morning light suppresses morning melatonin, promotes alertness, and advances the melatonin peak so sleepiness arrives earlier, improving sleep-onset difficulty; evening light delays melatonin and can help advanced sleep-wake phase disorder or early-morning awakening.



Other Mechanisms

Serotonin, dopamine, cortisol stress-hormones, amygdala sensitivity to emotions

In mood disorders, PTSD, and borderline the amygdala reads fear as anger. Light therapy reduces amygdala hypersensitivity.

Light influences serotonergic, dopaminergic, and other monoaminergic systems, consistent with its relatively rapid antidepressant action. The adrenal cortex/glucocorticoid axis has also been proposed as a light-responsive target. • Enhances neurotrophic factors (BDNF) and mitochondrial metabolism

Who Benefits

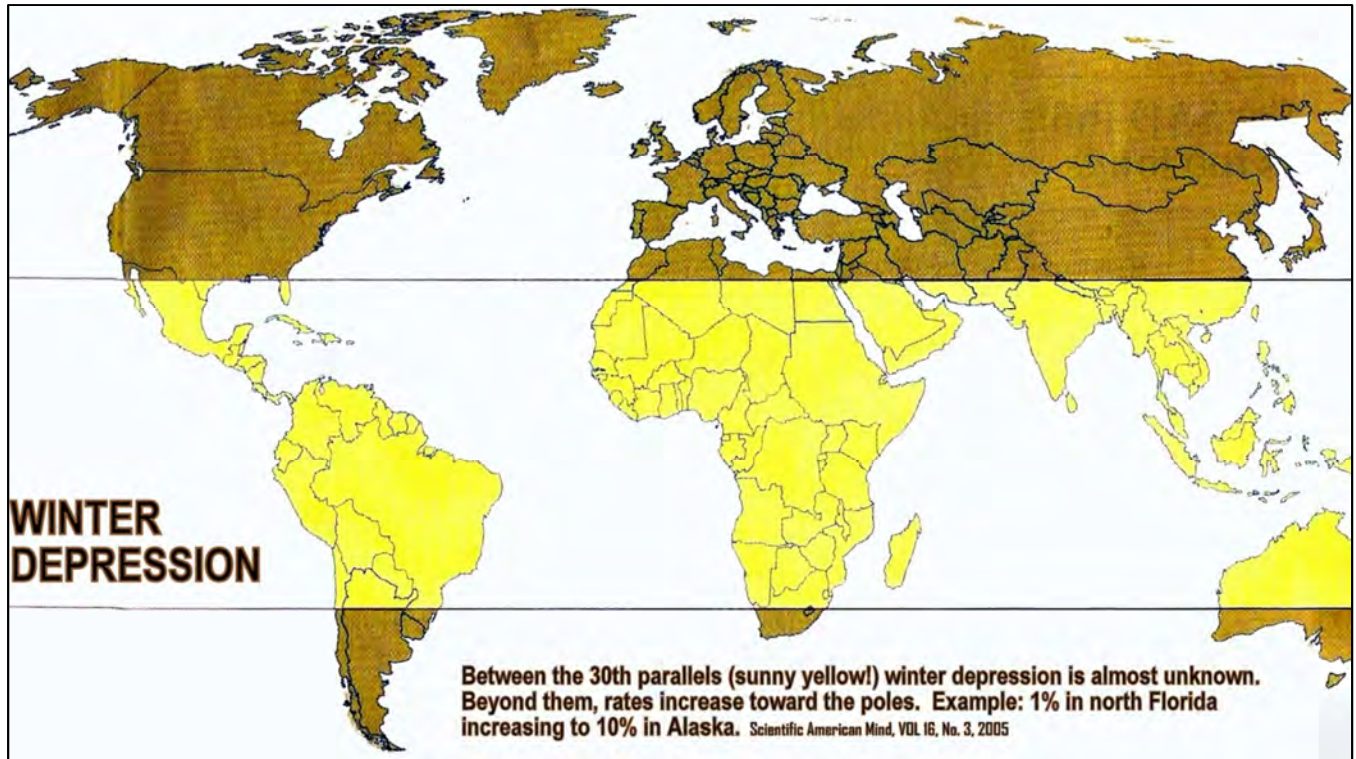
(word cloud)

Winter Depression

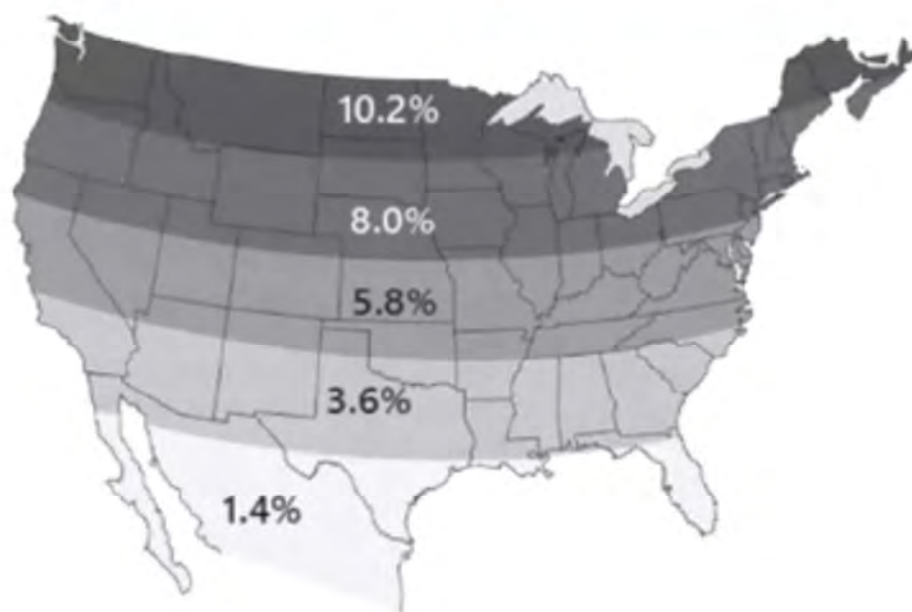


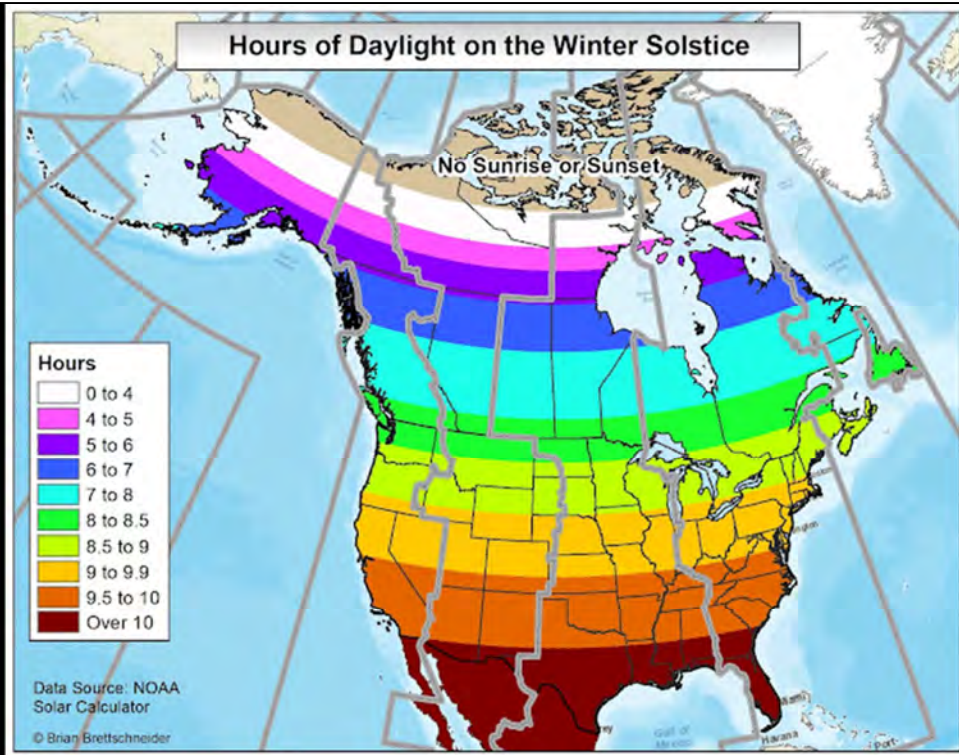


- > Commonly depression in fall (equinox) or winter (nadir of sunlight)
- > In bipolar, mixed states or mania in spring
- > Summer depression more common near equator
- > Depression can also peak briefly in March when daylight savings shifts morning light later



Rates of Winter Depression in U.S.





Night Owls



“night owls” fall asleep earlier, including trials in depression, ADHD, adolescents, and older adults; evening dark therapy also helps.

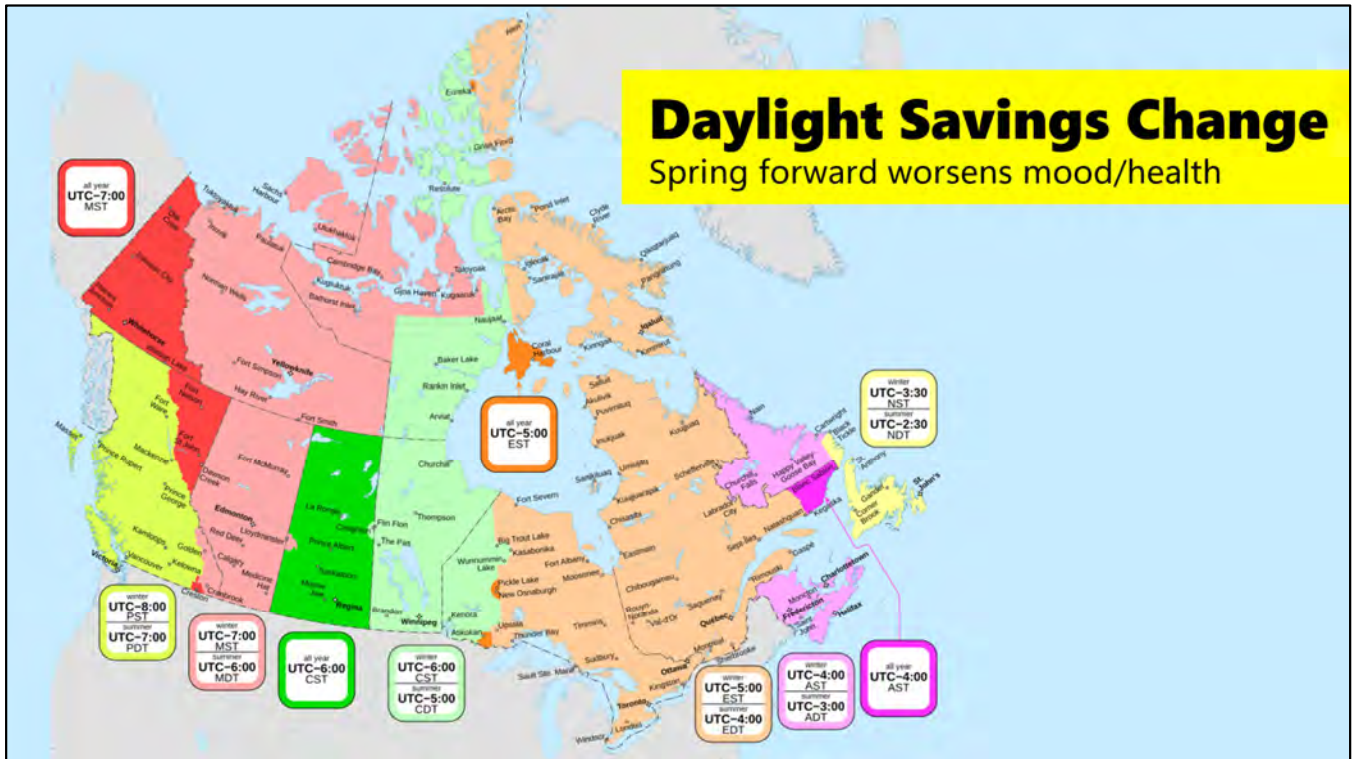
Social jet lag is where “night owls” rise early for work during weekdays, then oversleep on weekends, causing depression, cognitive impairment, and symptoms of perpetual jet lag. The solution is to use regular wake times and light/dark manipulation with dawn simulator and blue light blockers.

Starting school before 8:30 am



Teens are likely to be night owls, and early start times impair their mood, energy, and cognition/academics. Also 10% higher risk of suicide attempts; more substance use, impulsivity, obesity, cardiovascular risks. The American Academy of Pediatrics recognizes this as a major public health issue and recommends middle/high schools start at 8:30 am or later

A dawn simulator can help.



“Spring forward” is associated with acute increases in cardiovascular events, strokes, fatal traffic crashes, sleep loss, and mood disturbance, and most major medical societies conclude that eliminating the switch in favor of permanent standard time (not permanent DST) is best for health. However, the extra morning light in winter that “fall back” provides does give temporary relief to winter depression.



Worse if traveling over 2 timezones. Traveling West causes more depression; East more mania. Melatonin and dark/light therapy help shift the circadian rhythm gradually before travel.

Apps for Jet Lag

Timeshifter provides personalized timing of light/dark, sleep, and melatonin, supported by large survey data (similar guidance is online at jetlag.sleepopolis.com)

Melatonin for Jet lag

Melatonin 0.5–5 mg (instant release more effective than sustained). Start upon arrival in new time zone and take before bedtime in time zone of arrival (eg, 9–10 pm) for 3–5 days. For westbound travel across fewer than 6 time zones, a low dose (0.5 mg) in the middle of the night (2–4 am in destination time zone) may be more effective—use this strategy if still awake at that time. More detailed directions on timing of melatonin and adjustments to sleep before travel at sleepopolis.com/calculators/jet-lag.



Shift Workers

Night shift work is linked to depression, obesity, sexual dysfunction, cancer, GI and heart disease.
Use artificial light in “morning,” blue light blockers before bed, and black out curtains at “night”

Personalized schedules,
tuned to you

No one-size-fits-all. Your data
decides what you see

Clairoe

Evidence-based app for shiftwork

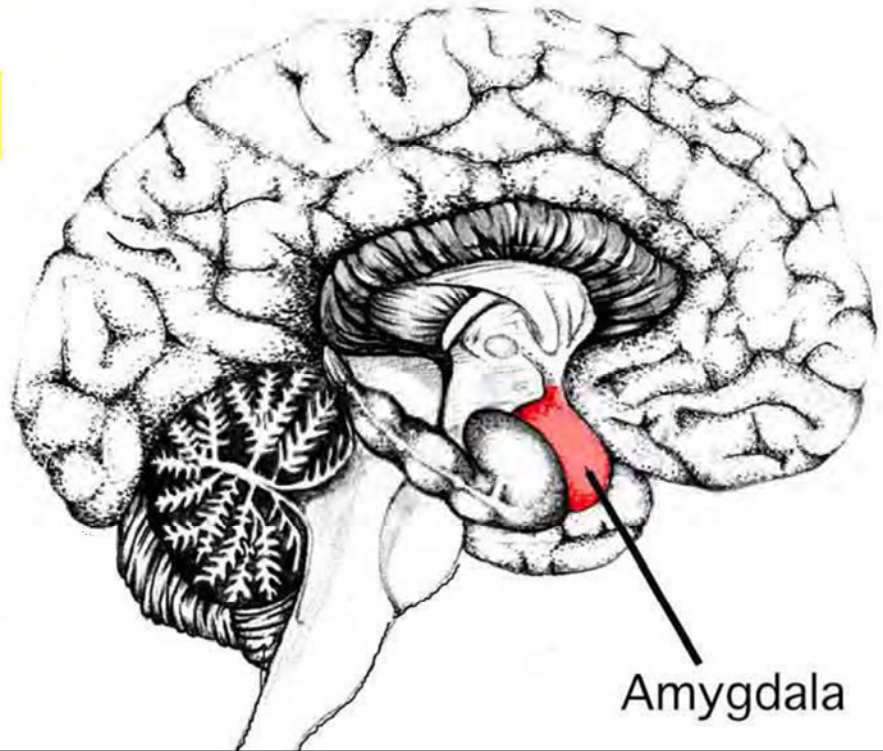


Clairoe estimates circadian phase to personalize timing of light, sleep, and other behaviors, supported by a small RCT (also known as Arcashift)

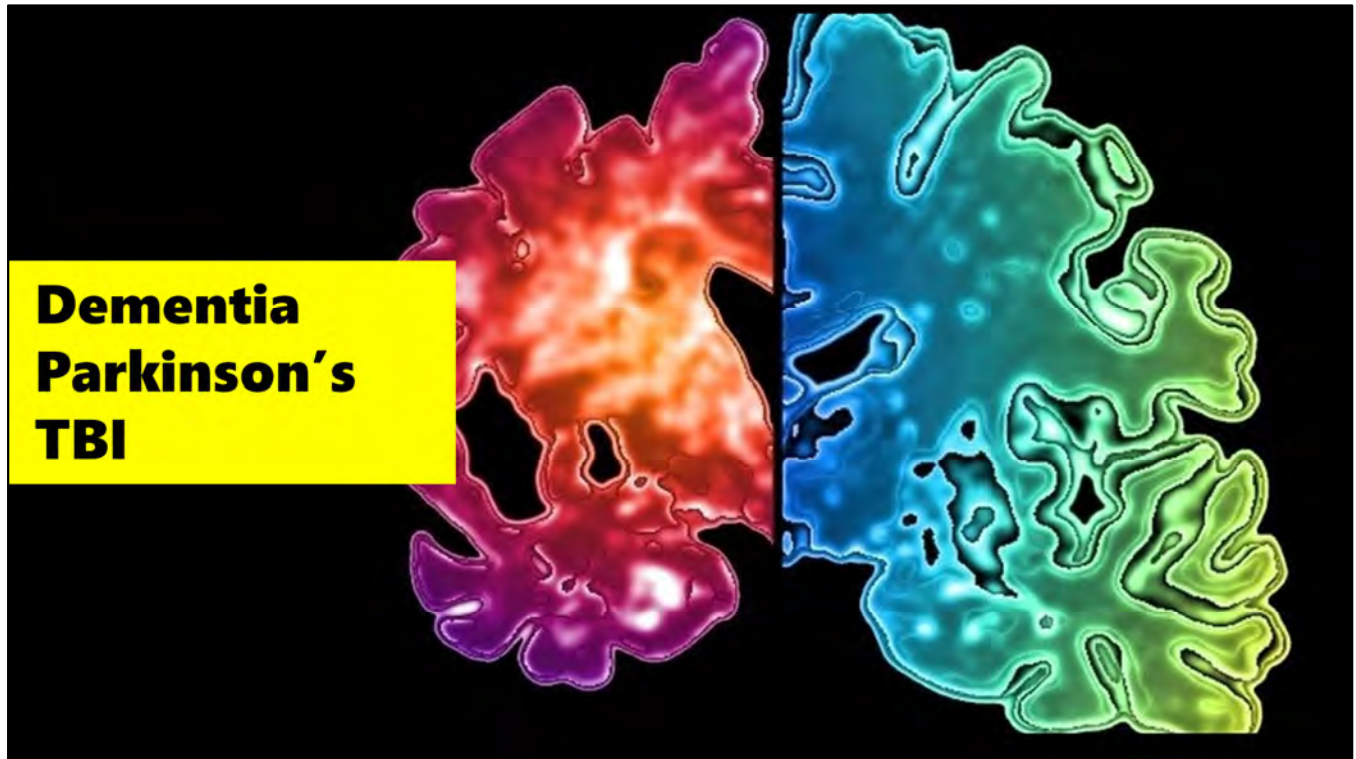


Early morning (5am) bright light therapy deepens sleep, improves sleep quality, and next day sedation in 5 randomized trials

PTSD



Reduces core symptoms of combat-related PTSD regardless of season in 4 small randomized trials



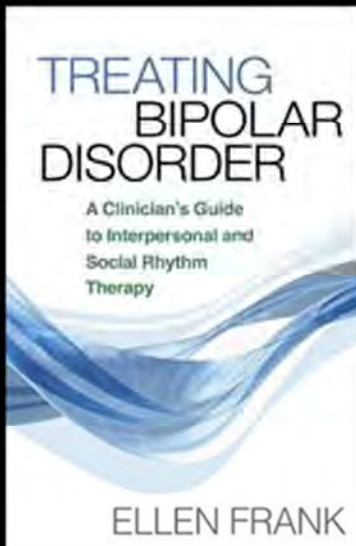
Dementia: improved agitation, mood, sleep, cognition in 3 trials

Parkinson's: improved motor function and sleep

TBI: Improves mood, energy, sleep, and cognition in mild and severe TBI

Social Rhythm Therapy

(quiz 3)



IPSRT: Interpersonal Social Rhythm Therapy

Developed for bipolar disorder, later shown to work for depression. The “intepersonal” part works on the role transition of having the diagnosis and what it means in their life and relationships

Treating Sleep Problems

A TRANSDIAGNOSTIC APPROACH

Allison G. Harvey | Daniel J. Buysse



Transdiagnostic Sleep and Circadian Intervention (TranS-C)

Effective in mixed psychiatric disorders with circadian rhythm problems: Schizophrenia, bipolar, depression, anxiety, ADHD, night owls
Large reductions in sleep disturbance; moderate for psychiatric symptoms and functioning (including mood, hallucinations)



Social Rhythm Therapy

Top activities that stabilize mood (*zeitgebers**)

- Time out of bed
- Time starting work or chores
- Time of significant interaction with others
- Time of dinner

Do these at the same time each day

**German for "Time givers"*

All these affect neurohormones.



Brain runs on island time, +/- 15 minutes

The average clock cycle is 24.25 hours, so the brain can tolerate a 15 minute difference, as they do in "Island time"

(clients need to do key activities at same time each day, give or take 15 minutes)



Social Rhythm Therapy

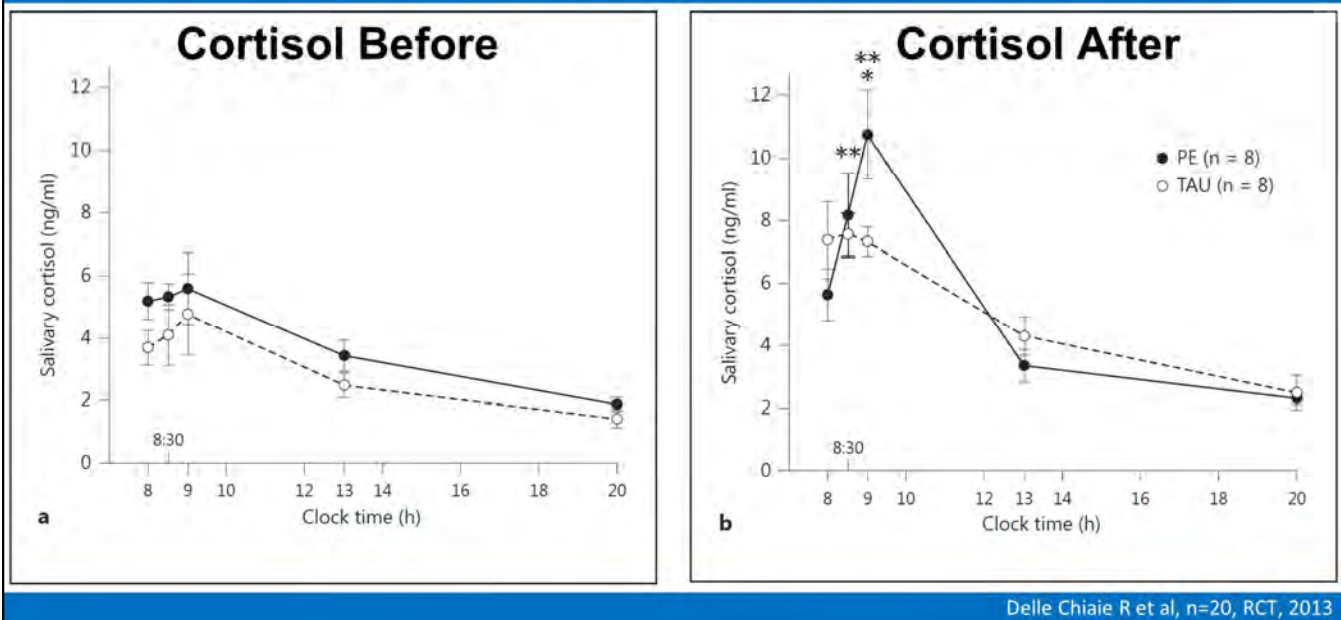
Rate the People Factor

- 0= Alone
- 1= Others present but not involved
- 2= Others actively involved
- 3= Others very stimulating

People affect our neurohormones. Think of that flush of love, or that tense meeting at work – you feel it physically, in your heart, your gut, your skin.

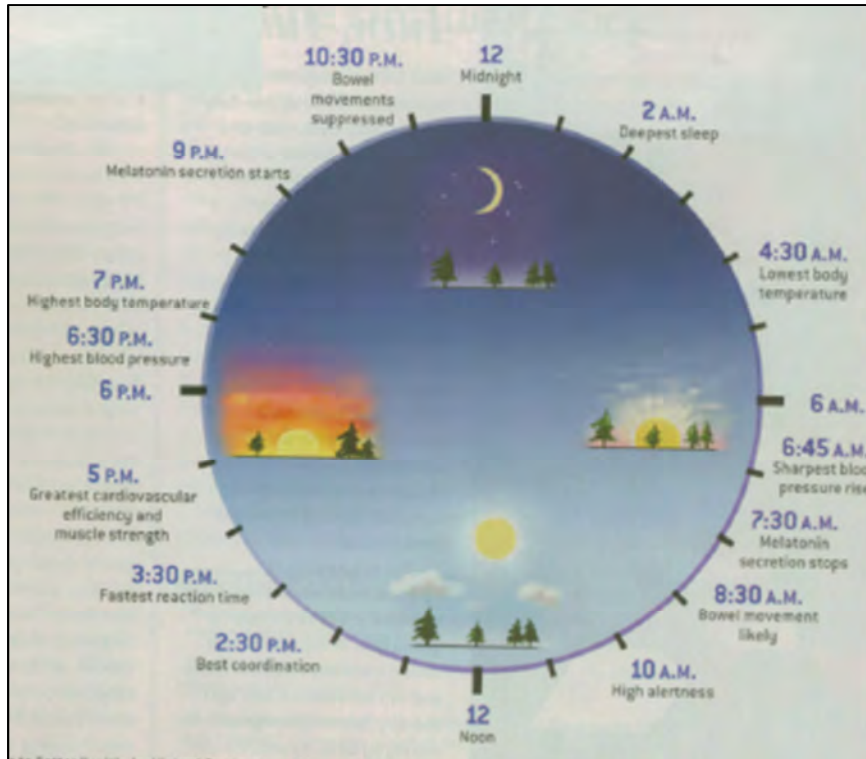
[illegible][illegible]

5 Month Circadian-Education Group Therapy for Bipolar



Delle Chiaie R et al, n=20, RCT, 2013

The cortisol curve goes from a depressive flat curve to a lively, sharp (normal) curve after a group psychotherapy designed to improve circadian rhythms



**A day
in the
(ideal) life**

Sleep Inertia

- Sound alarms wake us from deep sleep 90% of the time, causing *sleep inertia*.
- This groggy state lasts 15 minutes in most people, but up to 4 hours during depression.



Ask depressed clients how long it takes them to feel fully awake in the morning.

Dawn Simulator

TURNS ON

Gradually over 30 minutes

IMPROVES

Alertness
Energy
Depression



Standalone models with built-in LED bulbs

- Lowest price: JALL Wake Up Light Sunrise Alarm Clock (\$30–50), Winshine Touch (\$45–75 CAD).
- Other options: Philips SmartSleep HF3520/60 (recommended by National Sleep Foundation, \$150 CAD), Lumie Body Clock 100 (tested in clinical trials, \$150 CAD).

Smart bulbs

- Smart bulbs plug into existing lights. They can be programmed through an app to turn on gradually with white light in the morning and dim to an amber hue at night.
- Choose yellow or full-spectrum bulbs instead of white light, such as Philips Hue Ambiance, Philips Hue Color, or models labeled RGB, Rainbow, or Multicolor.
- Philips Hue is the industry standard (30–70 CAD per bulb).
- Lowest price: Foco LED Smart A19 RGB, Ledvance RGBW, and TP-Link Tapo L535E (MultiColor).
- Other options: AiDot, Foco, Govee, Nanoleaf, Philips Hue, and Wyze.
- Cost: 15–70 CAD per bulb.

Smartphone apps

- These are useful for travel but do not provide enough light to treat depression.
- Rise and Shine (Peter Matthews), Dawn Simulator (Aaditya Garg), Dawn Simulator (AppFinery), and Gentle Wake Up for Android (Dr. Alexander Rieger).

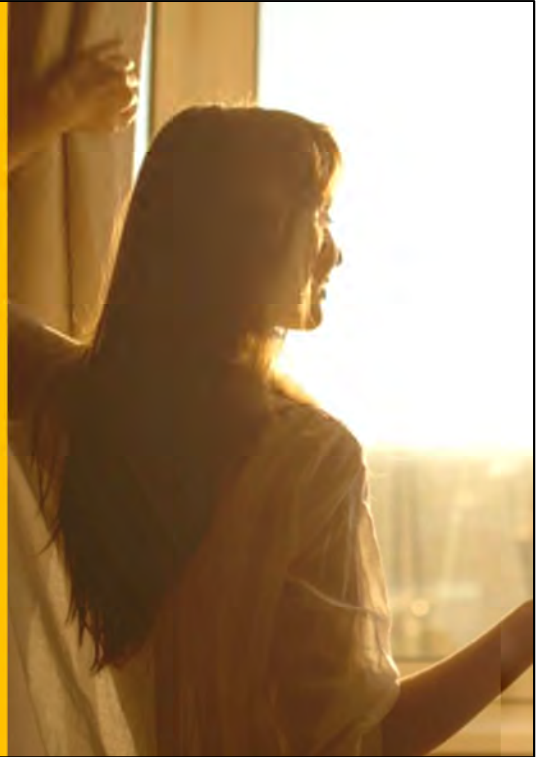
How to Use



- Set the light to turn on gradually over 30–90 minutes at the same time each morning.
- The patient should wake up gradually as the light increases. If they wake too early, move the light away from their bed. If they do not wake up, bring it closer. In clinical trials, the light reached a peak intensity of 100–300 lux.
- If the light allows color modulation, aim for broad-spectrum white light in the morning and yellow-amber-red light in the evening.

Effective for winter depression in 9 small trials; sleep inertial in 4 small trials; may improve sleep quality, cognition after sleep deprivation, and daytime energy/functioning in dementia and traumatic brain injury

Brisk Awakening



- ☐ Wake up at the same time each morning (within 15 minutes).
- ☐ Get out of bed immediately upon waking.
- ☐ Make the bed so it's harder to get back in.
- ☐ Start the day with energizing activity.

Improved depression, sleep, and reduced frequency of mood episodes in several small studies.

Energizing Activity in Morning



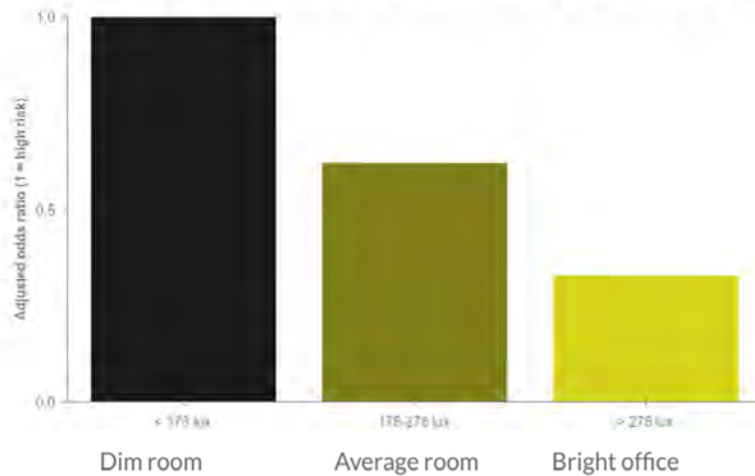
Do these upon awakening:

- > Page turners: the more you do them, the more you want to do them
- > Aromatherapy (citrus, mint, rosemary)
- > Morning playlist (e.g. dance or exercise music)
- > Step outside, move around
- > Cold water

Pleasure, daylight, and physical activity are important ingredients. Aromatherapy works best in small doses (don't saturate). Ask client what they do all night – often those are the activating things you can move to morning

Daytime light and depression

Risk of Depression and Intensity of Daytime Light



Study type

- 1 181 patients with bipolar disorder followed over a week

Uncontrolled but adjusted for

- 2 Physical activity, employment, bedtime, age, manic symptoms, and age, age at onset of bipolar

Replicated finding?

- 3 Yes, in animal studies, large epidemiologic human studies, and controlled studies in winter depression

Esakia et al, 2019

Note that a lightbox is 10-20 times brighter than a bright office



The “time you get out of bed” is defined this way. Standing up activates baro-reflex to keep you from fainting (=adrenaline)

Evening

Apps for Sleep

CBT-Insomnia Apps	
CBT-I Coach	A free, therapist-guided app sponsored by the VA
Sleep Coach	Similar to CBT-I Coach, but self-guided
SleepioRx	FDA-cleared prescription app, 6-week program, reimbursed under Medicare's Digital Mental Health Treatment codes or through employer-sponsored plans (\$400)
Somryst	FDA-cleared prescription app, 9-week program, reimbursed under Medicare's Digital Mental Health Treatment codes or through employer-sponsored plans (\$900)
Sleep Ninja	Free, 6-session app designed for adolescents

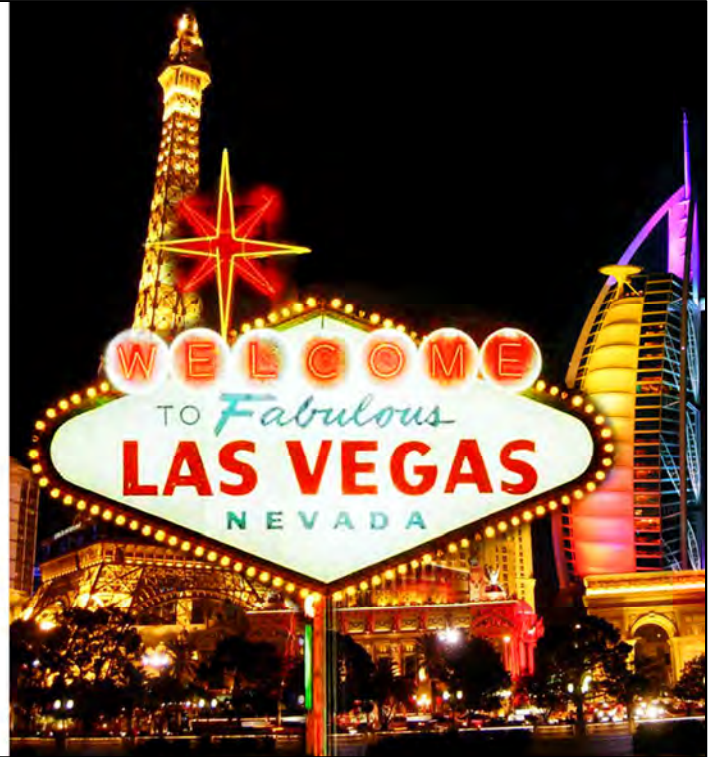
CBT-insomnia apps tested in clinical trials

Avoid overstimulation at night

- Bright lights
- Crowds
- Arguments
- Intense conversation
- Goal-directed activity
- Exciting projects

Is it energizing?

Move it to morning



Evening Wind Down

Sundown

- Dim the lights
- Dim the screens (f.lux app)

30 min before bed

- Electronic free zone
- Darkness or warm, yellow light
- Colder temperature
- Meditative activity
- Stretching, muscle relaxation
- Calming music
- Lavender, jasmine



Meditative/mindfulness 30 min before bed deepens sleep quality. Airplane analogy

Light at Night (LAN)

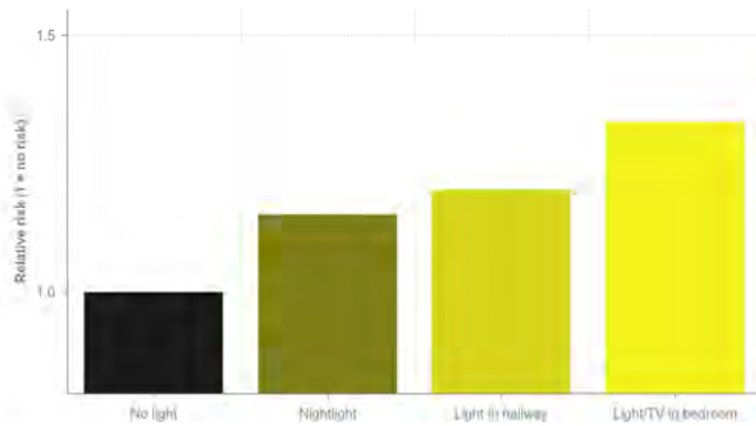
Obesity
Diabetes
Cancer (breast, prostate)
Cardiovascular disease
Neurologic diseases
Gastrointestinal ulcers
Adverse reproductive outcomes



AMA is concerned, psychiatry not – still recommending night lights for kids who can't sleep

Evening Light Causes Obesity

Obesity Risk and Bedroom Light



Park et al, 2019

1 Large study, long follow up
44,000 women age 35-74 followed for average of 6 years

2 Uncontrolled but adjusted for
Age, race, location, education, income, family size, menopause, stress, depression, and use of nicotine, alcohol, caffeine.

3 Replicated finding?
Yes, in animal studies and several large cross-sectional human studies.

Light at Night (LAN)

Delays, reduces melatonin
Impairs neuroplasticity, shrinks dendrites

Impairs sleep, cognition, learning
Creates night-owls (phase delay)

Obayashi K et al, *Am J Epidemiol.* 2018



Even dim light...

Bedroom light above 5 lux associated with double the risk of depression after 2 years.

The brighter the light, the greater the risk.

(Obayashi, 2018, Longitudinal study of 863 older adults)



Nocturnal light = Shortens sleep, lighter sleep, in bipolar; The associations are so strong that it is considered unethical to do controlled studies in humans

Lux

Full moon	0.3
Twilight	5-10
Dark public area	20-50
Living room	50
Dark overcast day	100
Office lighting	320-500
Sunrise/set	400
Overcast day	1,000
Full daylight	10,000-25,000
Direct sunlight	32,000–100,000

Outdoor light is far brighter than indoor

Dark Therapy

If morning light can act as an antidepressant, can evening darkness work as an antimanic? That is the idea behind dark therapy, developed in the 1990s by the same NIMH researchers who brought us light therapy. By keeping patients in a pitch-dark room from 6:00 pm to 8:00 am, they treated mania and insomnia, but the protocol proved difficult to apply at home. A more practical approach uses blue light blocking glasses to filter the wavelength that suppresses melatonin.

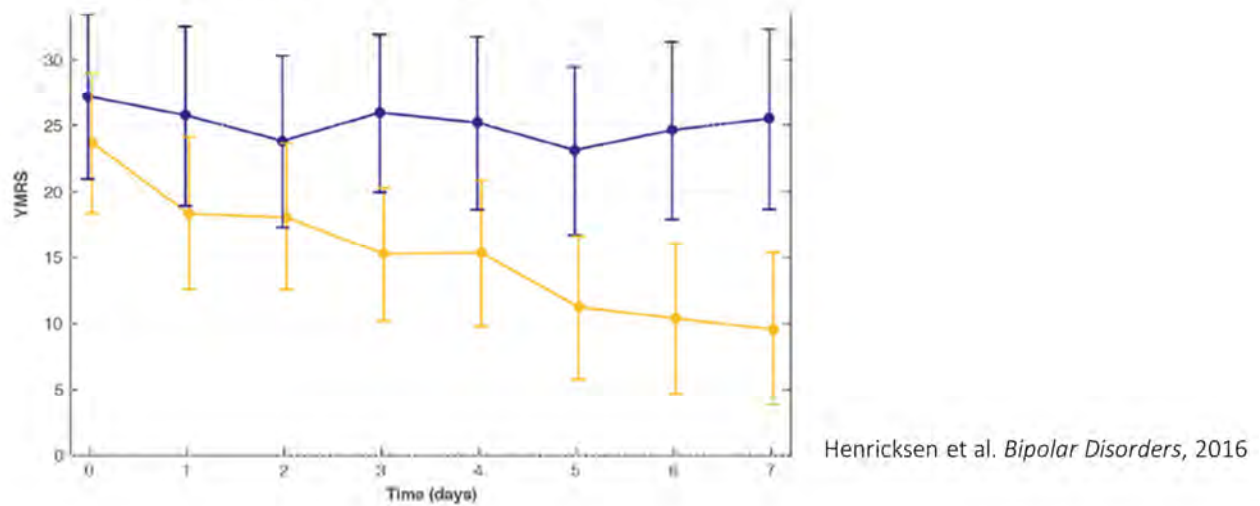
Blue light is the primary signal that tells the brain's master clock it is daytime, through melanopsin-containing retinal cells. The glasses approach deepened sleep, reduced insomnia, and augmented mood stabilizers in mania with a large effect size. However, the trials were small and unblinded. To achieve the biological effects, patients need to wear the glasses while up and then sleep in a pitch-dark bedroom. Some trials neglected the dark bedroom, which may explain why some of them have negative results.

Dark Therapy Treats

- Bipolar mania (controlled trial)
- Bipolar rapid cycling (case series)
- Shift-work and jet lag
- Insomnia and sleep quality
- Next-day cognition
- Aggression in psych disorders



Dark therapy improved mania in hospitalized patients.
Effect size = 1.8 (3-times greater than most meds).
Patients recovered without sleeping more.



Patients in the dark therapy group actually slept a little less than the controls, but their sleep became more regular

Protocol

6pm to 8am

- Virtual darkness (blue-light filters) when out of bed
- Total darkness (or eye mask) when in bed
- Can start later if improved after a week or if symptoms are mild
(Shifting later by 1 hour every 2-3 days)
(2 hours before bed is ideal for prevention)



- For the entire evening during dark therapy, the patient should either: Remain in a pitch-dark room, or wear blue light blockers
- They do not need to wear the glasses in bed as long as the room is pitch-dark.

Timing

- Bipolar mania: Total or virtual darkness from 6:00 pm to 8:00 am. After improvement (usually within one to two weeks), shift to a later start time (moving up by an hour every three to five days). Once stable, shift to a preventative schedule, starting dark therapy 1.5–3 hours before bed and continuing until waking.
- Insomnia and sleep phase delay: Total or virtual darkness from 8:00 pm (or 1.5–3 hours before bed) until 8:00 am.
- Night shift work: Wear blue light blockers two to four hours before bed. Sleep in a pitch-dark room and use a dawn simulator to wake up.
- Cognition: Wear blue light blockers two hours before bed and sleep in a pitch-dark room to improve next-day cognition (processing speed may be slower while the glasses are on).

Glasses



Fitovers:
Blockbluelight.com
Noir Insight ARG



Uvex Skyper 3S1933X

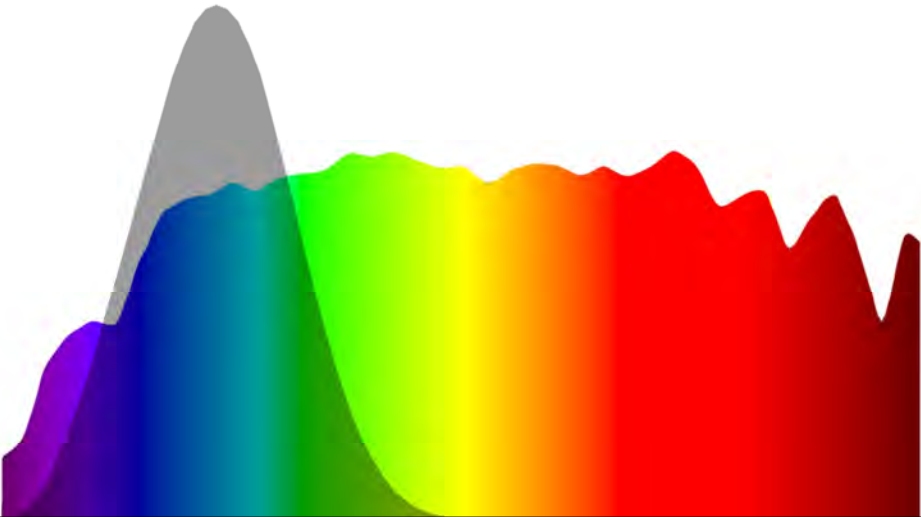


Lowbluelights.com

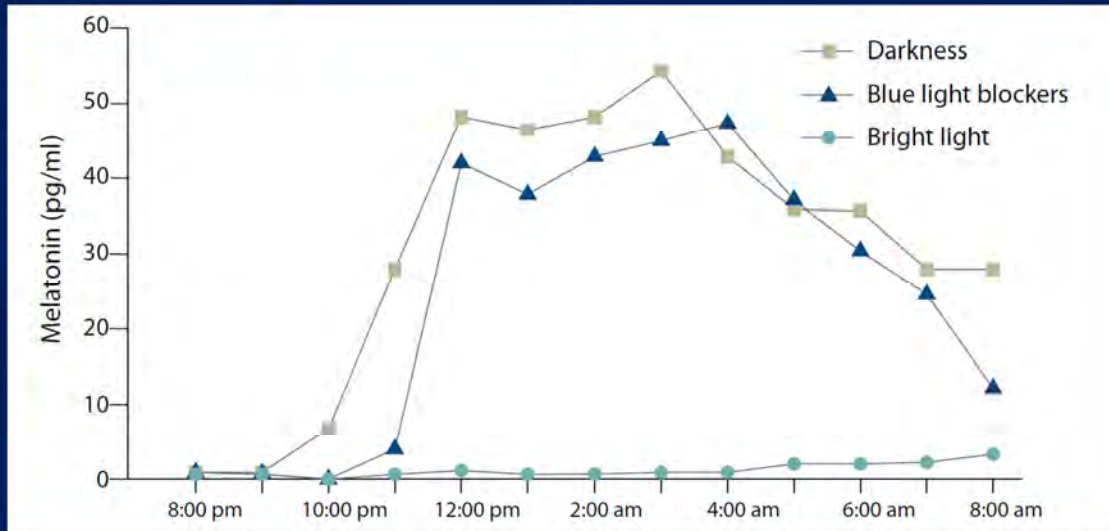
Products at: chrisaikenmd.com/darktherapy

- Most products do not block enough blue light to alter melatonin. Circadian researchers recommend glasses with a “melanopic daylight filtering density” greater than 1.0, and the glasses used in clinical trials fit this metric (Glickman GL et al, Transl Vis Sci Technol 2025;14(7):25).
- Lowest price: Uvex Skyper S1933X (these are useful to start with, but patients who find them uncomfortable will prefer the options below).
- Other options: Carbonshade Classic, Chron-Optic (chron-optic.net), Low Blue Lights (lowbluelights.com), and Swanwick Swannies.
- Options that fit over prescription glasses: LowBlueLights Traditionalists (at lowbluelights.com, blockbluelight.com, and cet.org), Noir ARG (noirinsight.com/arg).
- Cost: \$25–200 CAD.

MELANOPSIN RESPONSE
(PROMOTES ALERTNESS)



Melatonin Rises with Dim Light or Blue-Light Filtering Glasses



Kayumov et al. *J Clin Endocrinol Metabolism*, 2005

This is just one way that blue blocking glasses have a medicinal effect

Black out

- Blackout curtains (such as ShiftShade, or buy blackout fabric, attach with pins or Velcro)
- Aluminum foil against window
- Electric tape over LED lights
- Sleep in basement

Low blue nightlights:

- GE SleepLite, Beams MB720A Night Light
- Bulb: Harth Sleep-Shift Sleep Ready Light
- lowbluelights.com, somnilight.com
- Apps: f.lux, Apple Nightshift mode, Kindle Candle



Getting the room pitch-dark

- Seal blackout curtains to the wall with Velcro or magnets.
- Cover cracks and LED lights with aluminum foil, insulation strips, electrical tape, or a towel at the bottom of the door.
- Wear an eye mask.
- Consider sleeping in the basement or a windowless room.
- In the morning, use a dawn simulator to wake up.



Side Effects

- Blue objects appear gray while wearing the glasses.
- Most common: Headache. Depression if the glasses are worn too early.
- Serious but rare: None, but advise patients not to wear the glasses while driving.
- Pregnancy/breastfeeding: No risk.

Troubleshooting

- "I can't sleep without the TV on." Try audio books, nature sounds, or music ("Weightless" by Marconi Union is a mellow track designed by sleep researchers).
- "I'm afraid of the dark." Use an amber "low blue" nightlight (lowbluelights.com).
- "The glasses are calming, so I wear them during the day." Don't. It disrupts circadian rhythm.
- "It didn't help me fall asleep." Dark therapy improves the quality and regularity of sleep, but sleep initiation may still be difficult, particularly during mania.

Quiz 2



Light Therapy

Light therapy is one of the most effective natural therapies for depression, with a medium to large effect size in depression.

Ref: Mårtensson B et al, J Affect Disord 2015;182:1-7, Tao L et al, Psychiatry Res 2020, 291:113247, Lam RW et al, Can J Psychiatry 2020;65(5):290-300



400 BCE: Hippocrates

Employs *heliotherapy* on island of Kos



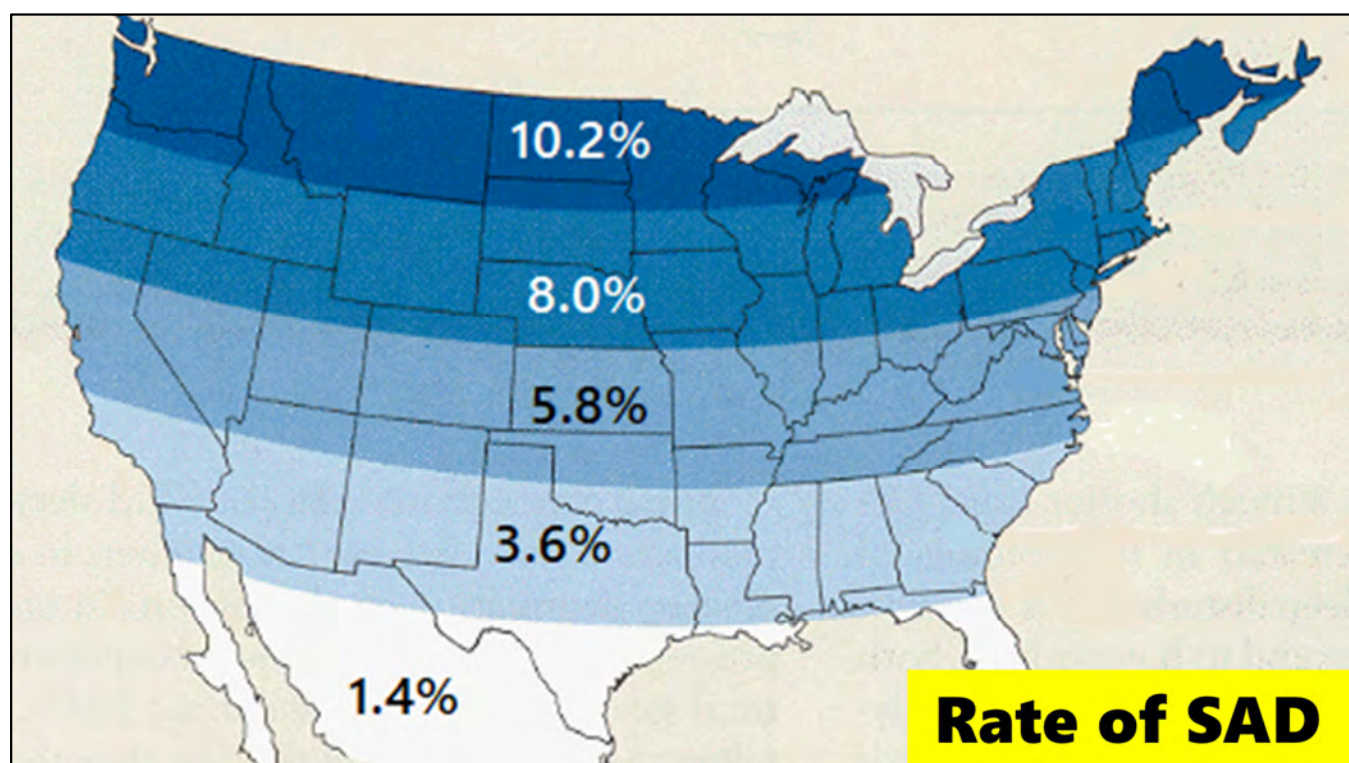
1859: Florence Nightingale

Sunlight fosters recovery from illness



It began in the 1980s as a limited treatment for seasonal affective disorder, but its role has expanded to non-seasonal depression, treatment-resistant depression, late-life depression, and a variety of other disorders. It is well tolerated and works in conditions where antidepressants are unsafe or ineffective, such as in adolescents, pregnant women, and bipolar disorder.

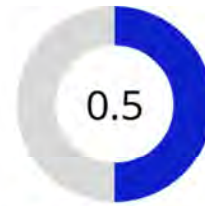
The trials are numerous, but limited by small size and lack of blinding. Sitting in front of the box for 30–60 minutes a day is a barrier for some patients, in which case the dawn simulator is a more practical, though less effective, option.



Light Therapy Effect Size



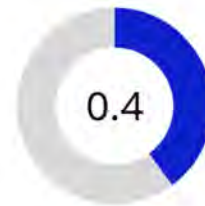
Seasonal



Non-seasonal



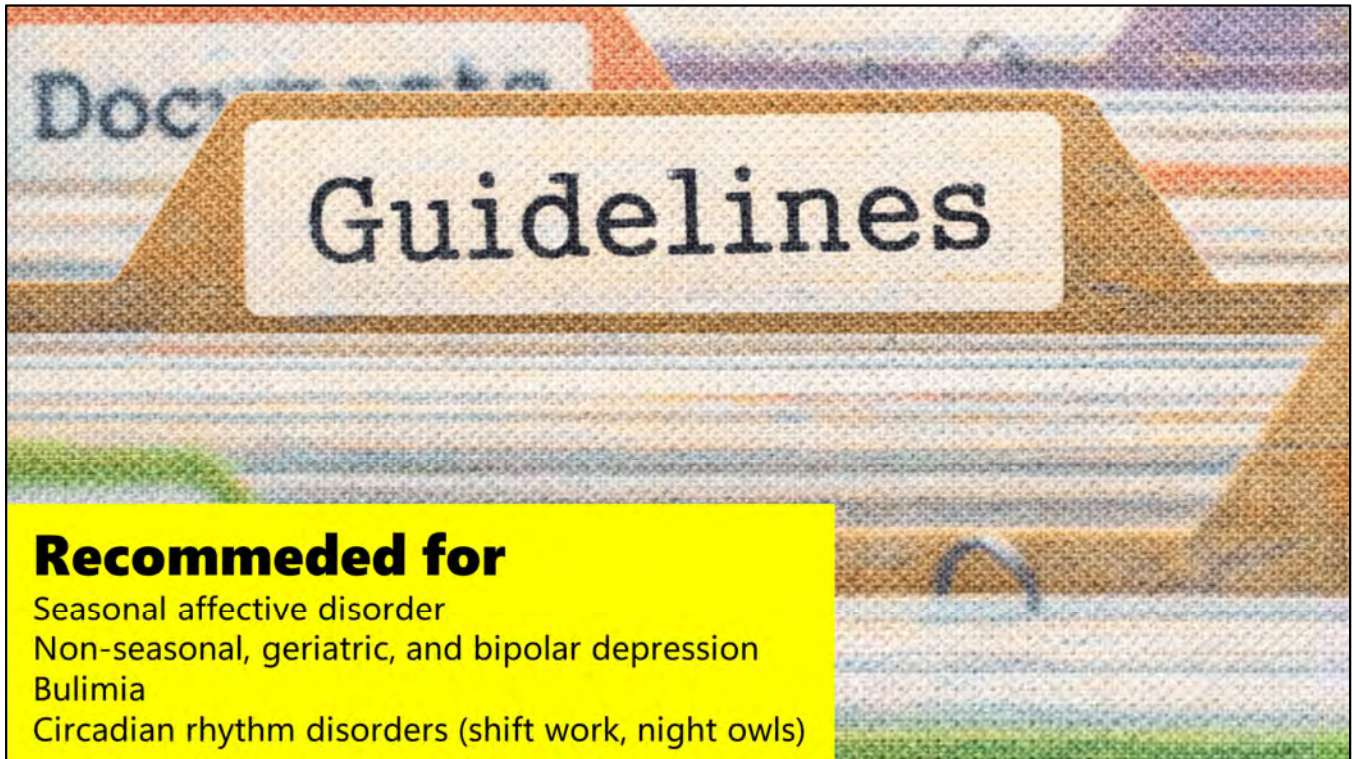
Augmentation



Bipolar

Mårtensson B et al, *J Affect Disord* 2015;182:1–7
Tao L et al, *Psychiatry Res* 2020;291:113247
Lam RW et al, *Can J Psychiatry* 2020;65(5):290–300
Geoffroy PA et al, *Sleep Med Rev* 2019;48:101213

Approx 50 RCTs, 30% nonseasonal



Practice guidelines

- Seasonal affective disorder (American Psychiatric Assoc, US Veterans Affairs, Psychopharmacology Algorithm Project)
- MDD, regardless of seasonal pattern (US Veterans Affairs, Psychopharmacology Algorithm Project), and geriatric depression (Japanese Society of Mood Disorders)
- Bipolar depression (International Society for Bipolar Disorders)
- Bulimia nervosa (World Federation of Societies for Biological Psychiatry)
- Circadian rhythm sleep-wake disorders (eg, phase delay, shift work) (Polish Psychiatric Association)

Light Therapy in Other Disorders

Depression	Youth, elderly, anorexia, perinatal, bipolar, post-stroke, bipolar
PTSD	Core symptoms
Schizophrenia	Negative symptoms and depression
Bulimia	Winter
Hypoactive sexual desire	Winter (men and women)
Insomnia	Any season (start 5 am), for night owls or general insomnia (sleep quality)
Dementia	Sleep, mood, agitation, cognition
Traumatic brain injury	Sleep, mood, energy
Parkinson's	Sleep, mood, motor symptoms
Pain syndromes	Fibromyalgia and back pain

For insomnia, improves sleep quality and morning fatigue. Also effective in shift work disorder (when combined with dark therapy). Does not work in OCD

Light Therapy



Brouwer A et al, Acta Psychiatr Scand 2017;136:534–548
Rosenthal NE, Winter Blues, Guilford Press, 2012

Optimize start time with AutoMEQ test at cet.org (usually 5-8 am)

Do not use after 2:00 pm

Duration 30-60 minutes, taper slowly in bipolar (raise by 15 min/week)

10,000 Lux

UV filter

Carex Daylight Sky or Elite at cet.org or chrisaikenmd.com/lighttherapy

Start 2 weeks before winter depression

Risks: Photosensitivity, aggravate eye disease, headache, eye strain, mania

Modifications for other disorders

- Follow the usual protocol for seasonal affective disorder with modifications for those below.
- Bipolar disorder: Lower the risk of mania by increasing light exposure gradually (start at 15 minutes, adding 15 minutes weekly toward 60 minutes) and using the light at midday (12:00–2:00 pm). Morning light was safe and effective in some bipolar disorder trials, so these modifications may only be needed for those with bipolar I or recent manic symptoms (within six months).
- Shift work: Deliver light upon waking.
- Jet lag: A lightbox may be impractical for travel, but before traveling, patients can gradually adjust their sleep and light exposure to match their destination (for personalized protocols, search “Jet Lag Rooster” or visit sleepopolis.com/calculators/jet-lag).
- Insomnia: Early morning light (4:00–5:00 am) can help night owls and those with trouble falling asleep by shifting sleep onset earlier (phase advance). Evening light (before bed) shifts sleep onset later (phase delay), helping people wake up earlier.
- Traumatic brain injury: Use blue or blue-enriched wavelength.
- Discontinuation: Patients should continue for at least six to eight weeks after recovery and then taper over two to four weeks. This needs personalization, as some may need continued light treatment. Those who get more outdoor light and exercise are less likely to need continuation.

Purchasing



- **Many boxes are too small or do not direct light over the head. Look for these specifications:**

- o Intensity: 5,000–10,000 lux (higher is better as patients may need to sit for a longer duration with lower intensity, such as 2 hours for 5,000 lux vs 30–60 minutes for 10,000 lux).
- o Screen size: At least 12 x 17 inches.
- o Wavelength: Around 509 nanometers (white light).
- o Safety: A UV filter to screen out ultraviolet rays that can damage the retina.

- Avoid light therapy glasses. Their safety and efficacy are not well established, though this may change as the Luminette brand is conducting trials.

- Newer models employ LED lights, which are smaller and longer lasting. The older, fluorescent bulbs need to be replaced every two to three years (their therapeutic wavelengths decline with time even though the bulbs still light up).

- Lowest price: Carex Daylight Sky.

- Other options: Carex Elite, Northern Lights Desk Lamp II, BOXelite OS.

- Cost 170-300 CAD

- www.chrisaikenmd.com/lighttherapy, www.cet.org



The box should hover above their head at a 45-degree angle, like the sun. Stay within the manufacturer's recommended distance (usually 12–17 inches) because intensity decreases quickly with distance. Don't look directly at the light. Patients can read, eat, or use a laptop under it but should not wear sunglasses.

Timing



- Start one to two weeks before episodes usually begin to prevent recurrent winter depression.
- Titration: Start with 30 minutes in the morning and raise to 60 minutes after 4–7 days.
- Duration: Sit under the box for 30–120 minutes in the morning (longer durations are for more severe depressions or boxes with intensity less than 10,000 lux).
- Timing: Early morning is ideal (5:00–8:00 am). Patients can personalize their time with the AutoMEQ test (available at cet.org), but a rough guide is to start earlier for “morning types” and later for “night owls.” Patients who struggle to wake up can use a dawn simulator. Avoid light therapy after 2:00 or 4:00 pm as that can cause insomnia and disrupt circadian rhythms.
- Discontinuing: Taper down (lowering by 15–30 minutes per week) in the 2–4 weeks before the peak of spring sunlight.



Side Effects

- Most common: Headache, eye strain, nausea, photosensitivity (an additive risk with photosensitizing meds like lamotrigine, tricyclics, and antipsychotics). Irritability and insomnia usually improve with light therapy but can also worsen on it.
- Serious but rare: Worsening of retinal disease. Light therapy has not caused retinal damage in healthy patients, but those with retinal disease may be at risk. Seek ophthalmology clearance for patients with macular degeneration and diabetic retinopathy.
- Pregnancy and breastfeeding: Safe.

Questions?

caiken@thecarlatreport.com

