

# NORTHERN LIGHTS™

## Bright Light Therapy & Seasonal Mood Disorders

Physician Resource Guide

By Northern Light Technologies

presented for the Family Medicine Forum 2025 – Winnipeg

### Light, the Circadian System, and Mood

The body's internal clock follows a near-daily cycle. Beyond describing the typical sleep-wake cycle, this circadian rhythm (circa diem, or 'approximately a day') regulates many disparate cognitive and physiological processes: mood [1], memory [2], and even immune response [3]. The common primary synchronizing cue ("zeitgeber") for this rhythm, across processes, is light [4]. In diurnal mammals—including humans—it is naturally synchronized by morning sunlight [5].

### Seasonal Affective Disorder (SAD)

Insufficient light exposure during morning hours—particularly during winter months—can lead to SAD [6]: an annually recurrent depressive pattern beginning in late autumn and fading with springtime. So, in addition to common depressive symptoms (following a seasonal pattern), SAD patients also tend to experience [7]...

### SYMPTOMS:

- ... **Oversleeping** (hypersomnia)
- ... **Overeating** (especially carbohydrates) & weight gain
- ... **Social withdrawal** (feeling like "hibernating")
- ... **Cognitive slowing** (memory, attention, fatigue)

### Prevalence

According to the Canadian Psychological Association [8], a full **15% of Canadians will experience some level of clinical SAD during their lifetimes**, with many more experiencing subsyndromal "winter blues". Some research indicates that incidence varies geographically, such that it is more prevalent at northern latitudes, at least in North America and Europe [9,10].

### Evidence and Mechanism

The etiology of SAD (and potentially other chronobiological disorders) is largely based on two factors. First, intrinsically photoreceptive retinal ganglion cells regulate suprachiasmatic nucleus activation, which controls the body's sleep-wake cycle [11]. Second, levels of the mood-regulating hormone melatonin depend on the timing and availability of bright light. For instance, SAD patients are known to exhibit delayed dim-light melatonin onset [12].

Especially during the darker days of winter, natural sunlight may not always be readily available. However, morning light exposure remains no less crucial to maintenance of a healthy, consistent circadian rhythm. The Canadian Mental Health Association (cmha.ca), American Psychiatric Association (psychiatry.org), and

National Institute of Mental Health (nimh.org) all recommend 20-30 minutes of bright light exposure every morning for SAD prevention, but also as a safe primary treatment method—as effective as antidepressant medications—that avoids most of their common side-effects with shorter uptake (as little as a week) [13].

## Patient Handout

SCAN TO  
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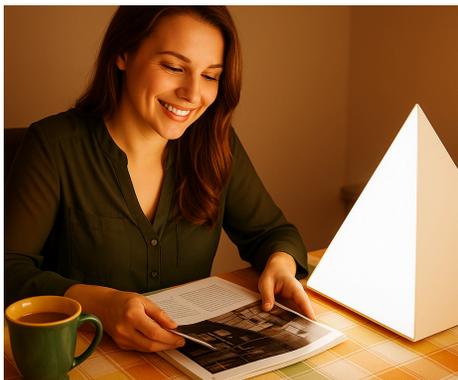
### Basic Protocol

Parameter	Recommendation
Intensity	10,000 Lux at 30–50 cm
Duration	20–30 minutes per session
Timing	Within 1 hour of waking
Angle	Lamp positioned above eyes, shining downward
Frequency	Daily, typically from October to April in northern latitudes

Note also: patients should keep their eyes open (though not staring directly at the light source). Reading, eating, or working nearby can all be appropriate pastimes.

## Clinical Applications Beyond SAD

Condition	Rationale
Major Depressive Disorder (Adjunct)	Improves response rate, allows lower SSRI dosing
Pregnancy / Postpartum Depression	Safe non-pharmacologic option
Circadian Rhythm Disorders (ASPD/DSPD, Shift Work)	Corrects delayed sleep timing
Non-seasonal fatigue & alertness	Stabilizes daytime wakefulness



LUXOR

Models commonly used in clinical and research settings:

- BOXelite OS - Largest screen
- Northern Light Desk Lamp II
- Flamingo Floor Lamp II
- LUXOR Desk Lamp
- TRAVelite II - Portable unit

## See Northern Lights shop:

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## About Northern Light Technologies

Founded in 1989, Montreal, Quebec. Every light we craft is made with precision and attention to detail in Canada. Northern Light seeks to bring back the light into the lives of SAD sufferers with top of the line products and unmatched customer care.

## Contact Us



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## Access & Patient Resources

The QR code on this handout links to:

- Downloadable PDF: Physician summary & evidence overview
- Patient handout: One-page “How to use your light safely and effectively” sheet

- Northern Light Technologies shop page
- Resource links:
  - CET.org
  - Health Canada consumer advisory

## Experts in the Field

- Dr. Norman E. Rosenthal – First identified Seasonal Affective Disorder, pioneered bright light therapy research.
- Dr. Michael & Juan Su Terman (CET.org) – Established circadian-based treatment protocols.
- Dr. Suzanne Fillion (Canada) – Promotes light therapy awareness in clinical practice.
- Dr. Dorothy Sit (Northwestern University) – Explored bright light therapy in non-seasonal depression and perinatal mood disorders.

## Disclaimers

Bright light therapy is a non-pharmacologic wellness intervention supported by peer-reviewed research. It is not a replacement for medical evaluation or treatment of major depressive disorder. Patients with bipolar disorder or retinal disease should consult a physician before use.

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