

Bright Light Therapy for Shift Work Disorder

- Use bright lights (artificial lights) at work and during awake hours to help combat drowsiness and improve alertness
- Use bright lights from early in night shift through 2 hours before shift ends



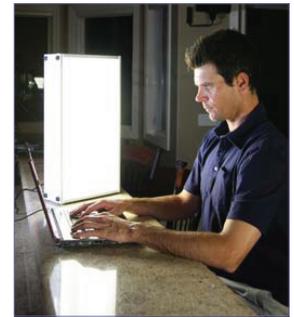
- Wear sunglasses:
 - During commute home in the morning after night shift
 - 1-2 hours before daylight bedtime
- Minimize light exposure prior to bedtime
- Avoid light during sleep hours

- Darken bedroom at home
 - Use light-blocking curtains or blinds
 - Dim lights in bedroom, bathroom, and passage in between

Morgenthaler TI, et al. *Sleep*. 2007;30:1445-1459. Smith MR, et al. *Sleep*. 2009;32:1481-1489.

Use of Light Box¹

- Intensities (illuminances) of 2,350 to 12,000 lux
- Usually full spectrum, no UV*
- Schedules
 - 20- to 30-min discontinuous periods during night shift
 - Continuously during the first half to the entire night shift
- Often combined with morning light restriction with sunglasses
- Demonstrated improvement in:
 - Performance
 - Alertness
 - Mood
 - Daytime sleep
- Bright light therapy, typically with a light box producing 10,000 lux at a prescribed distance, can be used in the evening to delay or in the morning to advance one's sleep timing.²



*There is controversy regarding possible risks of bright light exposure to the retina. Broad-spectrum white light traditionally used for bright light therapy also contains blue light of potential concern, particularly for very high-intensity, long-duration exposure. Further investigation is needed.²

1. Morgenthaler TI, et al. *Sleep*. 2007;30:1445-1459.

2. Lack L, Wright HR. *Behav Sleep Med*. 2007;5(1):57-76.

SELECTED PUBLICATIONS

Dodson ER, Zee PC. Therapeutics for circadian rhythm sleep disorders. *Sleep Med Clin*. 2010;5(4):701-715.

Smith MR, Fogg LF, Eastman CI. A compromise circadian phase position for permanent night work improves mood, fatigue, and performance. *Sleep*. 2009;32(11):1481-1489.

Thorpy MJ. Managing the patient with shift-work disorder. *J Fam Pract*. 2010;59(1 suppl):S24-S31.

Zee PC, Manthana P. The brain's master circadian clock: implications and opportunities for therapy of sleep disorders. *Sleep Med Rev*. 2007;11(1):59-70.

ARTICLES

How Can Light Therapy Be Used for Shift Work? www.livestrong.com/article/253717-how-can-light-therapy-be-used-for-shift-work/

Reverse Shift Work Fatigue www.naturebright.com/lightTherapy_Fatigue.php

Bright Light Therapy <http://yoursleep.aasmnet.org/treatment.aspx?id=4>

WEB SITES

The Litebook Company www.litebook.com/light-therapy/shift-work.asp

NatureBright www.naturebright.com/store.php

Philips Sense and Simplicity. Light therapy www.usa.philips.com/c/light-therapy/hf3310_60/prd/#

Verilux www.verilux.com/light-therapy-lamps