

Light and cognitive behavioral therapies in the treatment of shift work disorder

Bjorvatn B, Järnefelt H, Lowden A, Vanttola P, Waage S

For affiliations and more information please see:
<https://www.ttl.fi/en/research-and-development-projects/wow/>

Shift work disorder (SWD) is a circadian rhythm sleep-wake disorder defined as insomnia and/or excessive sleepiness that lasts at least three months and is associated with a shift work schedule that overlaps the habitual sleeping time.

Light therapies and cognitive behavioral therapies for insomnia (CBT-I) are individual-based countermeasures that can be used for treatment of shift work disorder.

Recommendations

- SWD and comorbid sleep disorders should be recognized and assessed in occupational health services (OHS) among shift workers.
- Treatment options using both ergonomic shift scheduling, sleep hygiene and/or cognitive behavioral therapies are recommended in the treatment of SWD.
- Scheduled bright light treatment is recommended among permanent night workers who struggle with poor adaptation to the work schedule.
- In rotating shift work, the appropriateness of bright light therapies will likely depend on the number of consecutive night shifts. In fast-rotating shift work, phase shifting is not recommended.
- If a shift worker has insomnia independent of working hours, standard treatment guidelines of chronic insomnia should be followed, that is, CBT-I.

Treatment of shift work disorder: current knowledge

WOW studies showed that:

- SWD is related to disturbed sleep and alertness in association with both morning and night shifts, and to shorter compensatory sleep on days off.
- Nurses vulnerable to shift work are also sensitive to other sleep-related complaints like restless legs syndrome, headache and migraine.
- An intervention study in OHS showed similar sleep improvements both after cognitive behavioral therapy for insomnia (CBT-I) and short sleep hygiene control intervention among shift workers with insomnia.
- The preliminary results of an intervention study indicate that strong light boosts in the beginning of night shifts promote alertness.

Earlier studies show that scheduled exposure to bright light will facilitate the adaptation of the circadian rhythm. Most of the earlier studies involve simulated night work, but also a few field studies are encouraging. There is also some earlier evidence that CBT-I methods are an effective way to treat SWD.