

On-the-spot management

INFORMATION FOR HEALTH PROFESSIONALS



Shift Work Sleep Disorder

Definition

Shift work sleep disorder consists of symptoms of insomnia or excessive sleepiness that occur as transient phenomena in relation to work schedules (ICSD).

A critical component in the diagnosis of SWD is the distinction between what might be considered 'normal' responses to the challenges of shiftwork, and a clinical response which may include issues that impact on the individual's work and family life. Prevalence estimates suggest that 10% of shiftworkers likely suffer from SWD.

Shiftwork requires individuals to attempt sleep at biologically inappropriate times of the day, but most people are able to obtain some sleep. A key symptom of SWD is an inability to obtain sleep at these times. Shiftworkers without a diagnosis of SWD obtain an average of approximately 6.5 hours sleep in a 24-hour period whereas sufferers of SWD report obtaining far less. The other key diagnostic criterion is excessive sleepiness during periods of desired wakefulness (i.e. work periods). Again, while most people experience reduced alertness and increased sleepiness during the night hours, SWD is characterized by extreme sleepiness (Epworth Sleepiness Scale score >10)

Typical scenario

- Individual who works night shift or rotating shifts that involve night work
- Inability to get to sleep or stay asleep for desired period
- Excessive sleepiness associated work hours
- Prolonged symptoms (coincident with work schedule)
- Caffeine or other stimulant use to promote alertness, may also impact sleep

Clinical Presentation

- Likely to present extremely tired, depending on time of day and day in schedule
- May look fatigued with dark circles under the eyes but may equally look very alert and so called 'normal'
- Mood may be depressed

What to Ask

- Does the patient sleep differently on days off or day shifts?
- What strategies has the patient used to promote sleep?
- Questions to eliminate possibility that the sleep disturbance is not due to another current sleep disorder, medical disorder, mental disorder, substance use disorder, or medication use.
- Light exposure routine

What investigations to order now/later

- Sleep log or actigraphy monitoring (with sleep diaries) for at least 7 days demonstrates disturbed sleep (insomnia) and circadian and sleep-time misalignment
- Epworth sleepiness scale

Treatment plan for today

Educate

Discuss normal sleep with emphasis being placed on how most of our sleep is relatively light (45-55% whilst we only spend 20% of the night in deep sleep & 25% in dream or REM sleep; Waking is also normal and it is what we learn to do with the wake and how we manage it which is most important. Discuss the challenges presented by night work and sleep hygiene strategies.

What to do initially

- Manage immediate risks to health and safety (e.g. drive home); encourage consistent sleep and wake times as far as possible; restrict caffeine and alcohol intake; set up bedroom for sleep (cool, dark, quiet); minimise screen time in hour prior to bed; recommend strategic napping to manage alertness.

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- Discuss options for change to work hours, even if temporarily to assist diagnosis.
- Consider medication – melatonin for sleep promotion and caffeine and modafinil for alertness promotion.

Try caffeine early in the shift, suggest the equivalent of 1-3 cups of coffee depending on habitual use.

Recommend using caffeine only when need boost in alertness as tolerance can build up. Timing of caffeine is important as it can impact sleep quality.

Melatonin may be used for its hypnotic effect, at higher doses, for example 3mg 1-2 h before intended sleep time. Recommend trial with dose and timing.

Most shifts change too rapidly to allow melatonin to have an effect on adjusting circadian phase. Melatonin is not effective in everyone.

NB: Modafinil, a wakefulness-promoting agent was first registered in Australia for treatment of narcolepsy but two additional indications were TGA registered in 2007 including the treatment of excessive sleepiness associated with moderate to severe chronic shift work sleep disorder.

The indication to treat was further revised to include only patients where non-pharmacological interventions have been unsuccessful or are inappropriate.

Future management

- Advise the patient to return for a follow-up visit.
- Consider referral to sleep psychologist or sleep physician.

Where to access more information

Shiftwork and Sleep Problems:

www.sleephealthfoundation.org.au/fact-sheets-a-z/236-shiftwork.html

Melatonin:

www.sleephealthfoundation.org.au/fact-sheets-a-z/189-melatonin.html

Caffeine:

www.sleephealthfoundation.org.au/fact-sheets-a-z/262-caffeine-food-alcohol-smoking-and-sleep.html

www.sleep.org.au/professional-resources/health-professionals-information/the-medical-journal-of-australia

Link to sleep diary –

<http://yoursleep.aasmnet.org/pdf/sleepdiary.pdf>