

## **Sleep in Adolescence**

Adolescents require about the same amount of sleep as younger children (roughly 9 hours 15 minutes per night), but they are biologically and socially primed to get this sleep at a later time of day. This can be a problem, given that school start times, travel and pre-school activities mean many adolescents must wake up earlier than they did in primary school.

There is growing evidence that a significant number of adolescents obtain insufficient and poor quality sleep, and this is increasingly regarded as an epidemic of sleep deprivation in adolescents (1). Two factors combine to make sleep vulnerable to disruption during adolescence. First, there are physiological maturational processes that cause a delay in the endogenous circadian oscillator. The biological processes most critical to producing this delay appear to be a lengthening of the intrinsic period of the oscillator and a reduction in the rate of rise of homeostatic pressure during wakefulness (2, 3). Taken together they reduce sleep propensity at the time the child had previously been going to sleep. Second, adolescents are subjected to less parental control over bedtime and develop cultural and social interests and obligations, such as homework, sports, hobbies, part time employment, and use of electronic media and communications, that encourage them to remain awake later in the evening. The two processes interact so that reduced sleep propensity in the late evening becomes permissive of continued waking activities.

The delay in sleep onset has two potential sleep related consequences. First, delayed sleep onset results in sleep restriction, because school starting times tend to be relatively inflexible and early in the morning for adolescents. Second, because recovery sleep tends to occur at an inappropriate circadian phase, the restorative value of sleep is reduced (3). The consequences of insufficient sleep among youth, including a range of behavioural, cognitive and emotional impairments, poor school performance, and depressed mood, is a growing concern among public health and educational professionals. One particularly important consequence is the possibility of a vicious cycle between poor sleep and impaired emotion regulation in the daytime. The link between adolescence, disturbed sleep and poor daytime functioning has recently been confirmed in an Australian sample (4): Dr Suzanne Warner and colleagues demonstrated that Australian adolescents are developing an average sleep debt of more than 6 hours each school week, with predictable effects on mood, attention and school grades.

We shouldn't be alarmist about adolescent sleep. First, many adolescents manage their sleep challenges well, and many are naturally resilient against the mood and cognition effects of poor sleep. The key take home message is that adolescents do face a genuine challenge in relation to sleep, giving teachers and caregivers important contextual information when interpreting adolescent behaviour. Second, teenagers can adopt simple practical strategies to help minimise their risk of sleep debt (see below). Finally, it's important to realise that sleep and daytime activity are opposite sides of the same coin: sleep and activity are part of a single 24-hour adaptive cycle of engagement and disengagement with the world. Therefore, sleep is a barometer of overall functioning. If an adolescent is complaining of poor or insufficient sleep or daytime tiredness or apathy, this is an opportunity to open a broader discussion about how they are managing their engagement and motivations.

## **Sleep tips for teenagers**

Professor Murray shares some tips on how to improve sleep during adolescence.

### **During the day**

- Get outside during the day, preferably early in the morning (but lunchtime will do)
- Get some exercise each day (finish your exercise at least 3 hours before bedtime – elevated body temperature is a barrier to sleep)
- Avoid napping
- Avoid caffeine (coffee, tea, soft drinks, chocolate), and other stimulants after noon
- Alcohol and nicotine, apart from their other well-known problems, significantly effect sleep quality

### **Around bed time**

- Aim for 8½ – 9 ¼ hours sleep per night
- Choose a bed time that works for you, and go to bed around this time each day, including weekends
- Avoid over-stimulation later in the evening. Intense study, computer games, arguing or heated discussions are incompatible with sleep
- Develop a soothing pre-sleep routine to train the body into a relaxed state for bed (try a hot bath, or a quiet read, chamomile tea, or a relaxation technique in the hour before bed)
- Create a good sleeping space that is dark, comfortable, cool, quiet and uncontactable, which means no phone and no internet
- Avoid bright light in the evening. Screens, especially computer screens at close range tell the body clock that it is not yet dark
- If you have any worries or concerns at bedtime, write them down for consideration in the morning
- If you're not asleep 20 minutes after lights out, get up and do something quiet until you feel tired

### **In the morning**

- Open the blinds or turn on lights as soon as you get up. The body clock benefits from a light-reminder that the day has started

### **Catch-up sleep**

- Weekend sleep-ins are OK, but don't awaken more than a couple of hours later than your usual awakening time or it could disrupt the body clock

### **Is poor sleep a problem for you?**

Effective, practical strategies exist for treating most sleep problems. If your sleep quality is consistently poor or is causing distress, you should seek professional assistance. Poor sleep can also be a marker of other issues that might warrant some attention. The Australian Psychological Society has an online service for finding a qualified psychologist in your area: [www.psychology.org.au/findapsychologist](http://www.psychology.org.au/findapsychologist)

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