Sleep Deprived Teens – A Growing Trend

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Adolescent Sleep

• Most adolescents do not get enough sleep
• Research suggests this pattern of poor sleep increases with age (Iglowstein, 2003)
• Sleep duration of adolescents has decreased over time (Iglowstein, 2003; Dollman et al., 2007)
• Adolescents obtain average of 7.6 hours of sleep per night (NSF, 2006)
• Similar patterns have been found worldwide, including in Australia (e.g., Gaina et al., 2006; Gianotti et al., 2002; Thorleifsdottir et al., 2002)
What is a ‘typical’ sleep pattern for adolescents?

- Often called ‘evening types’
- Stay up late on weeknights and even later on weekends
- Often have trouble falling asleep on weeknights
- Early rise times for school means sleep need is often not met, which increases ‘sleep debt’
- ‘Catch up’ on sleep by sleeping in on weekends or during school holidays
- Can develop into a vicious cycle
**Delayed Sleep Phase Disorder (DSPD)**

- A circadian rhythm disorder where the internal body clock is delayed later in relation to the individuals desired bed and wake up times.
- Eventual time they fall asleep can be very late (e.g., 1-6am).
- Mistimed scheduling significantly impacts on functioning.
- When allowed to choose their preferred schedule (e.g., weekends, school holidays), adolescents will exhibit normal sleep quality and duration for age.
Sleep/Wake Cycles

- **B** – Bedtime
- **S** – Sleep onset time
- **W** – Wake up time
Why do adolescents develop delayed sleeping patterns?

• Environmental factors
  – Increased extracurricular activities, part time work, academic and social pressures
  – Technology use has skyrocketed in recent years
    • NSF (2006) Sleep Poll – 97% of adolescents had at least one electronic media device in their bedroom
    • Television, computers, gaming consoles, mobile phones have all been linked to poor sleep in adolescence (e.g., Van den Bulck, 2003, 2004)
What are the consequences of DSPD?

• Poor sleep in adolescence can lead to a number of consequences, including:
  – Daytime sleepiness (e.g., NSF, 2006)
  – Reduced academic success (e.g., Curcio et al., 2006)
  – Psychological problems (e.g., Johnson et al., 2006)
    • Depression
    • Anxiety
# Assessment - Sleep Diary

## 7-DAY SLEEP/WAKE DIARY

**Symbols**
- *↓* in bed
- *C* - caffeinated drink (e.g. cola)
- *●* lights out
- ___ asleep
- *↑* out of bed
- *★* went outdoors after got up out of bed

**Abbreviations**
- **SOL** – Time to fall asleep (in minutes)
- **WASO** – Time spent awake during night – not including SOL (in minutes)
- **TIB** – Time In Bed (in hours)
- **TST** – Total Sleep Time (in hours)

### Example

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<thead>
<tr>
<th></th>
<th>AM</th>
<th>Noon</th>
<th>PM</th>
<th>Midnight</th>
<th>AM</th>
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<th>SOL</th>
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**Name** ____________________________  
**Start Day and Date** ________________________

### Daytime sleepiness

| Day |  9 |  10  |  11|  12  |  1 |  2 |  3 |  4 |  5 |  6 |  7 |  8 |  9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |     |    |
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## Assessment – Example of DSPD

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- --- asleep  
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- * went outdoors after got up out of bed

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**Start Day and Date** 5/6/2010

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Treatment - Sleep Hygiene

• Cease caffeine after 3pm.
• Avoid stimulating activities (e.g., exercise, video games, scary movies, homework) or bright light close to bedtime
• Engage in a relaxing activity leading up to bedtime to help wind-down.
• Keep a consistent wake-up time, even on weekends
• Try to get some bright light first thing in the morning
Treatment - Bright Light Therapy (BLT)

- Involves morning light exposure using natural or artificial light (e.g., lamps, glasses) for >30min
- Bright light therapy begins at a late wake up time, and is gradually moved forward
- Treatment plan needs to be carefully devised and monitored by a trained professional
- BLT + cognitive therapy (=CBT) very effective technique to treat adolescent DSPD (Gradisar, Dohnt et al., 2012)
Treatment Options

• Somnia Sleep Services ([www.somnia.com.au](http://www.somnia.com.au))
  – Private psychological service for infants, children, adolescents and adults
  – GP referral under a Mental Health Care Plan enables Medicare rebate
  – Ph. 0415 977 784

• Flinders University Child and Adolescent Sleep Clinic ([http://www.flinders.edu.au/sabs/psychology/services/casc/](http://www.flinders.edu.au/sabs/psychology/services/casc/))
  – Research treatment programs for children and adolescents
  – Ph. 8201 7587
References