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Special Report:

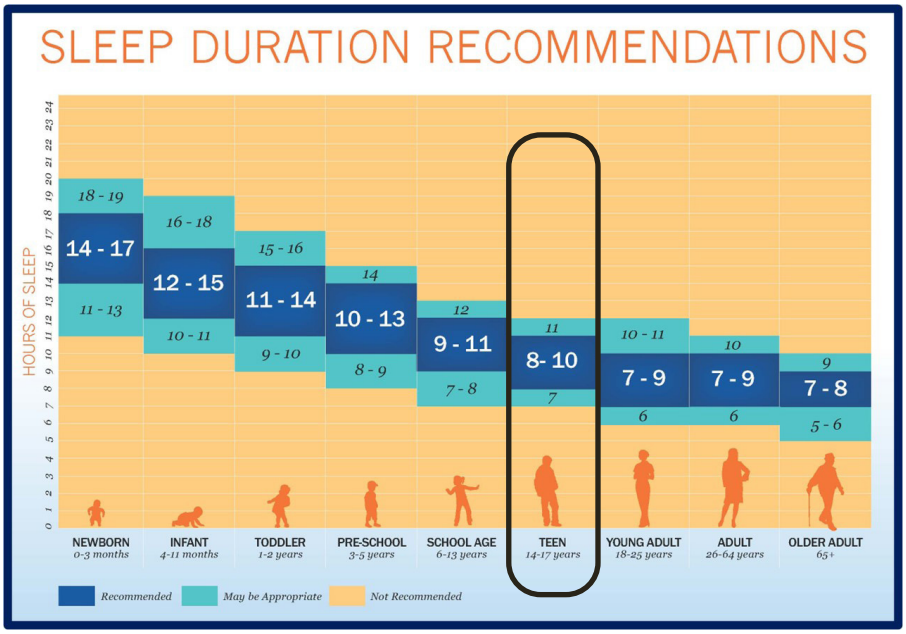
An Evidence-based Approach to Good Sleep

As part of our Strategic Wellbeing approach, we are currently refining and sequencing mental health education from ELC to the post-school year. This report gives an update on Concordia's research-based approach to good sleep to support mental health and optimal learning.

Adolescence is a pivotal transition point for maintaining optimal sleep, and this report highlights our adolescent sleep data collected over a 3-year period. However, foundations for good sleep start much earlier and parents have a key role to play for primary and pre-teen children to set up good habits. At the end of this report, you'll find our recommendations for children at any stage of the school journey.

What is the optimal amount of sleep for adolescents?

- Below, you'll find the sleep duration recommendations across the lifespan (National Sleep Foundation). In red, we've highlighted these recommendations for adolescents.
- Due to a combination of biological and social factors, adolescents develop delayed bedtimes, leading to insufficient school night sleep worldwide (Gradisar et al., 2011; Shochat et al., 2014)
- Regardless of pubertal age, recommendations for adolescent sleep are optimal (>9 hours), borderline (8-9 hours), and insufficient (< 8h; National Sleep Foundation, 2006; Short et al., 2018)



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How much sleep are Concordia's adolescents getting?

- We tracked this in Year 7-12 students over 3 years during our annual wellbeing survey.
- There were no differences across 2019-2021 cohorts (spanning COVID emergence).
- 16% of Year 7 students reported inadequate sleep (<8 hours), and this rose to 60% by Year 11 and 12 **(Figure 1)**.
- On average, sleep dropped to inadequate levels (< 8 hours) around Year 10 **(Figure 2)**. This is consistent with worldwide data, showing this dip at age 14-15 (Gradisar et al., 2011).

Figure 1: Insufficient sleep (< 8 hours)

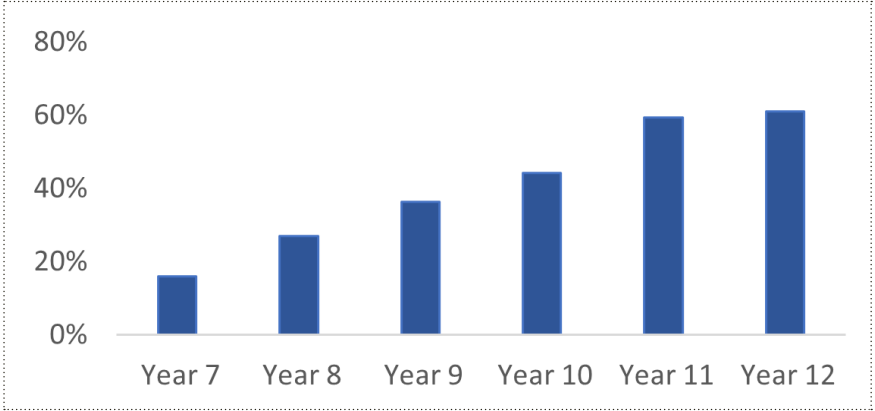
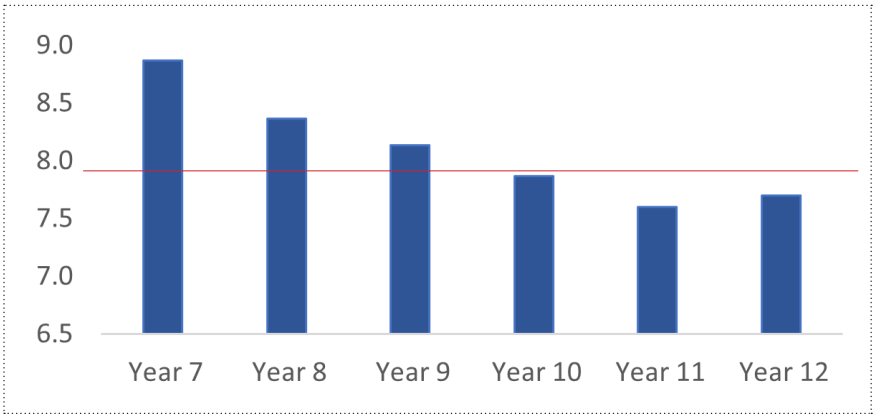


Figure 2: Average sleep per night (hours)



How important is this?

- For adolescents, less than 8 hours sleep adversely impacts short term memory (Gradisar et al., 2008), as well as the ability to sustain attention - necessary for thinking and learning, and also for novice drivers to safely control a car (Short et al., 2018)
- Insufficient sleep increases the risk for depression and risk taking behaviours, and there is also an association between poor sleep and anxiety, social functioning and lower academic achievement (with the latter especially pronounced in older adolescents; Shochat et al., 2014)

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Daytime sleepiness

- The following graphs show the percentages of Concordia's Year 7-12 students (2019-2020) who reported drowsiness in class or while doing homework "frequently or always". Data for Year 12 students may be less representative due to lower numbers participating in surveys.
- Again, data for our students is consistent with global trends, showing that 20-40% of adolescents report excessive daytime sleepiness (Gradisar, 2011).
- Research suggests that daytime sleepiness may be an even stronger predictor of lower academic performance than sleep duration (Dewals, 2010)

Figure 3: Frequently drowsy in class

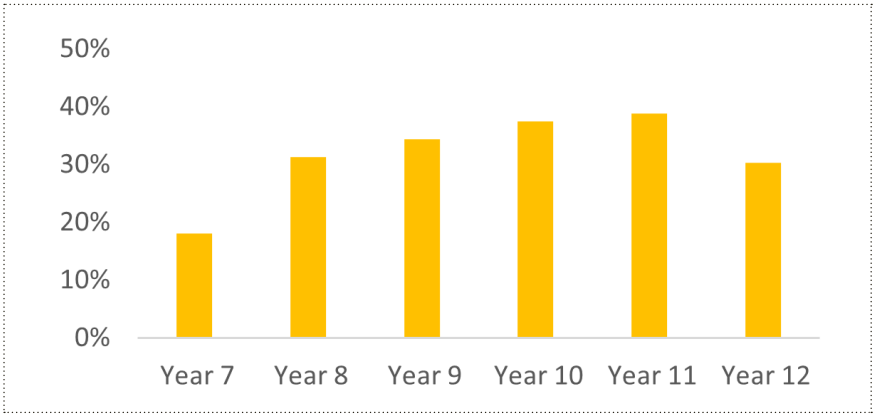
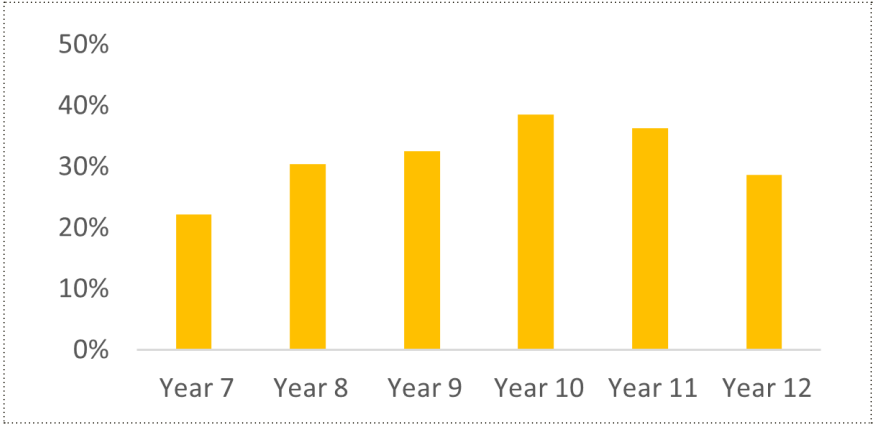


Figure4: Frequently drowsy doing homework



Can school education programs help?

At Concordia, our students already receive best-practice education on good sleep hygiene from our school counsellors. This includes setting regular bedtimes, regular exercise, winding down before bed, avoiding stimulants (e.g., caffeine) and setting up a quiet, dark, comfortable sleep environment.

However, a recent Australian **review of adolescent school-based sleep education** found that while sleep knowledge improves, changes to sleep behaviours are usually not maintained (Bartel et al., 2018) due to lack of student motivation.

Based on these findings, we've been working with a team of Sleep Researchers to help us investigate a more effective education approach. The team is led by Professor Michael Gradisar who established the Child and Adolescent Sleep Clinic at Flinders University, and has published more than 160 research articles on sleep in children and teens. (https://www.researchgate.net/profile/Michael-Gradisar/research).

Our senior students tell us "We know all about sleep, we don't need more presentations" but when the stress hits we hear "I can't sleep!"

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During Term 3, 2022, Concordia's Year 10 students undertook a seminar on ***Taking Sleep Back From Big Tech*** delivered by Dr Meg Pillion from Professor Gradisar's research team. This session

- acknowledged that with multiple demands on time, sleep can be the easiest thing to cut back on
- provided hard scientific evidence of the impact of sub-optimal sleep on learning and mood
- showed the intentional and manipulative approach of Big Tech companies to steal our time and sleep (based on *The Social Dilemma* documentary – it's worth watching!)
- challenged our students to a one-week behaviour experiment to test the effect of one simple school night change - ceasing their phone, YouTube and TikTok use 1 hour earlier than usual

During Term 4, our Year 8 students received the same information during home class sessions, together with a range of ways to calm their nervous system in the last hour before bed – e.g., reading a book, watching TV (more passive than devices), listening to music or having a bath.

We are continuing to work with Sleep Researchers to measure the impact of these sessions. Our Sleep Team also made the following parent recommendations to supplement education programs.....

What can parents do to help?

For primary age children

- Parent set bedtimes are the most important factor impacting sleep - this is beneficial not only to avoid fatigue, but also to support mood

As your child approaches puberty and body clocks naturally drift later, one of the best things you can do is to continue to instil a set bedtime on school nights (and weekends if possible)

- Try to do this for as long as possible – recent research suggests that even at age 14-15, teens report this structure as promoting better sleep
- As your child matures each year, you can make this bedtime slightly later each year (eg, 15 to 30 minutes)
- If you do decide to have a set bedtime on weekends as well, have this a little later to respect their emerging autonomy
- Consider setting rules around their access to technology use in the evenings. While it's important to respect your teenager's emerging autonomy, having a rule where devices are not kept in their sleeping space overnight could help your teen to get more sleep (Pillion et al., 2022).

Considerations for parents of older teenagers

- Parent suggested bedtimes may still be helpful for older teenagers, but even more important is supporting a consistent wake up time – including not sleeping in too late on weekends if possible!
- This helps to keep teenagers' "body clocks" from drifting even later and makes it easier for them to get up for school in the mornings feeling refreshed
- Be mindful not to set a bedtime that is too early for your teen (e.g., bedtime of 9pm when your teen might normally fall asleep at 11:30pm). They are likely to be too biologically alert to fall asleep if their bedtime is too far from their natural sleep time (again – trying to keep a consistent wake time can help to avoid the natural sleep time drifting later)

Questions or comments on our research approach?

We welcome emails to our researcher in residence
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