Sleep

The #1 strategy to being the best

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www.sleepforhealth.com.au
The image provides a chart illustrating the recommended hours of sleep for different age groups.

- **Newborn (0-3 months):** 14-17 hours
- **Infant (4-11 months):** 12-15 hours
- **Toddler (2-3 years):** 11-14 hours
- **Preschooler (3-5 years):** 10-13 hours
- **School Age (6-12 years):** 9-11 hours
- **Teen (13-18 years):** 8-10 hours
- **Young Adult (19-24 years):** 7-9 hours
- **Adult (25-64 years):** 7-9 hours
- **Older Adult (65+):** 7-8 hours

The chart highlights the hours of sleep that are considered recommended (dark blue), may be appropriate (light blue), and not recommended (yellow).
Sleep and our children

National Sleep Foundation Poll 2014 (n=1100)

Sleep patterns by age group:
- **6-11 years**:
  - 71% get 7 hours or less
  - 29% get 8 hours
  - 8% get 9 hours or more
- **12-14 years**:
  - 42% get 7 hours or less
  - 29% get 8 hours
  - 29% get 9 hours or more
- **15-17 years**:
  - 56% get 7 hours or less
  - 34% get 8 hours
  - 10% get 9 hours or more

National Sleep Foundation Poll 2014 (n=1100)
In 2010, 25% of 5-17 year old Australian children were either overweight or obese.
Brief awakenings

Deep sleep

REM \(\sim 1.5\) hrs

Non-REM stage 1

Non-REM stage 2

Non-REM stage 3

Awake

11pm 12pm 1am 2am 3am 4am 5am 6am 7am
AWAKE

Light sleep

Deep sleep

REM
THE AWAKE BRAIN

Activated

Deactivated

THE REM BRAIN
Hippocampus
Learning and memory

Amygdala
Emotional stress and learning

Anterior cingulate cortex
Selective attention and social interaction

Dorsolateral Prefrontal cortex
Executive f(n)/ abstract reasoning

Hippocampus
Learning and memory
The experiment

- 25 good sleepers - average sleep time 7 hours 5 minutes
- 25 poor sleepers - average sleep time 6 hours 4 minutes
- Performed an increasingly complex cognitive task
- fMRI’s were performed while participant engaged in task

Drummond, SP et al/ Sleep 2013
Good sleeper
(7 hours 5 mins)

Poor sleeper
(6 hours 4 mins)

Drummond, SP et al Sleep 2013
Five-fold increase in the risk of developing depression

Van der Helm, E et al Psychol Bull 2009
Quality of life in 6-7 y.o. Australian children (n=2926)

Physical functioning: exercising, inclination for exercise
Emotional functioning: feeling sad, unmotivated
Social functioning: problems socialising, peers and family

Magee CA et al, Pediatrics 2014
Something to keep in mind

One in every four teenagers have sleep problems!

- Twice as likely to have problems at home, at school and with their peers
- 2-3 times more likely to be depressed
- Twice as likely to abuse alcohol or drugs
- 2-3 times more likely to have health problems

Roberts RE Journal Adolescent Health 2008 42(3)
Sleepless in Australia

Of 50 countries studied, Australian children in year 4 were the fifth most sleep-deprived in the world.
“Clear and consistent associations have been found between sleep, sleepiness and lower academic achievement among younger and older adolescents worldwide.”

Managing sleep
The timing of our sleep is a result of two biological processes working together:

1. Our sleep drive (*and our sleepy neurotransmitter*)
2. The Circadian process
Our cycle of alertness

- **Early birds (larks)** wake around 6am and feel most awake around 8am and again at 8pm.

- **Night owls** like to wake after 8am, are most awake around 10am and again at 10pm.

Least alert during night hours

Time of day

Most alert at 9am and 9pm

Afternoon dip in alertness
The importance of light
(and melatonin)
For the body

1. Get up at the same time every day.
2. Exercise for at least 20 minutes per day (a walk at lunchtime is good)
3. Don't have caffeine after midday
4. No alcohol
5. Do not sleep during the day (a nap of 20 minutes is ok)
6. Small meal at night and especially no big meal within 3 hours of bedtime.
7. Do not exercise within 3 hours of bedtime (this will alert the body)
For the brain

Step 1: Deal with the issues of the day
Step 2: Set an alarm one hour before bedtime.
Step 3. Ensure that the bedroom environment is conducive to sleep for the brain.

For the brain

No

Or

No

iPhone

Phones

Television

Phones

Tablets

iPods

Players

Notebooks

Computers

Recorders

Cell

Radios

Video

Records

Similar

Audio
And remember .......

Children model adult behaviour!

✓ If a parent has an electronic device in the bedroom so do their children.

When parents set and enforce rules children get an extra hour of sleep.

Rules include:

- set bed time
- limit caffeinated food /beverages
- lateness of watching TV
- electronic devices
Tips for teachers

• Educate students about the importance of sleep.
• Have them do a sleep diary
• Be aware of your sleepy students and let their parents know their child is sleepy.
• Assist students to develop a sleep plan.
• Ensure homework load is not too great.
• Do not have lessons or any extra-curricular activity prior to the commencement of classes.
This diary records how you sleep. Get mum or dad to help you fill it out.

**Part 1: Fill this part out just before you go to bed**
I ate dinner tonight at ______pm
For dinner I had _____________________________________________________________
After dinner I: watched TV; played on the computer; read a book; did my homework; played; did something else
Just before bed I: had a bath / shower; was playing on the computer; was watching TV; read a book; did something else

**Part 2: Fill this part out in the morning when you get up and before you go to school**
Last night I went to bed at ______pm

Last night I went to sleep: very quickly; not very quickly; it took me a long time to fall asleep

Last night I: didn't wake up during the night; I woke up during the night but went back to sleep quickly; I woke up during the night and found it hard to go back to sleep.

This morning I woke up at ______am
I had ____________________ hours of sleep last night
This morning I feel: very happy; happy; tired; very tired

**Part 3: To be completed by mum or dad**

Was your child's sleep last night typical of their normal pattern?   Yes ☐   No ☐
If no, what normally happens? __________________________________________________________
Any comments you would like to make?
Be smart .... and catch some sleep