



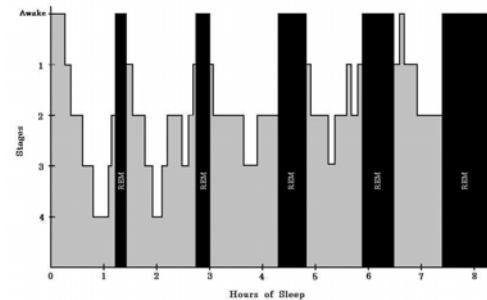
## How much sleep do you need?

Humans adapt to the 24-hour cycles of light and dark using their internal clocks (circadian rhythms). These clocks dictate that adults have one major episode of sleep at night typically lasting about 8 hours - ranging from 6 to 9 hours per night. Each person must determine his or her own sleep need. You can determine this ideal amount of sleep by simply paying attention to whether or not you feel rested in the morning and alert throughout the day. If no amount of sleep will make you feel rested on the next day, then you may want to seek medical advice, including being evaluated for a sleep disorder. People tend to sleep about 30 minutes longer on weekends, indicating that they may be accumulating a sleep debt during the week. It is important to understand that you cannot “catch up” on lost sleep, or store sleep for the future, by getting more on weekends! This is because lost sleep on any given night has immediate consequences for the very next day (e.g. driving, work performance, memory and learning). Research indicates that sleep loss impairs your response time, motor ability, visual acuity, memory and attention.

## What is a typical night's sleep?

The depth and character of sleep change in a predictable manner across the night. Healthy, young adults will fall asleep in 10-20 minutes after “lights out”. Thereafter, the sleeper will cycle through 5 different stages of sleep in the course of the night. As you fall asleep, your thoughts begin to wander and your awareness of the outside world is reduced (this is called “stage 1”). As much as 50-60% of the night is spent in stage 2 sleep, a relatively light stage of sleep (i.e., easy to awaken from sleep). Stages 3 and 4, occurring predominately in the first half of the night, are referred to as deep sleep since it requires a more meaningful or intense stimulus to awaken the sleeper (e.g., baby's cry or your own name). Together, stages 1 through 4, are referred to as non-REM sleep. REM sleep (or rapid eye-movement sleep) will occur approximately every 90 minutes throughout the night. You can thus expect to experience 4-5 REM sleep episodes per night. The first REM

period is typically very brief, lasting less than 10 minutes, while the final episode may continue for more than an hour. This means that you get most of your REM sleep during the second half of the night. REM sleep is commonly associated with dreaming because your most vivid and bizarre dream reports occur during this stage of sleep, although dreaming or mental imagery takes place in all stages of sleep. The sleep/wake histogram below illustrates how a healthy, young adult would cycle through the stages of sleep on a typical night.



## Changes in sleep across the lifespan

The timing and duration of sleep change dramatically as we age. A newborn baby may sleep as much as 16 hours per day! Adolescents will sleep 9 hours on average although they prefer to go to bed later and wake up later than the usual 11 to 7 bedtime. This shift to a later sleep time is a normal pattern for teens; however, their school schedules preclude this desired pattern and as a result many teens are chronically sleep deprived. Sleep in adults can be quite organized and efficient (meaning they sleep at regular clock times, fall asleep quickly, and have very little wakefulness during the night); however, lifestyle factors, behaviours, and poor sleep habits can grossly disrupt sleep in otherwise healthy adults. During later life, sleep becomes shorter in duration (about 6 hours on average); there is less time spent in deep sleep; arousals during the night are more frequent and for longer periods of time; and there is a tendency to nap during the day. Older adults prefer to go to bed earlier and wake up

earlier. This shift to an earlier sleep time is a normal pattern for older adults. Just as the teenager does not stay in bed later because they are lazy, the older adult does not go to bed earlier for lack of anything better to do with their time – the timing of when we sleep and when we wake is governed by our internal circadian clocks. If you find that you are sleeping less at night than you used to, yet your daytime functioning is not impaired, then there may be no cause for concern about these changing sleep patterns. If you are distressed by the fragmented nature of your sleep at night (and long bouts of wakefulness during the night specifically), it is not recommended that you compensate with naps.

## What about naps?

Daytime napping is natural for most toddlers. At about age 6 to 12 years, however, sleep begins to occur in a single nighttime episode. Napping behaviour is usually put aside until retirement age. Naps are generally only acceptable for people who have no difficulty falling asleep or staying asleep at night. Otherwise, the time you spend napping during the day may take away from your total sleep time at night. The optimal duration for a nap, whether during the daytime or while on the job for shift-workers, is 10-20 minutes. Twenty minutes is sufficient to feel rested, yet short enough not to interfere with nighttime sleep or your alertness on the job upon awakening. If you cannot get through the day without a long nap, despite also sleeping long hours at night, you should be evaluated for a sleep disorder.

## Tips for a good night's sleep

1. *Make sleep a priority!* In today's busy world, too many people simply do not make the time for sleep. Are you allowing yourself enough time in bed to get the sleep you need? It is a good idea to keep track of how much sleep you are getting by keeping a “sleep diary” You can do this by making note of your lights-out and wake-up times each day, taking care to note any time out of bed during the night. Also keep track of