

Sleep for optimal health

By Tony Boutagy

Humans spend roughly one third of their lives asleep. But it's estimated that only one fifth of the world's population enjoys perfectly healthy, restorative sleep. Deep sleep is an essential component of enjoying good health. In addition to tiredness, poor sleep can contribute to a number of chronic illnesses and disorders. Recent sleep investigations have provided researchers with some very fascinating information on the nature of sleep and factors that improve or detract from a good night's rest. By better understanding the cycles of sleeping and waking, and by following some simple strategies, we can greatly improve the quality of our sleep and health.

The circadian rhythm

The human body runs on a 24-hour cycle. The 24-hour cycle of waking and sleeping is termed the circadian rhythm. In order for us to keep time with the cycle of the sun each day our body has an internal timekeeper, called our biological clock, which controls waking up in the morning and going to sleep at night. The controlling factor of the sleep/wake cycle is the hormone melatonin, which is secreted by the pineal gland in the centre of the brain. Studies have shown that our biological clocks are set every morning upon waking when we see light. Bright light shone on the skin and eyes cause the pineal gland to cease its melatonin secretion and release the 'waking' hormones into the system.

Stages of sleep

Adult humans typically sleep between six to nine hours a night. During this time we travel through four or five separate cycles, each lasting approximately 90 minutes. These cycles are interspersed with brief periods of wakefulness, which we don't usually remember. Each of these four or five sleep cycles has in themselves five separate stages, which include two stages of light sleep (drowsiness and light sleep), two stages of deep sleep and Rapid Eye Movement (REM) sleep, which is where we do our dreaming. Interestingly, when we are asleep, we do not progress continuously through the stages of sleep from light (Stages 1 and 2) to deep (stages 3 and 4) to REM sleep. Rather, we make journeys back and forth - through Stages 1 to 4, then returning to Stage 2 before entering our first period of REM sleep. A healthy adult's sleep is comprised of roughly 50% light sleep, 25% deep sleep and 25% REM sleep.

The role of sleep

During the two stages of deep sleep our body secretes growth hormone, which assists with cellular repair. This includes regeneration of our immune function, bone density, connective tissues and muscle mass. It is also believed that the consolidation of memory takes place during REM sleep. Additionally, sleep is fundamental for mending damaged blood cells, repairing the daily wear and tear on the body, restoring the efficiency of the brain, and is essential for our emotional and mental well being. Also, in the early hours of the morning, the immune system manufactures the antibodies to combat the antigens (viruses, bacteria, toxins, etc) to which the body has been exposed the previous day. Compromised sleep therefore, impairs antibody development, which means that the immune system will be suppressed.

Five steps to a better night sleep

1. Go to bed and wake up at the same time every day, including the weekends;
2. Create a bedtime ritual before retiring at night (such as a glass of warm milk, shower, clean teeth, relaxing oil in an oil burner and 10 minutes of light reading);
3. Expose yourself to bright lights immediately upon waking;
4. Avoid the sleep destroyers (caffeine, alcohol, nicotine) up to ten hours before bedtime;
5. Avoid taking naps for longer than 20 minutes during the day.

Having problems falling asleep?

- Go to bed only when you feel sleepy.

- Keep your bed as a place for sleep only.
- If you do not fall asleep within 20 minutes, get out of bed and do something else.
- Return to bed once you feel sleepy (and get up again if necessary).
- Set your alarm to wake you up at the same time every day - and do not sleep in.
- Avoid napping during the day.