



KEYS TO EMBRACING AGING

Sleep

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Sleep has a major impact on our overall health and quality of life, including the way we look, feel and perform on a daily basis. Our bodies need sleep to repair muscles, consolidate memories and regulate hormones and appetite. Even though sufficient sleep is increasingly recognized as an essential aspect of chronic disease prevention and health promotion, many people do not get enough sleep or suffer from sleep problems.

THE IMPORTANCE OF SLEEP

Poor sleep has a negative impact on quality of life. It can lead to accidents, impaired job performance and relationship stress. Insufficient sleep causes distress and impairs alertness, concentration and memory. It is also associated with poor health and a number of chronic diseases and conditions, such as diabetes, cardiovascular diseases, obesity and depression. Sufficient sleep positively affects:

- **Learning and memory:** Sleep helps the brain commit new information to memory through a process called memory consolidation.
- **Metabolism and weight:** Adequate sleep helps with weight control. Chronic sleep deprivation may cause weight gain by affecting the way our bodies process and store carbohydrates and by altering levels of hormones that affect our appetite.
- **Safety:** A good night's sleep reduces accidents. Sleep debt contributes to a greater tendency to fall asleep during the daytime. These lapses may cause falls and mistakes, such as medical errors, air traffic mishaps and road accidents.
- **Mood:** Sufficient sleep reduces irritability, impatience, inability to concentrate and moodiness. Too little sleep can leave you too tired to do the things you like to do.
- **Cardiovascular health:** Getting enough sleep improves heart health. Serious sleep disorders have been linked to hypertension, increased stress hormone levels and irregular heartbeat.
- **Disease:** Getting enough sleep helps fight disease. Sleep deprivation alters immune function, including the activity of the body's killer cells. Keeping up with sleep may also help fight cancer.

SLEEP NEEDS BASED ON AGE

As early as three to six months, most infants have developed a sleep-wake cycle. Sleep is extremely important for children because it directly impacts both physical and mental development. Teens and young adults are a high-risk population for sleepiness, leaving them vulnerable to injury and injury-related death, especially in vehicle crashes due to lapses in attention, delayed responses, drowsiness and fatigue. Starting in young adulthood and as you continue to age, it is not uncommon for sleep to become less satisfying and less restorative. This is in part because sleep tends to mirror overall health. If health is sound, for example, sleep is often good and vice versa. Increasing age is associated with daily demands that can cause stress in addition to higher risk for health conditions such as high blood pressure, stroke and other heart problems. In general, adults are increasingly decreasing their hours of sleep, unaware of the ramifications on overall health. Many senior adults may have more time for sleep, but they are not getting the number of hours needed. Seniors are more likely to

get up in the middle of the night to go to the bathroom, or they may be distracted from sleep due to various aging issues such as muscle aches, illness or a sick spouse. Restless nights, day naps, earlier bed and wake-up times can also throw off the sleep rhythm.

The amount of sleep needed to function varies from individual to individual and is determined by genetics and hereditary. According to the National Sleep Foundation (2014), the average hours of recommended sleep by age include:

Infants

- Birth-2 months need 10.5-18 hours
- 2-12 months need 14-15 hours

Toddlers/Children

- 12-18 months need 13-15 hours
- 18 months-3 years need 12-14 hours
- 3-5 years need 11-13 hours
- 5-12 years need 9-11 hours

Adolescents

- at least 8.5-9.5 hours

Adults

- 7-9 hours

STATES OF SLEEP

As we sleep, we pass through two alternating states (National Sleep Foundation, 2011). Each state is important for experiencing satisfying and restorative sleep.

- **Non-Rapid Eye Movement (NREM)** or “quiet” sleep. During the deep states of NREM sleep, blood supply to the muscles is increased, energy is restored, tissue growth and repair occur and important hormones are released for growth and development.
- **Rapid Eye Movement (REM)** or “active” sleep. During REM sleep, our brains are active and dreaming occurs. Our bodies become immobile and breathing and heart rates are irregular.

WHY CAN'T I SLEEP?

It is normal to experience an occasional problem with sleeping. It is not normal to feel sleepy during the day, to have problems getting to sleep at night or to wake up not feeling refreshed. If you are having trouble sleeping, examine your symptoms to be sure your sleeping problem is just a minor, passing annoyance versus a sign of a more serious sleep disorder or underlying medical condition. If you are experiencing any of the following symptoms on a regular basis, you may be dealing with a sleep disorder and should contact a health care provider:

- Daytime sleepiness
- Irritability or moodiness
- Difficulty staying awake when sitting still, watching television or reading
- Falling asleep or feeling tired while driving
- Difficulty concentrating
- Told by others that you look tired
- Slow reaction time
- Trouble controlling your emotions
- Feeling the need to take a nap almost every day
- Dependent on caffeinated beverages to keep yourself going

COMMON SLEEP DISORDERS

If sleep problems are a regular occurrence and interfere with your daily life, you may be suffering from a sleep disorder. Some common sleep disorders include (CDC, 2014):

- **Insomnia**, the most common sleeping disorder, is the inability to get the amount of sleep you need to wake up feeling rested and refreshed. It is often a symptom of another problem, such as stress, anxiety, depression or an underlying health condition. It can also be caused by lifestyle choices, including the medications you take, lack of exercise, jet lag or even the amount of coffee you drink.

- **Sleep apnea** is a serious and potentially life-threatening sleep disorder in which your breathing temporarily stops during sleep due to blockage of the upper airways. These pauses in breathing interrupt your sleep, leading to many awakenings each hour. While most people with sleep apnea don't remember these awakenings, they feel the effects in other ways, such as exhaustion during the day, irritability, depression and decreased productivity. Loud, chronic snoring, gasping, snorting or choking during sleep, waking up with shortness of breath, chest pains, headaches, nasal congestion or a dry throat are symptoms of sleep apnea.
- **Restless leg syndrome** causes an almost irresistible urge to move your legs and sometimes arms. The urge to move is due to an uncomfortable tingling, aching or creeping sensations that are triggered by rest and often get worse at night. Moving, stretching or massaging your legs can make the sensations temporarily better.
- **Narcolepsy** involves excessive, uncontrollable daytime sleepiness. It is caused by a dysfunction of the brain mechanism that controls sleeping and waking. If you have narcolepsy, you may have "sleep attacks" while in the middle of talking, working or even driving.
- **Disruptions of circadian rhythms** have been linked to a variety of sleeping problems and sleep disorders, including insomnia, jet lag and shift work sleep difficulties. They have also been linked to depression, bipolar disorder and seasonal affective disorder. Circadian rhythms act as an internal biological clock that regulates our 24-hour sleep-wake cycle. Circadian rhythms are cued by light. When the sun comes up in the morning, the brain tells the body that it is time to wake up. At night, when there is less light, your brain triggers the release of melatonin, a hormone that makes you sleepy. When circadian rhythms are disrupted or thrown off, you may feel groggy, disoriented and sleepy at inconvenient times.

RECOMMENDATIONS TO HELP YOU SLEEP

To get the most out of sleeping, both quantity and quality are important.

- Use your bed for sleep and sex only; avoid reading, conversation or television watching in bed
- Do relaxation training to reduce tension
- Restrict time in bed if time is spent lying awake
- Try therapy to help modify attitudes and beliefs that may contribute to poor sleep
- Exercise in the afternoon or early evening not within a few hours of bedtime
- Avoid caffeine, nicotine and alcohol at least three to four hours before going to bed
- Try to go to bed at the same time every night and wake up at the same time every morning
- Keep in mind that daytime naps affect nighttime sleep
- If you cannot fall asleep within 20 minutes, get out of bed and participate in a quiet, relaxing activity; go back to bed when you are sleepy
- Eat a balanced diet and don't eat heavy meals before bedtime
- Practice relaxation techniques – such as deep breathing, visualization or meditation – at bedtime
- Keep a sleep journal to keep track of activities, food, drink, emotional circumstances or other factors that might influence how well you sleep
- Keep a steady room temperature in your bedroom (not too warm)
- Make the bedroom a safe place, with locks on the door, a smoke alarm, telephone and good lighting within reach of the bed
- If you snore, avoid sleeping on your back and elevate your head
- Get treatment for allergies, colds or sinus problems
- Wake up to the sun, or use bright lights in the morning to reset the body's biological clock
- Do not lie in bed once awake in the morning

CONCLUSION

When you sleep well, you wake up feeling refreshed and alert for your daily activities. Sleep prepares you to concentrate, make decisions and fully engage in school, work and social activities. Ignoring sleep problems and disorders can lead to poor health, accidents, impaired job performance and relationship stress. Sleep is a necessity for feeling your best, staying healthy, performing at your best and maximizing your potential for optimal aging throughout the lifespan.

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