

Aging and Sleep: What You Need to Know

Sleep quality plays a vital role in physical and mental health. This article reviews biological, lifestyle, and environmental factors that influence sleep habits.

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Life can be stressful, and it is natural to feel sad, stressed, confused, scared, or angry in moments of uncertainty. Learning how to manage stress through regular exercise and getting a good night's sleep is important for our overall health and well-being. According to the 2014 book, "Atlas of Clinical Sleep Medicine 2nd edition" (Kryger, et al), "more than half of older adults in America experience some form of sleep disturbances and disorders." With aging, the most noticeable changes in sleep are insufficient and unrestful sleep, with frequent nighttime waking, and regular daytime napping. Not getting the right sleep can have several consequences. The Centers for Disease Control and Prevention (2021) noted that lack of sleep has been associated with poor blood glucose control, high blood pressure, obesity, and heart-related conditions. Over time, poor sleep can lead to unhealthy habits like higher stress levels, less motivation to be physically active, and unhealthy food choices.

The Sleep-Wake Cycle

Sleep is controlled by circadian rhythms which are found in the brain's hypothalamus. It functions as an internal timer to tell us when to wake up and when to fall asleep. Kondratova (2012) concluded that the link between the circadian rhythm help keep sleep and eating patterns, memory, and mood under control.

The Effects of Aging on Sleep

With aging, circadian systems start to wear. The National Sleep Foundation (2015) recommends 7 to 8 hours of sleep for adults aged 65 and older. Miner and Kryger (2017) suggest that age-related factors that can affect sleep are medical conditions, medicine use, lifestyle, and stress. Consequences of poor sleep habits result in slower motor skills and fitness, daytime drowsiness, risk for falls, and changes in mood and cognitive functioning.

Exercise and Sleep

The Physical Activity Guidelines for Americans (2018) by the U.S. Department of Health and Human Services, advises older adults to engage in at least 30 minutes of physical activity at least 5 days per week to help foster better sleep, better functioning throughout the day, and it can help to reduce the risk of many chronic diseases. Adhering to a fitness routine can improve the quality of sleep by reducing the length of time it takes to go to sleep once in bed and can increase alertness when rising in the morning. It also can increase the time in deep sleep and reduce daytime sleepiness.

What is the best mode of exercise?

In 2005, a pilot study by Ferris et.al. found that older adults with sleeping problems who participated in anaerobic exercise (such as resistance training) saw moderately positive effects on sleep quality. However, Morone and Greco (2007) showed that aerobic exercise (such as walking) combined with breathing and meditation had more promising results in managing stress and quality of sleep. Also, flexibility exercises (such as yoga) lowered stress levels, and pain in the neck and lower back.

When is the best time to exercise?

It is suggested by John Hopkins Medicine Sleep Center that "exercising earlier in the day and ending workouts at least 1 to 2 hours before going to bed is enough time for the body temperature and endorphins to cool down and induce sleep" (Gamaldo, 2021, The Timing of Exercise May Matter section).

Stress and Sleep

Frequently experiencing stress can have harmful effects on our physical and mental health. In older adults, mood, anxiety, and arousal impact sleep. Learning how to recognize the signs and symptoms of chronic stress can help prevent future adverse effects. Sutton (2011) defines symptoms of stress in five categories: mental, physical, emotional, behavioral, and spiritual. The most common signs of stress are forgetfulness, overly busy mind, tension, fatigue, insomnia, restlessness, anxiety, depression, worrying, loneliness, avoiding social situations, apathy, emptiness, and having no sense of purpose.

Luckily, there are simple tactics to help you manage stress and sleep. Brown and Gerbarg (2005) found that diaphragmatic breathing and flexibility exercises can reduce muscle tension and stress. Although stress is one of the most common reasons for insomnia, researchers have determined that having an active lifestyle and good sleep hygiene are essential to avoiding sleep disturbances.

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