

Aging and Sleep Disturbance in Older People

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Abstract

The world population is aging rapidly and the older population will dominate the age composition of the population in the coming days. Sleep deprivation is a considerable public health concern in older people. More than 50 percent of older people suffer from insomnia. Insufficient sleep can directly affect a person's feelings during their working hours - slow thinking, reduced attention span, worsened memory, poor or risky decision-making, lack of energy, and mood changes. Long-term consequences of insomnia include hypertension, dyslipidemia, weight gain, metabolic syndrome, and the risk of many other non-communicable diseases. Finally, insufficient sleep forces people to live low quality of life. Walking is recognized as a sustainable exercise that does not need professional instructions to perform. Studies show a regular walking is a good instrument to improve the sleep quality of many older people.

Keywords: aging; walking; physical activity; insomnia; sleep quality

Introduction

Aging is a natural, lifelong process that starts at conception and concludes with death. Growing older and maturing are connected to aging. As a result, we have all aged since our birth [1]. Population aging is occurring around the globe at different rates. Regardless of a country's degree of development, the share of the population aged 60 or over is predicted to rise significantly globally [1]. Longer lifespans and falling fertility rates together cause aging [2]. Education and technological advancements, as well as improvements in medical, food distribution, and public health, all played a role in people living longer [3]. On the other hand, as people age, their physical and cognitive abilities deteriorate and the prevalence of chronic diseases and disabilities rises [4].

Sleep is important to physical, cognitive, and psychological health. Generally, adults aged 18-64 sleep between 7-9 hours per night, while adults aged 65 and older should sleep between 7 and 8 hours. People of all age groups suffer from sleep disturbances. Disrupted sleep is a pervasive problem, with numerous contributing factors from lifestyle and environmental factors to psychosocial issues and iatrogenic effects. Some of the factors are the use of caffeine, tobacco, and alcohol; sleep habits; and comorbid diseases. Further, sleep apnea syndrome, rapid eye movement sleep behavior disorder, restless legs syndrome (RLS), and psychiatric diseases such as depression and anxiety are related to sleep disturbances [5]. Further modern lifestyles such as working late at night,

habits of using social media after lying in bed too, and watching TV till late at night are also supported for sleep disturbance. An epidemiological survey performed in Japan reported an insomnia prevalence of 21.4% [6].

Sleep is vital to most major physiologic processes, and, as such, sleep disruption has vast potential for adverse short- and long-term health consequences in otherwise healthy individuals as well as those with underlying medical conditions. In healthy individuals, short-term consequences include a heightened stress response; pain; depression; anxiety; and cognition, memory, and performance deficits. In adolescents and children, disrupted sleep can lead to poor school performance and behavior problems. Reduced QoL may be a short-term consequence of sleep disruption in otherwise healthy individuals and those with an underlying medical condition. Long-term consequences for otherwise healthy individuals include hypertension, dyslipidemia, CVD, weight gain, metabolic syndrome, and T2DM. There is also evidence that sleep disruption may increase the risk of certain cancers and death in males and suicidal adolescents. Long-term sleep disruption may also worsen the symptoms of a variety of gastrointestinal disorders [7]. Insufficient sleep can directly affect a person's feelings during their working hours. Some examples of insufficient sleep effects are slow thinking, reduced attention span, worsened memory, poor or risky

decision-making, lack of energy, and mood changes. Thus, sleep deprivation is a considerable public health concern.

The prevalence of sleep disturbances increases with age. Studies show more than 50% of people over the age of 65 experience sleep disturbances. Poor sleep quality also becomes common during old age [8]. Sleep disturbances and the occurrence of illnesses or death are highly correlated. Physical inactivity has been identified as a risk factor leading to many chronic diseases. The study also shows that greater physical activity is associated with longevity and an Improved Quality of Life (QOL). The importance of physical activity in older adults, however, has often been neglected and given a lower priority compared to physical activity in the general population [8].

Though it is well-documented that exercise is beneficial to health and cognition, many people do not do regular exercise. Middle-aged and older adults are less likely to meet the required level of physical activity recommendations than younger adults. It is well-established that regular exercise is a good way to improve sleep quality. Both previous and recent studies revealed that sedentary people were more closely associated with poor sleep compared with physically active people [9]. Different studies show moderate exercise had positive effects on sleep efficacy and sleep behavior (10). Vigorous physical activity is not required to improve sleep quality.

However, less is known whether walking improves sleep quality among healthy young adults. Walking is a low-impact activity that is easy to track, safe for all age groups, and easy to encourage throughout the day. Walking is recognized as a sustainable exercise that does not need professional instructions to perform, which allows the possibility of public health promotion. Health benefits like weight reduction, cardiovascular health improvements, and improved psychological well-being have been associated with increased walking [11]. Study shows walking has beneficial effects on the improvement of sleep quality in the elderly population and patients [8]. Walking indirectly supports the battle of insomnia. For example, being exposed to natural light by walking outside in the morning helps entrain a strong circadian rhythm, which promotes healthy sleep. Exercise is also associated with stress reduction and physical well-being, both of which could be pathways to sleeping better. The social benefits of walking with another person could offer an additional boost to one's mood, thereby improving sleep. More research is needed to address these and other possibilities [12].

Exercise did not have a same-day effect on sleep. However, people exercised longer *after* having gotten a better night's sleep—that is, better sleep led to better exercise, not the reverse. For this reason, it's important to take a long view of the sleep benefits of exercise, and not be discouraged if same-day sleep is unaffected. Don't give up on exercise too soon if you're battling insomnia. The time and energy invested may

still be well worth the effort since exercise helps not only with insomnia but with conditions like depression and anxiety—not to mention the benefits for your general health [13].

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