

Ageing and Sleep

Changes to our sleep patterns are a part of the normal ageing process. As people age they tend to have a harder time falling asleep and more trouble staying asleep than when they were younger. It is a common misconception that sleep needs decline with age. In fact, research indicates that our sleep needs remain constant throughout adulthood.

As we age, the patterns/structure of our sleep also referred to as 'sleep architecture' change, and this may contribute to sleep problems. Sleep occurs in two main stages, Non-Rapid Eye Movement Sleep (Non-REM) and Rapid Eye Movement Sleep (REM). Within Non-REM Sleep there are three distinct stages, namely Stage N1, Stage N2 and Stage N3. The sleep cycle is repeated several times during the night and although total sleep time tends to remain constant, older people spend more time in the lighter stages of sleep than in deep sleep.

Many older adults, though certainly not all, also report being less satisfied with sleep and more tired during the day. Studies indicate that older people show an increase in the time it takes to fall asleep (sleep latency), an overall decline in REM sleep, and an increase in sleep fragmentation (waking up during the night). The prevalence of sleep disorders also tends to increase with age. However, research suggests that much of the sleep disturbance among the elderly can be attributed to physical and psychiatric illnesses and the medications used to treat them.

In addition to changes in sleep architecture that occur as we age, other factors affecting sleep are the circadian rhythms that coordinate the timing of our bodily functions, including sleep. For example, older people tend to become sleepier in the early evening and wake earlier in the morning compared to younger adults. This pattern is called Advanced Sleep Phase Syndrome (ASPS). The sleep rhythm is shifted forward so that 7 or 8 hours of sleep are still obtained but the individuals will wake up extremely early because they have gone to sleep quite early. The reason for these changes in sleep and circadian rhythms as we age is not clearly understood. Many commentators believe it may have to do with light exposure and treatment options for ASPS typically include bright light therapy.

The incidence of **insomnia** is more pronounced among older adults. Research indicates that 44% of older people experience one or more of the night-time symptoms of insomnia at least a few nights per week. Insomnia may be chronic (lasting over one month) or acute (lasting a few days or weeks) and is often times related to an underlying cause such as a medical or psychiatric condition.

If insomnia symptoms become noticeable, it should be reported to a doctor who can explain any effects these symptoms may have. The doctor can help assess how serious a problem it is and what to do about it. For instance, cutting back on caffeine and napping may help solve the problem. If insomnia is creating serious effects, complicating other conditions or making a person too tired to function normally during their waking hours, this would suggest that it is important to seek treatment. When effects are serious and untreated, insomnia can take a toll on a person's health. People with insomnia can experience excessive daytime sleepiness, difficulty concentrating, and

increased risk for accidents and illness as well as significantly reduced quality of life. Both behavioural therapies and prescription medications singly or in combination are considered effective means to treat insomnia.

Snoring is the primary cause of sleep disruption for anything up to 30/35% of the population. Snoring is most commonly associated with people who are overweight and the condition often becomes worse with age. Loud snoring is particularly serious as it can be a symptom of **Obstructive Sleep Apnoea (OSA)** and is associated with high blood pressure and other health problems. With OSA, breathing stops - sometimes for as long as 10-60 seconds - and the amount of oxygen in the blood drops, often to very low. This alerts the brain, causing a brief arousal (awakening) and breathing resumes. These stoppages of breathing can occur repeatedly, causing multiple sleep disruptions throughout the night and result in excessive daytime sleepiness and impaired daytime function.

Untreated Sleep Apnoea puts a person at risk for cardiovascular disease, headaches, memory loss, nocturia and depression. It is a serious disorder that is easily treated. If you experience snoring on a regular basis and it can be heard from another room or you have been told you stop breathing or make loud or gasping noises during your sleep, these are signs that you might have sleep apnoea and it should be discussed with your doctor.

Restless Legs Syndrome (RLS) is a neurological movement disorders characterized by an irresistible urge to move the limbs. With RLS, unpleasant, tingling, creeping or pulling feelings occur mostly in the legs, become worse in the evening and make it difficult to sleep through the night. Its prevalence increases with age and about 10% of people in Europe are reported to experience RLS symptoms. About 80% of people with RLS also have Periodic Limb Movement Disorder (PLMD) and in one study, it was found that approximately 45% of all older persons have at least a mild form of PLMD.

As we age, there is an increased incidence of medical problems, which are often chronic. In general, people with poor health or chronic medical conditions have more sleep problems. For example, hypertension is associated with both snoring and OSA and heart failure. In addition, menopause and its accompanying hot flushes, changes in breathing, and decreasing hormone levels can lead to many restless nights.

Gastroesophageal Reflux Disease (GERD) is another common cause of sleep problems. Pain also makes it difficult to sleep. Medical conditions such as Diabetes Mellitus, Renal Failure, respiratory diseases such as Asthma, and immune disorders are all associated with sleep problems and disorders. Diseases such as Parkinson's Disease and Multiple Sclerosis also commonly cause problems sleeping.

Here are some things you can do to promote sleep:

Exercise in the afternoon

Avoid stimulants such as caffeine for at least 3 or 4 hours before bed

Try to go to bed at the same time every night and wake at the same time each morning

Use the bed only for sleep or sexual activity

Avoid alcohol in the later evening (it increases awakenings later in the night)

Try taking naps but remember that sleep in the daytime affects sleep at night. You may find that a short (20 minute) nap in the mid to late afternoon may give you energy in the second half of your

day, but realize that such a nap can decrease your night-time sleep need so that it may take you longer to fall asleep or you may sleep for a shorter time

If you can't fall asleep after 20 minutes, get out of bed and do a quiet relaxing activity such as reading or listening to music. When you feel sleepy, get back in bed and try again. If not successful in 20 minutes, repeat.

Ageing and Sleep - Symptoms

If you are getting healthy sleep on a regular basis, you should feel alert during waking hours. One of the main symptoms of all sleep problems is daytime sleepiness. Sometimes sleepiness will manifest in other ways, such as loss of memory or concentration problems. You may also feel irritable, depressed or a bit confused when you're sleep deprived.

Ageing and Sleep - Treatment

If you are experiencing difficulty sleeping, consider whether an event or particular stress could be the cause. If so, the problem may resolve in time. If not, talk to your doctor about your symptoms. It is helpful to keep a record of your sleep and fatigue levels throughout the day, and any other symptoms you might have to bring with you when you see your doctor. He or she may order a series of tests to determine whether you have a sleep disorder, which may include an overnight stay at a sleep clinic. It is a very good idea to bring a completed Sleep Diary when visiting your doctor (See this link).

After consulting with your doctor, he or she may prescribe medication to help you sleep. The particular medication prescribed to treat insomnia should depend on a patient's diagnosis, medical condition, use of alcohol or other drugs, age, and need to function when awakened during the usual sleep period.

Sleep medications may lead to tolerance, withdrawal symptoms, and rebound insomnia. They should be used only as recommended by your doctor.

DISCLAIMER: While every effort is made to ensure medical accuracy, this paper should not be used to diagnose or treat a sleep disorder. In all cases the advice of a properly qualified medical practitioner should be sought.

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