

NAPPING

More than 85% of mammalian species are polyphasic sleepers, meaning that they sleep for short periods throughout the day. Humans are part of the minority of monophasic sleepers, meaning that our days are divided into two distinct periods, one for sleep and one for wakefulness. It is not clear that this is the natural sleep pattern of humans.

Developed countries and communities are becoming more and more sleep deprived. And it may be our busy lifestyle that keeps us from napping. While naps do not make up for inadequate or poor quality night-time sleep, a short nap of 20-30 minutes can help to improve mood, alertness and performance.

A nap is a short period of sleep, typically taken between the hours of 9am and 9pm in addition to the usual nocturnal sleep period. Naps are most often taken as a response to drowsiness during waking hours. A nap is a form of biphasic or polyphasic sleep, where the latter terms also include longer periods of sleep in addition to one single period. Cultural attitudes toward napping during the work day vary. In many Western cultures, children and the elderly are expected to nap during the day and are provided with designated periods and locations to do so. In these same cultures, most working adults are not expected to sleep during the day and napping on the job is widely considered unacceptable. Other cultures (especially those in hot climates) have an allowance for a nap period (siesta) during the day (typically in the early afternoon) before returning to work.

A power nap, also known as a Stage 2 nap, is a short slumber of 20 minutes or less which terminates before the occurrence of deep slow-wave sleep (SWS), intended to quickly revitalize the napper. The expression "power nap" was introduced by psychologist, James Maas.

The 20-minute nap is believed to improve alertness and motor skills. The short duration prevents nappers from sleeping so long that they enter the slow wave portion of the normal sleep cycle, without being able to complete the cycle. Entering deep, slow-wave sleep and failing to complete the normal sleep cycle, can result in a phenomenon known as sleep inertia, where one feels groggy, disoriented, and even sleepier than before beginning the nap. In order to attain optimal post-nap performance, a Stage 2 nap must be limited to the beginning of a sleep cycle, specifically sleep stages N1 and N2, typically 18–25 minutes.

A study in Australia (Flinders University) in which 5, 10, 20, or 30 minute sleeps were monitored. The greatest immediate improvement in measures of alertness and cognitive performance came after 10 minutes of sleep. The 20 and 30 minute sleeps showed evidence of sleep inertia immediately after the naps and improvements in alertness more than 30 minutes later but not to a greater level than after the 10 minutes of sleep.

TYPES

Planned napping (also called preparatory napping) involves taking a nap before you get sleepy. You may use this type of napping when you know that you will be up later than your normal bed time or as a mechanism to ward off getting tired earlier.

Emergency napping occurs when you are suddenly very tired and cannot continue with the activity you were originally engaged in. This type of nap can be used to combat drowsy driving or fatigue while using heavy and dangerous machinery.

Habitual napping is practiced when a person takes a nap at the same time each day. Young children may fall asleep at about the same time each afternoon or an adult might take a short nap after lunch each day.

TIPS

A short nap is usually recommended (about 20 minutes) for short-term alertness. This type of nap provides benefit for improved alertness and performance without leaving you feeling groggy or interfering with night-time sleep.

Your surroundings can greatly impact your ability to fall asleep. Make sure that you have a restful place to lie down and that the temperature in the room is comfortable. Try to limit the amount of noise heard and the extent of the light filtering in.

If you take a nap too late in the day, it might affect your night-time sleep patterns and make it difficult to fall asleep at your regular bedtime. If you try to take it too early in the day, your body may not be ready for more sleep.

BENEFITS

Naps can increase alertness in the period directly following the nap and may extend alertness a few hours later in the day.

Scheduled napping has also been prescribed for those who are affected by narcolepsy.

Napping has psychological benefits. It can provide an easy way to get some relaxation and rejuvenation.

Most people are aware that driving while sleepy is extremely dangerous. While getting a full night's sleep before driving is ideal, taking a short nap before driving can reduce a person's risk of having a drowsy driving crash. Sleep experts also recommend that if you feel drowsy when driving, you should immediately pull over to a rest area, drink a caffeinated beverage and take a 20-minute nap.

Shift work, which means working a schedule that deviates from the typical "9 to 5" hours, may cause fatigue and performance impairments, especially for night shift workers. Studies have indicated that both naps and caffeine improve alertness and performance among night shift workers and that the combination of naps and caffeine had the most beneficial effect.

Researcher and commentator James K. Walsh, PhD, explains "Because of the body's propensity for sleep at night, being alert and productive on the night shift can be challenging, even if you've had

enough daytime sleep." "Napping before work combined with consuming caffeine while on the job is an effective strategy for remaining alert on the night shift."

NEGATIVE EFFECTS

Despite these benefits, napping isn't always the best option for everyone. Some people are unable to sleep any place other than their own bed, so having a nap at the office or anywhere else is unlikely to happen. Other people simply have trouble sleeping in the daytime.

Naps can leave people with sleep inertia, especially when they last more than 10-20 minutes. Sleep inertia is defined as the feeling of grogginess and disorientation that can come with awakening from a deep sleep. While this state usually only lasts for a few minutes to a half-hour, it can be detrimental to those who must perform immediately after waking from a napping period. Post-nap impairment and disorientation is more severe, and can last longer, in people who are sleep deprived or nap for longer periods.

Napping can also have a negative effect on other sleeping periods. A long nap or a nap taken too late in the day may adversely affect the length and quality of night-time sleep. If you have trouble sleeping at night, a nap will only amplify problems.

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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