

OPTIMAL HEALTH UNIVERSITY™

Presented by Steven L. Smith, DC

Napping: Health Benefits and Drawbacks

The benefits of sleep are well-proven, but many of us still lack nighttime shut-eye. Regular naps are common for kids, but rare for adults. In this week's Optimal Health University™ handout, Dr. Smith investigates whether napping can make a real difference in your level of wellness.



Sleep deprivation is blamed for many ills: drowsiness, irritability, inability to pay attention and even depression (*Encephale* 2004;30:222-7). And drivers who haven't slept well the night before are far more likely to have accidents (*Sleep* 2001;24:780-7).

Inadequate rest has also been linked to high blood pressure, obesity, headaches and other medical maladies. Is the answer as simple as catching forty winks after lunch?

Chiropractic for Better Sleep

Before you add a daily nap to your routine, it's important to understand why you're sleepy in the first place. According to an exhaustive article on the topic published in the *Journal of the American Chiropractic Association*, "chiropractors evaluate sleep complaints with a meticulous sleep history and physical examination with

particular attention to the neurologic, cardiopulmonary and psychological functions."

From there, doctors of chiropractic, like Dr. Smith, uncover the specific cause of the disturbance. One obvious instigator is pain. Research reveals that chronic pain upsets regular nocturnal slumber so much that sufferers must compensate for the loss with daytime dozing (*J Pediatr Psychol* 2008;33:307-11). Chiropractic adjustments help patients achieve quality sleep by alleviating pain, spasms and joint dysfunction.

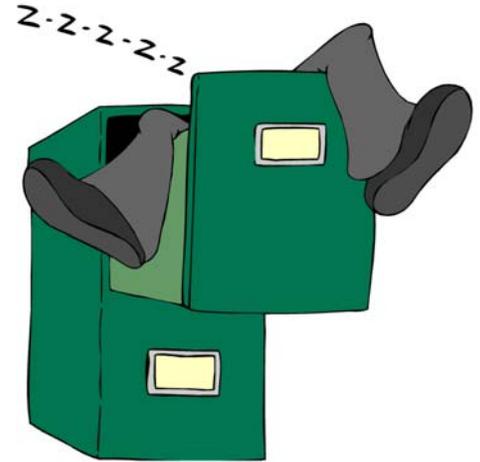
Another logical source of trouble is the central nervous system (CNS), which is fully involved in all phases of sleep. Researchers speculate that, because the spinal column houses the spinal cord, dysfunction in the spine (*vertebral subluxations*) may influence the CNS, in turn disturbing circadian rhythms and sleep patterns.

If you suffer from daytime fatigue, Dr. Smith will work with you to isolate the root cause of the problem, and help you feel more energetic and well rested — every day.

But would a nap boost your wellness level as well? Read on for the latest research on napping.

The History of Napping

For centuries, many cultures encouraged the post-lunch lie-down, so much so that it has become an institution. In



China, doctors have even warned that there may be severe health complications if the traditional *Chinese Afternoon Nap* is eliminated.

Thanks for the Memory Assistance

Many brain mechanisms are at play when we nap. Some scientists uphold that the unique rest during naps can "dynamically facilitate" motor memories by activating certain electrodes in the learning hemisphere of the brain (*PLoS ONE* 2007;2:e341).

For example, as the brain tries to memorize a series of physical tasks, it gets progressively more difficult to retain information. But napping for 90 minutes directly after training for a sequenced task reduces this competition for memory, known as "interference" (*Nat Neurosci* 2007;10:1085-6). This type of nap also helps enhance performance even hours later.



Steven L. Smith, DC, Hickory Chiropractic Clinic, PLLC
256 Third Avenue NW, Hickory, NC 28601 (828) 323-8998
www.hickorychiro.com contact@hickorychiro.com

One study from Harvard Medical School and the Center for Sleep and Cognition set out to determine if there were advantages to the specific type of sleep that occurs during a nap.

Researchers found that non-dreaming sleep, known as non-rapid eye movement (non-REM), advances a person's declarative memory, which includes "book knowledge" and fact storage (*Sleep* 2008;31:197-203).



Other studies bear this out, showing that people whose naps are categorized as non-dream state have better memory for certain types of declarative tasks, especially when compared to the memory abilities of people who remain awake (*Neurobiol Learn Mem* 2006;86:241-7).

A German study shows that naps of about 45 minutes, even those that include some dreaming — or REM — sleep, successfully consolidate another type of memory called procedural memory. This is the type of retention used for skill mastery and physical activities like typing or riding a bike (*Sleep Med* 2006;7:508-12). A curious, confounding factor was that women showed more improvement than men.

Naps Boost Work Productivity

While we can't deny the appeal of catching some zzz's when we are sleepy or stressed, does napping have genuine advantages in the workplace? Research indicates that employees who are allowed a little shuteye time do indeed perform better.

Many sleepy workers would love to get the okay for a midday siesta, but the idea has not taken hold in the mainstream. Only a few professions

allow it, such as airline pilots and emergency room physicians.

Nap Timing

Studies indicate that excessive napping can ruin nighttime sleep (*J Am Geriatr Soc* 1996;44:693-8) but that modest napping usually does not. However, the timing of the rest period can be significant.

Believe it or not, scholars have established guidelines for optimal napping. One theory upholds that a short daytime nap lasting no longer than 30 minutes can promote alertness, and enhance performance and learning ability (*Curr Opin Pulm Med* 2006;12:379-82).

A University of Pittsburgh research project found that hour-long naps sometime between 1:30 pm and 3:00 pm are ideal (*Sleep* 2001;24:680-7). Participants who napped also said they functioned better in the evening.

Other news on nap timing comes from the University of Düsseldorf. An experiment there showed that tiny catnaps — just six minutes long — improve recall and memory processing (*J Sleep Res* 2008;17:3-10). Researchers hypothesize that the mere onset of sleep triggers consolidation of information, even if the sleeper is awakened quickly.

Night Shift Naps

Millions of people work the graveyard shift. This population makes perfect study subjects to demonstrate how napping affects job efficiency and physical functioning. Interestingly, results have been mixed.

One Japanese study examined whether the length of a snooze, and the time it occurred during the night shift, made a difference. Participants who took one-hour naps later, in the second half of the shift, had better performance and sleep quality than those who dropped off earlier (*Rev Saude Publica* 2004;38Suppl:32-7). This study warned that overall functioning declined if a nap was longer than 60 minutes.

But another study from Japan showed that the timing of the nap did not affect performance. Rather it found that a longer sleep — two hours long — actually helped workers maintain the ability to do their jobs (*Ind Health* 2007;45:552-63).

A final note on night shift shuteye comes from a Stanford University study of emergency room physicians and nurses. Study investigators found that those working the overnight shift who napped at 3:00 am did their job better at 7:30 am than those who had to stay awake for the entire shift (*Ann Emerg Med* 2006;48:596-604). Researchers did specify that the nappers' memories were worse directly upon waking, but the effect was only temporary.

Let Us Help!

Short daytime naps can refresh and revitalize. But if you still aren't getting solid nighttime sleep, naps won't be as beneficial.

People require restorative sleep to lead a healthy, happy life. If you're not catching enough zzz's, make an appointment today with this chiropractic office to find out what's wrong. We'll work together to uncover a solution.



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