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National Sleep Foundation Stresses Sound Sleep As Vital To Health

New Research Indicates Sleep Plays Critical Role In Clearing Harmful Toxins From The Brain

ARLINGTON, VA—Trusted sleep authority the National Sleep Foundation is dedicated to educating the public about the importance of a good night's sleep, and a new series of studies is revolutionizing the science of sleep and reinforcing the organization's message about the vital role sleep plays in health and wellness.

“A good night's sleep plays an important role in giving the brain a daily ‘tune-up,’ flushing away the day's waste during the night so you wake up refreshed,” points out National Sleep Foundation spokeswoman Natalie Dautovich, Ph.D. “New findings in sleep science underline the fact that sleep is a cornerstone of a healthy lifestyle.”

New research published this fall in the journal *Science* suggests that sleep may serve a vital “housekeeping” role by clearing toxins from the brain, reports Dr. Dautovich, the National Sleep Foundation's Environmental Scholar. “These new findings highlight the critical role that sleep plays in the maintenance of our brains,” she notes. “Previously, sleep has been thought to serve many functions, such as consolidating memories and maintaining neuronal connections. This new research, however, is revolutionary in that it identifies the very basic purpose that sleep serves – playing a critical role in our brain health.”

According to Dr. Dautovich, the new studies indicate that sleep plays an even more important role in overall health than previously understood. “A research team at the University of Rochester Medical Center studied the metabolic brain activity of mice during sleeping and waking periods,” she relates. “Specifically, they examined the flow of cerebrospinal fluid containing the brain's ‘waste products,’ which are the result of neural activity. The researchers found that channels carrying the



cerebrospinal fluid expanded by 60% when the mice were asleep compared to when they were awake, indicating a greater ‘cleaning’ effect during sleep.

“These results indicate that sleep may play an important housekeeping role by increasing our ability to ‘clean’ the brain, serving a restorative function,” Dr. Dautovich continues. “Without this cleaning, harmful toxins can accumulate which could have negative consequences for our cognitive functioning.”

Having an optimal bedroom environment is crucial to achieving deep, sound and restful sleep, and the National Sleep Foundation and its Official Licensed Products program are helping people create bedrooms that contain all of the right components for a restorative night’s sleep.

“The most direct impact on our sleep comes from the immediate bedroom environment,” asserts Dr. Dautovich. “The design of our bedrooms plays a key role in assisting with the transition from waking to sleeping. Our ability to relax our mind and body is enhanced when our bedroom environment is dark, quiet, cool, and comfortable. This ideal setting can be achieved by eliminating light through the use of window coverings, masking noise with sound conditioners, maintaining comfort through the use of quality mattresses, bed pillows, and mattress toppers, and creating a clean and fresh ambiance by using pillow and mattress protectors and scents conducive to sleep.”

The National Sleep Foundation is working with leading home furnishings industry manufacturers as part of its Official Licensed Products program, and many of these suppliers are featuring Official Products of the National Sleep Foundation at next week’s Home Fashions Market March 24 to 27 in New York City, and next month’s High Point Market in North Carolina April 5 to 10.



“As a society, we have moved from thinking about sleep as a vice or a luxury to understanding that it is a basic need,” Dr. Dautovich adds. “These new findings underscore the importance of prioritizing sleep in our daily lives. We know that sleep is important for our physical health, mental health, and now, based on these findings, we understand sleep’s importance for our brain health. Although we understood that sleep restores the body and mind, these results illustrate how this restoration may be occurring. The National Sleep Foundation is committed to improving health and well-being by promoting healthy sleep. These results suggest that, more than ever, sleep is needed to provide the necessary time for brain recovery.”

National Sleep Foundation research shows that Americans often are not getting the proper amount of sleep: adults today are averaging one to two hours less sleep a night than they did 50 years ago and 38 minutes less sleep on weeknights than they did 10 years ago. Most people say they sleep an average of 6 hours and 44 minutes on work nights, and 7 hours and 35 minutes

on non-work nights, falling short of National Sleep Foundation recommendations of seven to nine hours of sleep per night for adults aged 18 and older. Teenagers, children and infants need even more sleep than adults: the National Sleep Foundation recommends that children aged 6 to 10 get 10 to 11 hours of sleep per night, and that children aged 11 to 17 get 8.5 to 9.5 hours of sleep per night.

Official Products of the National Sleep Foundation include Perfect Sleeper mattresses by Serta; Live Comfortably bed pillows and mattress toppers by Hollander Sleep Products; Sound Asleep room darkening curtains by Ellery Homestyles; Pure Care mattress, box spring and pillow protectors by Fabrictech; Dohm sound conditioners by Marpac; Febreze Sleep Serenity scents; and personal, wireless sleep tracking devices by Lark.

Dr. Dautovich explains that myriad aspects of the bedroom environment play a role in getting a good night's sleep. "Humans are habitual creatures and, as a result, can become conditioned to cues provided by the bedroom," she notes. "Some of these cues can be negative and promote wakefulness: for example, having technology in the bedroom, engaging in stimulating activities, and having an uncomfortable bedroom environment can promote wakefulness. On the other hand, by creating a bedroom environment that is conducive to sleep, the bedroom can become a cue to relaxation and sleep."

Comfortable bedroom furnishings can be the foundation for a good night's sleep, according to Dr. Dautovich. "Comfort in the bedroom is based in part on the quality of bedding such as mattresses, bed pillows, and mattress toppers," she says. "Bed comfort plays an important role in helping the body transition into sleep. As important is the role of bedding in maintaining sleep. When our bedding is uncomfortable, we are less likely to experience deep, restorative sleep that is necessary for optimal functioning."

Light control also plays an important role in creating a bedroom environment conducive to a good night's sleep. "Light is the most dominant environmental cue influencing our sleep," Dr. Dautovich remarks. "Light plays a critical role in maintaining alertness during the daily. Conversely, the absence of light at night initiates a cascade of events that cue our body for sleep. Even small amounts of light at night can be disruptive to a good night's sleep. Minimizing exposure to light through the use of window coverings can help with regulating our circadian sleep-wake rhythm."

Equally important to sleep is controlling the level of internal and external noise in the bedroom. "Sounds at night, particularly unfamiliar sounds, can be disruptive to sleep and can reduce our ability to achieve deep, restorative sleep," Dr. Dautovich notes. "In today's modern society, it is very difficult to eliminate sound completely from the bedroom, but a great, effective alternative is to mask noise with a sound conditioner. Sound conditioners provide a uniform, familiar sound that can assist with sleep onset and maintenance."

The overall atmosphere of the bedroom also comes into play, according to Dr. Dautovich. "A clean and fresh ambiance in the bedroom can become a cue for the calmness and relaxation conducive to a good night's sleep," she observes. "Scents have a powerful effect on our mood and behavior. By using pillow and mattress protectors, we can protect against allergens and irritants that could disrupt sleep. Using scents that have a calming effect can help with the elimination of odors and the promotion of sleepiness."

National Sleep Foundation chief executive officer David M. Cloud says the National Sleep Foundation and its Official Licensed Products program are working to bring Americans useful sleep health information and the best sleep products on the market. The National Sleep Foundation and its Official Licensed Product partners are working together to disseminate information about better sleep through a series of consumer brochures, marketing and merchandising programs, all of which offer consumers a wide variety of sleep informational tips designed to help achieve a better night's sleep. Brochures offering sleep tips and information are distributed to consumers in Official Licensed Products packages sold through leading retailers.

“The National Sleep Foundation is dedicated to helping the public choose the right bedroom elements to create an optimal sleep environment,” Cloud asserts. “The National Sleep Foundation’s Official Licensed Products program is designed to help people create bedrooms with all of the right components for a long and healthy night’s sleep.”

The National Sleep Foundation also is getting the message out to consumers through a website centered on the bedroom environment. “The ‘Inside Your Bedroom’ (<http://bedroom.sleepfoundation.org/>) website is specific to the five senses, and how they can impact sleep,” Cloud notes, adding, “The website offers a compilation of practical advice about creating the optimal sleep environment, and contains a wide variety of informational tools and tips designed to help people learn about sleep and sleep health.”

About The National Sleep Foundation

The National Sleep Foundation is dedicated to improving health and well-being through sleep education and advocacy. It is well-known for its annual Sleep in America® poll. The Foundation is a charitable, educational and scientific not-for-profit organization located in Washington, DC. Its membership includes researchers and clinicians focused on sleep medicine, health professionals, patients, families affected by drowsy driving and more than 900 healthcare facilities. To find out more about the National Sleep Foundation, visit www.sleepfoundation.org.

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