Rocking to sleep actually works, according to new study

To get into a nap quicker and to sleep more deeply, swaying or rocking is the trick.

By LiveScience Mon, Jun 20 2011

There's a reason that swaying gently in a hammock is so relaxing, and it's not just ocean breezes and piña coladas. A new study finds that rocking as you fall asleep actually affects your brain waves, hastening the descent into slumber.

The results, which will be published in the June 21 issue of the journal Current Biology, could explain why everyone from babies to adults finds rocking soothing. They may also come in handy for people hoping to grab a quick afternoon nap, which has been shown to refresh the brain.

To find out if rocking really does improve sleep and how it might do so, researchers from the University of Geneva recruited 12 volunteers. Each volunteer came to the university's sleep lab on two separate afternoons, each time for a 45-minute nap on a custom-built bed suspended from the ceiling. During one nap, the bed was stationary. During the other nap, it swayed gently. As they slept, the men's brain activity was monitored with an electroencephalogram (EEG), which uses electrodes on the skin to sense electrical activity in the brain.

The researchers found that all of the men fell asleep faster and slept more deeply when the bed was rocking. When the bed was still, sleepers spent about half of their nap in the initial phase of light sleep, known as the N1 phase. When the bed was rocking, the N1 phase took up only about 30 percent of the nap. [5 Things You Must Know About Sleep]

N2, or slightly deeper sleep, increased by about 10 percent when the bed was swaying, increasing from about 50 percent of the nap to more than 60 percent.

Swaying also changed a pattern of activity known as sleep spindles in volunteers' brains. Sleep spindles are half-second bursts of electrical energy that occur during N2 sleep. When sleeping in a stationary bed, participants had a fairly constant rate of sleep spindles over the course of their naps. But when they rocked as they slept, participants showed a steep increase in the number of sleep spindles during the second half of their naps. Another 2011 study published in the journal Current Biology found that a greater number of sleep spindles during a nap is linked to greater mental refreshment after the nap is over.

The researchers aren't yet sure whether rocking is more restful over the course of an entire night of sleep, but they hope future research could aid in treatment for insomnia. In the meantime, you now have permission to laze away summer afternoons on the hammock. Science said so.

Why Hammocks Make Sleep Easier, Deeper

by Nancy Shute, NPR
June 20, 2011

Napping in a hammock is one of the more delightful tasks of summer, and Swiss researchers say they now know why.
The gentle rocking motion makes people fall asleep faster, and they sleep deeper.
Those changes in brain activity may inspire new ways to help insomniacs, the researchers say.

Neuroscientists at the University of Geneva rigged up a bed so it would sway gently from side to side every four seconds, considerably slower than the pendulum on a cuckoo clock. "This rocking is very gentle, very smooth, oscillating every four seconds," Sophie Schwartz, a professor of neurology who led the study, told Shots. "It's not like rocking like you would see some mothers rocking their babies, it's more gentle."

A dozen adult research subjects napped on the bed for 45 minutes while scalp electrodes recorded brain activity. During one nap the bed swayed; for another, it was stationary.
The scientists weren't too surprised to find that people fell asleep faster when the bed rocked. But they were surprised at the big difference that rocking made in brain activity.

Rocking increased the length of N2 sleep, a form of non-REM sleep that takes up about half of a good night's rest. It also increased slow oscillations and "sleep spindles." Sleep spindles are brief bursts of brain activity, which look like sudden up-and-down scribbles on an electroencephalogram.

University of Geneva
"We were basically trying to find a scientific demonstration of this notion of rocking to sleep," Michel Muehlethaler, a professor of neuroscience who conducted the research with Schwartz, tells Shots. The fact that the brain waves changed so much, he says, was "totally unexpected." The results were published in the journal *Current Biology*.

Sleep spindles are associated with tranquil sleep in noisy environments and may be a sign that the brain is trying to calm sleepers stuck in them. Spindles also have been linked with the ability to remember new information. And that is associated with the brain's ability to rewire itself, known as brain plasticity.
That ability is important in recovery from stroke, and the researchers say that rocking while sleeping should be tested on people with strokes or other brain injuries. Rocking is "changing things in your brain," Schwartz says.

The Swiss scientists are eager to try the rocking bed on night-time sleepers, to see if it might help with insomnia and other common sleep disorders. But Shots readers may not want to wait for those results, and instead head directly to the back yard and their own time-tested research tool, the hammock.

Rocked To Sleep -- Not Just For Babies Anymore

Posted: 07/ 6/11
http://www.huffingtonpost.com/dr-michael-j-breus/rocking-to-sleep_b_890553.html?view=print

It's the simplest of soothing, sleep-inducing remedies, something we all naturally do: rocking a baby gently to sleep.
Long after we've left childhood, we all can be deeply affected by this relaxing rocking motion. Think of the peaceful glide of a porch swing, sleeping on a boat or the calming sway of a hammock nap.
A recent study seems to back up this feeling with scientific facts. The study suggests that rocking does indeed have an effect on our ability to fall asleep -- as well as on the quality of the sleep itself.

Researchers at the University of Geneva, Switzerland tested the effects of rocking on sleep in a dozen adult men between the ages of 22 and 38. All the men involved were good sleepers -- none were suffering from any sleep or anxiety disorders and they were well-rested at the time of the experiment. Researchers created a special bed that mimicked the rocking of a hammock and had the men take two 45-minute naps. During one nap the bed gently rocked and during the other nap the bed remained still. While their subjects slept, researchers measured brain activity using an electroencephalogram (EEG).

Here's what they found:

- Every one of the participants fell asleep more quickly during their rocking nap.
- A majority (eight out of 12) said they found the rocking nap "more pleasant" than the nap on the stationary bed.
- During the rocking nap, all of the sleepers moved more quickly from Stage 1 to Stage 2 of their sleep cycle. Stage 2 is where we typically spend half of our sleep time over the course of a night.
- While rocking, sleepers showed significant increases in the types of brain-wave activity that are specifically associated with deeper, more restful and more continuous sleep.

These findings regarding brain-wave activity are really fascinating. In Stage 2 sleep, a couple of important things happen:

- Brain waves slow down from stage 1
- Sleep spindles -- short bursts of electrical activity in the brain -- occur.

Sleep spindles are a kind of noise barrier created by the brain. Their presence seems to help us stay asleep when faced with noises and external stimulation that might otherwise wake us. People whose brains generate more sleep spindles seem better able to sleep through certain noises and interruptions -- whether it's a snoring bed partner or an ill-timed car alarm on the street.
Based on these results, the researchers suggest that a rocking motion has the effect of helping to synchronize the brain for sleep -- both to fall asleep more quickly and possibly to achieve longer periods of deep, uninterrupted sleep.
I believe that there is great potential in these results. I'd love to see the effects of rocking tested over longer sleep periods and on subjects who suffer from sleep disorders, including insomnia. In many ways, of course, this study confirms what we all instinctively know about the power of this soothing, repetitive rocking motion.
Sweet Dreams,
Dr Michael J. Breus, Ph.D.
The Sleep Doctor™ Clinical psychologist, board certified sleep specialist
www.thesleepdoctor.com
Everything you do, you do better with a good night's sleep™
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Rocking motion fosters deep sleep, study claims

By Jeremy Laurance, Health Editor
Tuesday, 21 June 2011

If you need a nap, get a hammock. You will nod off quicker and sleep more deeply, researchers say.
The gentle rocking motion soothes us to sleep – and the effect has now been demonstrated by a study of brainwaves.
From babies cradled in their mother's arms to grandparents falling asleep in a rocking chair, it is common knowledge that rocking induces sleep. But scientists did not understand how it worked.
"It had remained a mystery," said Sophie Schwartz of the University of Geneva. She led a study involving 12 volunteers who were asked to nap on a custom-made "experimental hammock" bed that could either stay still or rock gently.
All the participants were naturally good sleepers who did not typically nap. Each took two 45-minute afternoon naps, one with the bed stationary and the other with it in motion. At the same time, their brainwaves were monitored by electroencephalogram (EEG) electrodes attached to the scalp.
"We observed a faster transition to sleep in each and every subject in the swinging condition," said co-researcher Dr Michel Muhlethaler, also from the University of Geneva.
The findings, published in the journal Current Biology, showed a "dramatic boosting" of certain types of sleep-related brainwaves associated with rocking.
Swaying from side to side specifically increased the duration of deep non-dreaming sleep, where the eyes are still, which normally accounts for about half a good night's sleep. The brainwaves also showed activity typical of deep sleep.
The next step is to see whether rocking may be useful for the treatment of insomnia and other sleep disorders, say the researchers. "Swinging" sleep might also improve memory and brain-damage repair, they say.
Children often rock themselves to sleep but the habit can be disturbing if it extends into adulthood. Called rhythmic movement disorder, it is marked by excessive rocking or banging of the head or body in bed. It is usually a response to stress. Introducing bedtime rituals to induce relaxation, such as a warm bath, can help ease the condition.

Study: Rocking hammock promotes faster, deeper sleep

By Jonathan Shorman, USA TODAY

Updated 06/21/2011

More than just a nice rest in the summer breeze, hammocks may now be scientifically proven to give you a better nap.

-

Individuals fell asleep faster and slept more deeply when nodding off in a slowly rocking hammock vs. a stationary bed, says a study in *Current Biology*, published today.

Twelve volunteers who had good sleep habits took two 45-minute naps a week apart. In both naps the volunteers slept in an experimental hammock. During one nap the hammock was slowly swung by a motor; the hammock remained still in the other.

Researchers measuring electrical activity in the brain (EEG) found that in the rocking hammock, participants experienced quicker onset of stage N1 sleep, the beginning and lightest stage of sleep. Nappers also transitioned into deeper forms of sleep faster.

The Swiss researchers who conducted the study expected to find that rocking caused subjects to fall asleep faster, says study co-author Michel Muhlethaler of the University of Geneva. He says they didn't expect the motion to also cause deeper sleep. Exactly why the rocking motion helps sleep remains a subject of speculation, he says.

More research is planned, says co-author Sophie Schwartz, also of the University of Geneva. "What we want to find out now is if a full night of sleep has an effect." A new full-night study is in the beginning stages, she says.

Though the connection between motion and sleep may seem intuitive for getting babies to sleep, its use as a sleep aid in adults is not widely recognized.

"It has not, to date, been recommended," says Kathy Gromer of the Minnesota Sleep Institute.

For those trying to get to sleep without hammocks, creating a restful bedroom environment may be the best bet. Gromer recommends keeping the bedroom as dark as possible during sleep, without digital clocks, computers and other sources of light.

"Once sunlight comes into your bedroom, you're probably going to wake up," she says.

A quiet environment is preferable, Gromer adds, but if silence can't be achieved, using a fan to create white noise may be able to help cover up more disruptive sounds.

Also, removing as much stress as possible and getting concerns about the day ahead out of the way before lying down also makes it easier to get to sleep, Gromer says.

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Sleep Disruptions Linked To Type 2 Diabetes Risk

ASSOCIATED PRESS

January 2, 2008; Page B15

WASHINGTON -- Researchers at the University of Chicago Medical Center report tha
the body's ability to regulate blood-sugar levels, potentially raising the risk of developi

More than 18 million Americans have diabetes and the most common form is Type 2, i
becomes resistant to insulin or doesn't produce enough of it to regulate sugar in the blo

In a small experiment, researchers led by Dr. Esra Tasali, an assistant professor of med
the deepest sleep periods of volunteers rapidly resulted in reduction in their ability to re

The findings were reported in Monday's online edition of Proceedings of the National A

The researchers studied the sleep patterns of nine volunteers, five men and four women
good health and aged 20 to 31.

Normal sleep is divided into several stages, with the so-called slow-wave sleep conside

Whenever the volunteers went into slow-wave sleep the researchers made noise -- enou
though not to fully awaken them.

After just three days the ability of the volunteers to regulate blood sugar was reduced b
reported.

Earlier studies have indicated that lack of sleep can reduce the ability to regulate sugar
evidence that poor sleep quality is also a diabetes risk.

"This decrease in slow-wave sleep resembles the changes in sleep patterns caused by 4
said in a statement. Young adults spend 80 to 100 minutes per night in slow-wave sleep
generally have less than 20 minutes. "In this experiment," she said, "we gave people in
in their 60s."

"Since reduced amounts of deep sleep are typical of aging and of common obesity-rela
obstructive sleep apnea, these results suggest that strategies to improve sleep quality, as
to prevent or delay the onset of Type 2 diabetes in populations at risk," said co-author E
professor of medicine.

http://www.newsmaxhealth.com/headline_health/nap_make_smarter/2010/02/23/313146.html?s=al&promo_code=7704-1

A Nap Can Make You Smarter

Tuesday, February 23, 2010 8:10 AM

By Sylvia Booth Hubbard

Instead of being viewed as lazy or slackers, workers who catch 40 winks in the afternoon may be gaining a bit more respect — or at least a bit more understanding. Researchers from the University of California, Berkeley, found that napping an hour can dramatically restore and boost your brain power. Amazingly, they found a nap can actually make you smarter.

On the other hand, the more hours we spend awake, the more sluggish our minds become. These findings should give pause to college students who pull "all nighters" cramming for finals. The new study found this practice decreases the ability to learn by nearly 40 percent.

"Sleep not only rights the wrong of prolonged wakefullness, but at a neurocognitive level, it moves you beyond where you were before you took a nap," Matthew Walker, an assistant professor of psychology at UC Berkeley and lead investigator, said in a statement.

In the study, 39 healthy young adults were divided into two groups — nap and no-nap. Both groups were given rigorous learning tasks at noon to stress the hippocampus, a region of the brain that helps store fact-based memories. Results in both groups were similar.

At 2 p.m., the first group napped for 90 minutes while the no-nap group stayed awake. At 6 p.m., both groups were subjected to a new series of learning exercises. Those who napped performed markedly better and actually improved their ability to learn.

Walker said researchers believe sleep is needed to clear the brain's short-term memory storage and make room for new information.

"It's as though the e-mail inbox in your hippocampus is full and, until you sleep and clear out those fact e-mails, you're not going to receive any more mail. It's just going to bounce until you sleep and move it into another folder," Walker said.

In addition to boosting your brain power, one study showed that napping can reduce the risk of a fatal heart attack by 37 percent.

Use these five tips for an effective, refreshing afternoon nap:

- The best naptime is 1 p.m. until 3 p.m. when you experience a natural dip in energy.
- Get comfortable. If you have a couch or comfy chair, use them, says Salary.com. Otherwise, stash a yoga mat and pillow behind your desk.
- Draw the shades and wear a sleep mask to stimulate melatonin, a sleep-inducing hormone, advises Body Ecology.
- Your body temperature may fall during sleep, so cover yourself with a light blanket.
- Set an alarm to make sure you don't oversleep.