



HAPPY NEW YEAR

The Future of Sleep Studies

Most people have a general idea of what happens during a sleep study. You spend the night sleeping in a laboratory “all wired up” while doctors run tests. However, the future of sleep research looks much different, according to Charlene Gamaldo, M.D., medical director of Johns Hopkins Center for Sleep at Howard County General Hospital. “Sleep clinical care and research is in a revolutionary place because of technology,” says Gamaldo. “The brick-and-mortar model of conducting sleep studies in a medical care center is really going to be fading into the sunset or will be minimal at best.”

New approaches to testing are likely to take place in the comfort of your own home.

At-Home Sleep Testing Devices

Conducting sleep tests at home is going to become a lot more common, says Gamaldo. “Many of the portable devices currently available show a lot of promise with producing information that is in line with what we see in the lab,” she says. “These technologies can monitor people’s sleep or what’s going on with their breathing during sleep,” she says. Johns Hopkins uses several FDA-approved at-home devices for:

- **Measuring sleep brain wave activity**, which can show doctors how quickly you fall asleep, how deeply you sleep and whether rest quality is good
- **Assessing leg movements** to detect restless legs syndrome
- **Monitoring breathing** to help diagnose sleep apnea. In addition, home monitoring captures how well you rest in the comfort of your own home. Sleeping in a lab does not give doctors or researchers an idea of what a typical night’s sleep is like for you in your bedroom or sleep environment.

While these portable devices are becoming increasingly more accurate, some people may still need to come to the lab for a more comprehensive or sophisticated look at their biorhythms during sleep, says Gamaldo. A lab has the advantage of being a controlled environment where you’re under constant observation by a researcher in the case of more technically involved sleep monitoring. “If a wire falls off while you’re sleeping, there’s someone there to put it back on,” she says.

While sleep disorders have always existed, they have been underdiagnosed, says Gamaldo. Researchers want to explore better ways to diagnose and treat conditions such as sleep apnea, restless legs syndrome and insomnia. Researchers also want to study how lack of sleep and poor quality sleep impacts other conditions such as diabetes and heart disease, she says.

<https://www.hopkinsmedicine.org/health/wellness-and-prevention/the-future-of-sleep-studies>



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Wearable Technology and Phone Apps

Smartphone apps and wearable tracking devices will become more common in the sleep research field,” says Gamaldo. “There are apps now that record a person snoring at home. We hope to eventually correlate the information with actual features of sleep disorders, which could indicate the presence of conditions like sleep apnea. Not too long ago, this was a disorder we could only diagnose in the sleep lab.”

Scientists need to compare the information that the tracking devices and apps gather to the data that researchers and doctors gather in a lab setting, she says. These devices are convenient and can significantly increase access to care. However, researchers need to make sure that apps and trackers undergo rigorous and reportable validation studies. The public needs to be sure that that these devices actually do what they claim, she adds.

Best Sleep Trackers:

- Oura Ring
- WHOOP 4.0
- Biostrap Active Set
- Rise Science Sleep Tracker
- Sleepon Go2sleep Tracker
- Wellue O2Ring
- Kokon Nightbuds
- Withings Sleep
- Amazfit Bip U Pro

*The Air Force does not endorse any trackers

<https://www.sleepfoundation.org/best-sleep-trackers>

A Personal Message From Your Health Promotion Health Myth Busting Team



Dear Health Myth Busters,

Drinking a hot toddy (whiskey, lemon, honey, in chamomile tea) helps me to wind down and fall asleep faster, but I wake up in the middle of the night. I was under the impression that alcohol helped people sleep. If not, what can I use to help me sleep? Can you shed some light on this subject?

Respectfully,
Drinkin' for Rest

Dear Drinkin' for Rest,

I would be happy to shed light on this subject. You have some things right about your assumptions. You are correct when you say your "hot toddy" helps you to fall asleep faster; the problem is that it doesn't help you stay asleep. Studies of people with insomnia have found that heavy alcohol can make people wake up feeling unrefreshed. Evidence shows that although alcohol enables one to fall asleep faster, it doesn't help you improve your sleep. Drinking before bedtime cause effects on the body that alters the sleep stages. The average sleep pattern starts with light and deep sleep, followed by rapid eye movement. (REM). When one consumes alcohol at night, the metabolism of it causes one to enter deep sleep first, which disrupts the natural pattern. Deep sleep and REM sleep are affected; these are essential stages for mental and physical rejuvenation. I would say continue drinking chamomile tea, honey, and lemon; leave the whiskey out of it because even small amounts of alcohol before bedtime can affect your sleep. Chamomile tea contains flavonoids that may interact with benzodiazepine receptors in the brain involved with the sleep-wake transition. Other beverages that can help you sleep are warm milk and tart cherry juice. Warm milk is associated with chemicals that simulate the effects of tryptophan on the brain, and tart cherry juice supports melatonin (sleep hormone) production, which, in turn, helps a healthy sleep cycle.

Respectfully,

Mythbusters

Got questions on other health issues related to sleep health, physical activity, tobacco, or nutrition? Share them with us and we will help you "Bust The Myths!" Send your questions to usaf.jbsa.afmsa.mbx.afmra-hpo@health.mil. Make sure to include in the subject line "Health Myth Buster." For more online health tips visit the Air Force Health Promotion webpage <https://www.airforcemedicine.af.mil/Resources/Health-Promotion/>



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