Good Sleep for Good Health
Get the Rest You Need

Sometimes, the pace of modern life barely gives you time to stop and rest. It can make getting a good night's sleep on a regular basis seem like a dream.

But sleep is as important for good health as diet and exercise. Good sleep improves your brain performance, mood, and health.

Not getting enough quality sleep regularly raises the risk of many diseases and disorders. These range from heart disease and stroke to obesity and dementia.

There's more to good sleep than just the hours spent in bed, says Dr. Marishka Brown, a sleep expert at NIH. "Healthy sleep encompasses three major things," she explains. "One is how much sleep you get. Another is sleep quality—that you get uninterrupted and refreshing sleep. The last is a consistent sleep schedule."

People who work the night shift or irregular schedules may find getting quality sleep extra challenging. And times of great stress—like the current pandemic—can disrupt our normal sleep routines. But there are many things you can do to improve your sleep.

Sleep for Repair • Why do we need to sleep? People often think that sleep is just "down time," when a tired brain gets to rest, says Dr. Maiken Nedergaard, who studies sleep at the University of Rochester.

"But that's wrong," she says. While you sleep, your brain is working. For example, sleep helps prepare your brain to learn, remember, and create.

Nedergaard and her colleagues discovered that the brain has a drainage system that removes toxins during sleep.

"When we sleep, the brain totally changes function," she explains. "It becomes almost like a kidney, removing waste from the system."

Her team found in mice that the drainage system removes some of the proteins linked with Alzheimer's disease. These toxins were removed twice as fast from the brain during sleep.

Everything from blood vessels to the **immune system** uses sleep as a time for repair, says Dr. Kenneth Wright, Jr., a sleep researcher at the University of Colorado.

"There are certain repair processes that occur in the body mostly, or most effectively, during sleep," he explains. "If you don't get enough sleep, those processes are going to be disturbed."

Sleep Myths and Truths • How much sleep you need changes with age. Experts recommend school-age children get at least nine hours a night and teens get between eight and 10. Most adults need at least seven hours or more of sleep each night.

There are many misunderstandings about sleep. One is that adults need less sleep as they get older. This isn't true. Older adults still need the same amount. But sleep quality can get worse as you age. Older adults

Definitions

Immune System
The system that protects your body from invading viruses, bacteria, and other microscopic threats.

Subscribe @ *newsinhealth.nih.gov*

are also more likely to take medications that interfere with sleep.

Another sleep myth is that you can "catch up" on your days off. Researchers are finding that this largely isn't the case.

"If you have one bad night's sleep and take a nap, or sleep longer the next night, that can benefit you," says Wright. "But if you have a week's worth of getting too little sleep, the weekend isn't sufficient for you to catch up. That's not a healthy behavior."

In a recent study, Wright and his team looked at people with consistently deficient sleep. They compared them to sleep-deprived people who got to sleep in on the weekend.

Both groups of people gained weight with lack of sleep. Their bodies' ability to control blood sugar levels also got worse. The weekend catch-up sleep didn't help.

On the flip side, more sleep isn't always better, says Brown. For adults, "if you're sleeping more than nine hours a night and you still don't feel refreshed, there may be some underlying medical issue," she explains.

Sleep Disorders • Some people have conditions that prevent them from getting enough quality sleep, no matter how hard they try. These problems are called sleep disorders.

The most common sleep disorder is insomnia. "Insomnia is when you have repeated difficulty getting to sleep and/or staying asleep," says Brown. This happens despite having the time to sleep and a proper sleep environment. It can make you feel tired or unrested during the day.

Insomnia can be short-term, where people struggle to sleep for a few weeks or months. "Quite a few more people have been experiencing this during the pandemic," Brown says. Long-term insomnia lasts for three months or longer.

Sleep apnea is another common sleep disorder. In sleep apnea, the upper airway becomes blocked during sleep. This reduces or stops airflow, which wakes people up during the night. The condition can be dangerous. If untreated, it may lead to other health problems.

If you regularly have problems sleeping, talk with your health care provider. They may have you keep a sleep diary to track your sleep for several weeks. They can also run tests, including sleep studies. These look for sleep disorders.

Getting Better Sleep • If you're having trouble sleeping, hearing how important it is may be frustrating. But simple things can improve your odds of a good night's sleep. See the Wise Choices box for tips to sleep better every day.

Treatments are available for many common sleep disorders. Cognitive behavioral therapy can help many people with insomnia get better sleep. Medications can also help some people.

Many people with sleep apnea benefit from using a device called a CPAP machine. These machines keep the airway open so that you

Wise Choices
Getting a Better Night's Sleep

- **Stick to a sleep schedule.** Go to bed and wake up at the same time every day, even on the weekends.

- **Get some exercise every day.** But not close to bedtime.

- **Go outside.** Try to get natural sunlight for at least 30 minutes every day.

- **Avoid nicotine and caffeine**. Both are stimulants that keep you awake. Caffeine can take 6–8 hours to wear off completely.

- **Don't take naps after mid-afternoon.** And keep them short.

- **Avoid alcohol and large meals before bedtime.** Both can prevent deep, restorative sleep.

- **Limit electronics before bed.** Try reading a book, listening to soothing music, or another relaxing activity instead.

- **Create a good sleeping environment.** Keep the temperature cool if possible. Get rid of sound and light distractions. Make it dark. Silence your cell phone.

- **Don't lie in bed awake.** If you can't fall asleep after 20 minutes, get up and do a relaxing activity until you feel sleepy again.

- **See your health care provider** if nothing you try helps. They can determine if you need further testing. They can also help you learn new ways to manage stress.

can breathe. Other treatments can include special mouthguards and lifestyle changes.

For everyone, "as best you can, try to make sleep a priority," Brown says. "Sleep is not a throwaway thing—it's a biological necessity." ■

Web Links

For more about sleep and health, see "Links" in the online article: newsinhealth.nih.gov/2021/04/good-sleep-good-health

Pregnancy Check-Ups
Healthy Start for Mom and Baby

Life is busy before a baby arrives. There are many things to do to prepare. One of the most important is to visit your health care provider regularly.

Check-ups before your baby is born are called prenatal visits. They help make sure you and your baby are healthy. Your health care provider will look for certain problems that can happen during pregnancy. Some issues are best treated early. Others can be prevented before they start.

"Prenatal care is fundamental for shaping the lives of women and their children," says Dr. Monica Longo, an NIH expert on prenatal health. Longo cares for women with high-risk pregnancies. Such women have a higher chance of complications.

If you think you may be pregnant, schedule a visit with your provider. If you're pregnant, you'll need to start regular prenatal visits. Most women have check-ups about once a month in the beginning. Then, they go more often later in the pregnancy.

During a prenatal visit, your provider will ask about your health history. They will also perform a physical exam and weight check. They'll let you know how much weight gain is healthy for your body and help track your progress.

You'll also be asked to provide a urine sample. Urinary tract infections (UTIs) are common during pregnancy. UTIs and other infections increase the risk of having a preterm birth. This is when you give birth at 37 weeks or earlier.

"One of the primary purposes of prenatal care is actually prevention," says Longo. "We screen women to find potential health problems before those issues can worsen."

During certain stages of pregnancy, your provider will perform blood tests and imaging tests. These include ultrasound exams to look at the baby's growth and development. Visits are also an opportunity to talk with your provider about how to give your baby a healthy start.

"During prenatal visits, we educate and counsel moms about healthy habits, healthy food choices, and exercise," Longo says. "We also address any concerns a new mom-to-be might have."

Taking a prenatal vitamin is also key. Folic acid is included in most prenatal vitamins. It reduces the risk of severe birth defects that affect the developing brain and spine.

It's important to stay away from things that could harm your baby. These include certain medications, smoking, and alcoholic drinks. Also, talk with your provider about any health conditions. Conditions like diabetes (a disease that causes high blood sugar) and high blood pressure need to be brought under control.

Some women choose to talk with their provider before becoming pregnant. This is called a preconception visit. It can help you plan for a safer pregnancy.

Early and regular care for you and your developing baby is important. Studies show that prenatal care reduces the risk of having a low-birth weight baby. Low birth weight can cause health problems. Even during the pandemic, it's essential to keep up with regular prenatal care.

"Providers around the globe have adapted prenatal care to fit the current challenges," says Longo. That means using telehealth for visits that don't have to be done in person.

Health care providers are also seeing fewer patients and extending the time between them. This reduces possible exposure in waiting rooms.

"Providers are prepared for these difficult times," says Longo. So it's crucial that moms-to-be keep up with prenatal care. ■

Wise Choices
Your First Prenatal Visit

Here's what you can expect:

- **Your doctor will ask about your health history.** This includes diseases, operations, or prior pregnancies. They may also ask about your family's health history.

- **A complete physical exam.** This includes a pelvic exam and Pap test, which checks for cells that are not normal in the lower part of the uterus.

- **Getting your blood pressure, height, and weight taken.**

- **Giving blood and urine samples for lab work.**

- **Having your due date calculated.**

- **Time for questions.** It can be helpful to bring a list of any questions you want to ask.

Web Links

For more about prenatal care, see "Links" in the online article: newsinhealth.nih.gov/2021/04/pregnancy-check-ups

Health Capsules

For links to more information, please visit our website and see these stories online.

Antibodies Protect Against COVID-19 Reinfection

After having COVID-19, most people's bodies develop antibodies to help fight it off. These are special molecules made by the body's disease defense system, the immune system. A study found that people with these antibodies were less likely to get COVID-19 again.

Researchers looked at more than 3 million people who had an antibody test for SARS-CoV-2. SARS-CoV-2 is the virus that causes COVID-19.

They found that about 11% of people had SARS-CoV-2 antibodies.

More than 88% had a negative test. And less than 1% of tests were inconclusive.

The scientists looked at who came down with COVID-19 after the test. They analyzed up to 30 days, 31–60 days, 61–90 days, and more than 90 days after.

About 3% to 4% of people with negative antibody tests got COVID-19 in each time period. But those who had antibodies were less likely to have COVID-19 as time went on. Only 0.3% of the people with antibodies

had a positive COVID-19 test more than 90 days after. Those without antibodies were 10 times more likely to get the disease.

The findings suggest that people who have a positive result from an antibody test may be at lower risk for future infection with SARS-CoV-2.

NIH's Dr. Lynn Penberthy, who led the research team, explains that more questions still need to be answered. "We are nevertheless encouraged by this early finding," she says. ■

Guarding Against Glaucoma

Glaucoma is a group of eye diseases that can lead to vision loss and blindness. It's usually caused by abnormally high pressure inside the eye. This can damage a nerve in the back of your eye called the optic nerve.

Glaucoma may not cause any early symptoms. Many people don't know they have it. That's why it's important to have regular eye exams. There, your eye doctor will check for signs of glaucoma.

Over time, people with glaucoma may slowly lose their vision. It may be especially hard to see things off to the side, in what's called your peripheral vision. Glaucoma can eventually lead to blindness if it's not treated.

There's no cure for glaucoma. But starting treatment early can prevent vision loss. Medicines and laser treatment can help lower the pressure in your eye. If these options don't work, your doctor may suggest surgery.

Anyone can get glaucoma. But if you're over the age of 60 or have a family history of glaucoma, you're at higher risk. Risk starts earlier if you're Black or Latino.

Glaucoma is a serious disease, but treatment works well. Talk to your health care provider if you have any concerns about your vision.

For more information, visit www. nei.nih.gov/learn-about-eye-health/ eye-conditions-and-diseases/glau-coma. ■
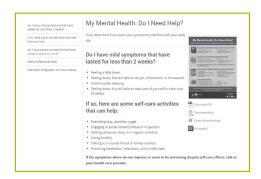
Featured Website

My Mental Health: Do I Need Help?
www.nimh.nih.gov/mymentalhealth

It can be difficult to know when to seek help for your mental health. This NIH resource can help guide you.

Learn which symptoms may be signs that it's time for professional help.

How to get *NIH News in Health*