

NIH News in Health

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Keep Your Kidneys Healthy Catch Kidney Disease Early

Your kidneys aren't very big—each is about the size of your fist—but they do important work. They keep you healthy by maintaining just the right balance of water and other substances inside your body.

Unfortunately, if your kidneys start to malfunction, you might not realize it for a long while. Kidney disease usually doesn't make you feel sick until the problem becomes serious and irreversible. March is National Kidney Month, a perfect time to learn more about how to keep your kidneys healthy and how to catch problems early.

Your kidneys are 2 reddish, bean-shaped organs located on either side of your spine in the middle of your back. Their main job is to filter your blood. Each kidney contains about a million tiny filters that can process around 40 gallons of fluid every day—about enough to fill a house's hot water heater. When blood passes through the kidney, the filters sift and hold onto the substances your body might need, such as certain nutrients and much of the water. Harmful wastes and extra water and nutrients are routed to the nearby bladder and flushed away as urine.

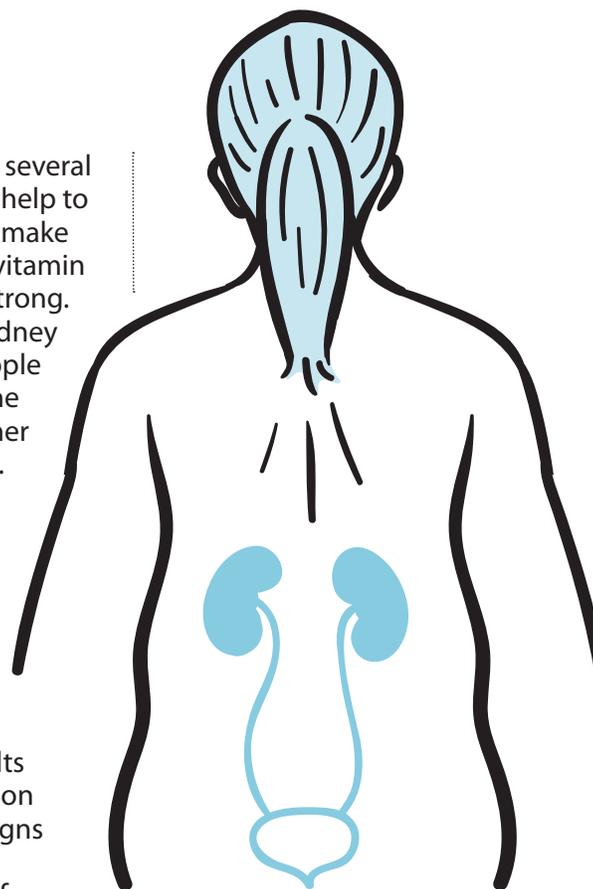
Your kidneys also produce several **hormones**. These hormones help to control your blood pressure, make red blood cells and activate vitamin D, which keeps your bones strong.

We all lose a little of our kidney function as we get older. People can even survive with just one kidney if they donate the other to a friend or family member.

But when kidney function drops because of an underlying kidney disease, it's something to be concerned about. Toxins and extra water can build up in your blood. Falling hormone production can cause other problems. About 1 in 10 adults nationwide, or about 20 million people, have at least some signs of kidney damage.

There are different types of kidney disease. Most strike both kidneys at the same time, harming the tiny filters—called nephrons—and reducing their filtering ability. When damage to nephrons happens quickly, often because of injury or poisoning, it's known as acute kidney injury. It's more common, though, for nephrons to worsen slowly and silently for years or even decades. This is known as chronic kidney disease.

"Most people have few or no symptoms until chronic kidney disease is very advanced," says Dr. Andrew Narva, a kidney specialist at NIH. "You can lose up to three-fourths of your kidney function and essentially have no symptoms."



Chronic kidney disease can strike people of any race, but African Americans are especially at risk. African Americans also tend to have high rates of diabetes and high blood pressure, the 2 leading causes of kidney disease. Other risk factors for kidney disease include heart disease and a family history of kidney failure—a severe form of kidney disease.

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Definitions

Hormones

Molecules sent through the bloodstream to signal another part of the body to grow or react a certain way.

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If you have these risk factors, it's important to be screened for kidney disease," says Narva. "That usually involves simple laboratory tests: a urine test to look for kidney damage, and a blood test to measure how well the kidneys are working."

The urine test checks for a protein called albumin, which isn't routinely



Wise Choices Protect Your Kidneys

If you're at risk for kidney disease—especially if you have diabetes, high blood pressure, or a family history of kidney failure—talk to your health care provider to choose the best steps for you.

- Get your blood and urine checked for kidney disease.
- Learn to manage your diabetes, high blood pressure or heart disease.
- Take medicines the way your provider advises.
- Cut back on salt. Aim for less than 1,500 mg of sodium daily.
- Choose foods that are healthy for your heart.
- Be physically active.
- Lose weight if you're overweight.
- Limit alcohol.
- If you smoke, take steps to quit.

detected when your kidneys are healthy. The blood test checks your GFR—glomerular filtration rate. GFR is an estimate of your kidney's filtering ability. A GFR below 60 is a sign of chronic kidney disease. A GFR below 15 is described as kidney failure.

"I tell my patients they should know their numbers," says NIH kidney expert Dr. Jeffrey B. Kopp. "We usually cannot cure chronic kidney disease, but if we catch it early, we can slow down its progression."

Without treatment, kidney disease often gets worse. If your GFR drops below 15, you may feel tired and weak, with nausea, vomiting and itching. By that point, you may need a kidney transplant or dialysis. It's a good idea to talk with your doctor about the possibility of these therapies long before they're needed. It takes time to understand your options, and it's easier to figure things out when you're feeling healthy.

"In general, the preferred therapy for kidney failure is to have a kidney transplant, but not everyone can have a transplant," says Kopp. Some obstacles include long waiting lists for healthy kidneys and finding a well-matched donor.

Dialysis is a treatment that filters wastes and water from the blood, allowing patients with kidney failure to feel better and continue with everyday activities. NIH kidney specialist Dr. Paul Kimmel leads an NIH program to improve the lives of patients on dialysis. "Although dialysis is a life-



Web Links

For more about kidney health, click the "Links" tab at:

<http://newsinhealth.nih.gov/issue/Mar2013/Feature1>

saving therapy, it can be challenging for patients and families," Kimmel says. "We're encouraging researchers to explore innovative ways to improve the quality of life and long-term outcome for these patients."

You can take many steps to avoid or delay reaching the point of kidney failure. The best thing you can do is control your blood pressure. A healthy lifestyle, including physical activity and a heart-healthy diet, can help to normalize blood pressure and also slow kidney disease.

"Most Americans eat more sodium and protein than the body needs. It's your kidneys' job to filter and get rid of the leftovers 24 hours a day, 7 days a week," says registered dietitian Theresa Kuracina, who advises NIH on kidney health and nutrition.

Healthy kidneys can generally handle the workload. "But if you have kidney damage, too much sodium and protein can have a negative effect," Kuracina says. "We generally recommend eating less sodium and more fruits, vegetables and whole grains. To reduce fats, choose lean meats and low-fat or fat-free dairy products."

If you have kidney disease, your health care provider may recommend additional changes to your diet. And if lifestyle changes aren't enough to slow down kidney damage, your doctor may prescribe medications to reduce blood pressure, control blood glucose and lower your cholesterol.

Don't wait to take the first step to keep your kidneys healthy. Talk to your health care provider about your kidneys, and ask if you should be tested for kidney disease. ■

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Soothing a Sore Throat

What To Do When Your Throat Hurts

We've all had sore throats around this time of year. Your throat feels scratchy and may hurt when you swallow. What can you do to soothe a sore throat? And when is it a sign of a more serious infection?

Most sore throats are caused by viral infections such as the common cold or the flu. These throat problems are generally minor and go away on their own.

To soothe your irritated throat, keep it moist. "Ever notice that a sore throat seems worse in the morning? It's because your throat gets so dry overnight," says Dr. Valerie Riddle, an infectious disease expert at NIH. "Having lozenges or hard candies—or anything that stimulates saliva production—will keep your throat moist. It's also important to drink plenty of fluids."

For young children who might choke on hard candies or lozenges, try cold liquids and popsicles. Throat pain might also be soothed by throat sprays and over-the-counter pain relievers such as acetaminophen, ibuprofen or aspirin, but don't give aspirin to young children.



Contact a doctor if your sore throat is severe, doesn't feel better after a few days, or is accompanied by a high fever or swollen glands. These symptoms could be signs of a bacterial infection, such as strep throat. Taking **antibiotics** won't help at all if your sore throat is caused by viruses, but they're essential for fighting bacterial infections like strep.

Strep is the most common bacterial throat infection. Although it can occur in adults, strep throat is more common in children between ages 5 and 15. Riddle says strep can be harder to detect in younger children, because it can cause a runny nose and other symptoms that make it seem like a cold. "If your child has severe throat pain, a fever above 100.4 degrees, or swollen glands, you should get medical attention right away," advises Riddle. Children with strep also may experience nausea, vomiting and stomach pain.

To see whether you have strep throat, the doctor will take a throat swab. If test results confirm strep, your doctor will prescribe antibiotics. After 24 hours of taking them, you should no longer be contagious. You'll likely begin feeling better

within a couple of days, but to fully recover it's important to finish all of the medicine.

Strep is highly contagious. Treat it quickly to prevent it from spreading to others. Riddle says, "Not only can the infection be transmitted, but there are potential complications from untreated strep throat." These include ear infections, rheumatic fever and kidney problems.

Another fairly common throat infection is tonsillitis, which occurs when you have sore, swollen **tonsils**. It's caused by many of the same viruses and bacteria that cause sore throats. If you have frequent bouts of tonsillitis or strep throat, you may need surgery (called a tonsillectomy) to have your tonsils removed.

The best way to protect yourself from the germs that cause these infections is to wash your hands often. Try to steer clear of people who have colds or other contagious infections. And avoid smoking and inhaling second-hand smoke, which can irritate your throat. ■



Wise Choices Sore Throat Relief

- Try hot tea with lemon or some hot soup.
- Keep your throat moist with lozenges or hard candies.
- Gargle with warm salt water or use ice chips.
- Cold liquids or popsicles can numb the pain. Throat sprays and over-the-counter pain relievers can help, too.
- Use a humidifier or vaporizer, especially when sleeping, to keep air from getting too dry.
- If the sore throat persists for several days, contact a health care professional.



Definitions

Antibiotics

Prescription medications used to treat bacterial infections such as strep throat.

Tonsils

Structures in the back of your throat that help prevent infection by trapping germs that come in through your nose and mouth.



Web Links

For more about sore throats, click the "Links" tab at:

<http://newsinhealth.nih.gov/issue/Mar2013/Feature2>

Health Capsules

For links to more information, see these stories online:
<http://newsinhealth.nih.gov/issue/Mar2013/Capsule1>

Many Doctors Don't Ask Teens About Alcohol

In a new study, more than one-third of 10th graders reported recent alcohol use. But many didn't recall their doctors asking them about drinking or talking to them about its effects. Doctors may be missing opportunities to prevent underage alcohol use, the study suggests.

Unhealthy alcohol use is the third-leading preventable cause of death nationwide. Alcohol is the most widely used substance of abuse among youth, and dangerous binge drinking is common among underage drinkers.

Many adults, research shows, cut back on risky drinking if doctors ask about and discuss alcohol. NIH scientists set out to see how often doctors discuss alcohol with teens. They asked more than 2,500 10th graders nationwide about their alcohol use and whether their doctor discussed drinking at their last medical exam.

More than 1 in 3 students said they had used alcohol in the past month, and about 1 in 4 said they had binged. Binge drinking means having 5 or more drinks per occasion for males and 4 or more for females.

Of the students who had seen a



Wise Choices Signs of Underage Drinking

- Academic and/or behavioral problems in school
- Changing groups of friends
- Less interest in activities or appearance
- Slurred speech
- Coordination problems
- Memory and/or concentration problems



doctor in the past year, 54% said they were asked about drinking, and 40% said they were advised about related harms. Of the students who reported past-month problem drinking (frequent alcohol use, bingeing or drunkenness), only about 25% were advised to reduce or stop drinking.

"Alcohol is by far the drug of choice among youth," says NIAAA Acting Director Dr. Kenneth R. Warren. "The findings indicate that we must redouble our efforts to help clinicians make alcohol screening a routine part of patient care for young people in the United States." ■



Featured Website Herbs at a Glance

<http://nccam.nih.gov/health/herbsataglance.htm>

Plant-based supplements like ginkgo, echinacea and St. John's wort are widely available and lots of people use them. But are they safe and effective? Find out what the science says. This website offers easy-to-read fact sheets about nearly 50 herbs and botanicals. Each can be downloaded separately as PDFs or together as an eBook.



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