

NIH News in Health

National Institutes of Health · Department of Health and Human Services · newsinhealth.nih.gov

Inside News: 3 Food Poisoning 4 Diet for Brain Health 4 Pelvic Floor Disorders 4 Vision Rehabilitation

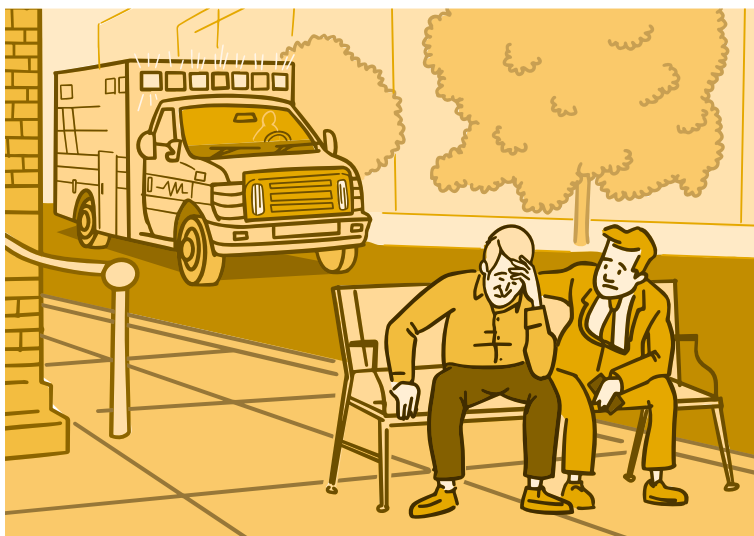
Halting Heart Attack and Stroke Get Medical Help Fast

A heart attack or stroke can happen within seconds. Getting treatment fast for these medical emergencies can mean the difference between life and death or disability. But do you know the symptoms of these dangerous events? And do you know if you're at risk for having one?

More than 1.5 million people have a heart attack or stroke every year in the U.S. Heart attack happens when blood flow to the heart gets blocked, most commonly by a blood clot. Stroke happens when blood flow to the brain gets disrupted. The most common type of stroke is caused by a blood clot stuck in a blood vessel that feeds the brain. Stroke can also be caused by a blood vessel in the brain that breaks open and bleeds into nearby tissue.

“Early treatment is key to improving your chances of survival,” says Dr. Gina Wei, a heart-health expert at NIH. Treatment may include either rapidly dissolving or removing the clot to open up the blocked blood vessel. For some heart attack cases, emergency surgery is used to redirect blood flow around the blockage.

Getting help immediately can save a life and reduce damage to the heart or brain. Less damage to these vital organs can also mean less disability afterward, and a faster recovery, explains Dr. Clinton Wright, a neurologist and stroke researcher at NIH. So it's important to be on alert for symptoms of a heart attack



or stroke for both yourself and the people around you. Every minute matters.

Know the Symptoms, Act Fast •

The most common symptoms of a heart attack are pain, heaviness, or discomfort in the center or left side of your chest. But they're not the only symptoms. Women are more likely than men to have other symptoms, like pain or numbness in the left arm.

Some people may also feel a rapid or irregular heartbeat. Others feel pain or discomfort in one or both arms, the back, shoulders, neck, jaw, or above the belly button. You may also feel short of breath or suddenly sweat a lot for no apparent reason. Rarer symptoms include feeling extremely tired for no reason, nausea and vomiting, and dizziness.

For stroke, the most common symptoms are facial drooping, arm weakness, and trouble speaking. “There can also be a sudden loss of

balance or coordination, or sudden trouble seeing in one or both eyes,” Wright says.

If you or anyone around you has these symptoms, call 9-1-1 immediately. Don't wait. Treatment can start in an ambulance on the way to the hospital. This helps improve the odds of survival and recovery. Don't drive yourself to the ER or ask someone to drive you. It may delay treatment.

Other health conditions can mimic symptoms of a heart attack and stroke. “But it's better to be safe than sorry,” Wei says. “Call an ambulance to go to the ER and get checked out.”

Are You At Risk? • Most heart attacks and strokes happen in people who have certain risk factors (see the Wise Choices box). If you know your risk, you can be on the lookout for symptoms. You can also take steps to lower that risk.

One major risk factor for heart attack is high cholesterol in the blood. High cholesterol can also increase the risk for stroke. Cholesterol can build up on the walls of blood vessels, causing plaques. If a plaque

continued on page 2

Subscribe @



newsinhealth.nih.gov

continued from page 1

breaks open, a blood clot can form. But cholesterol isn't the only contributor to this process.

Dr. Paul Ridker from Harvard University is working to understand the role of **inflammation** in heart disease. His research has shown that high cholesterol and inflammation work together to increase heart-attack risk. "Heart disease involves both accumulation of cholesterol and an inflammatory fire lighting the match underneath it all," he says.

In a recent study, his team measured inflammation using a test called hsCRP as well as blood cholesterol in women in their 30s. Women with high levels of inflammation had a higher risk of heart attack or stroke later in life than those who only had high cholesterol.

"Get these things measured," Ridker advises. Knowing your numbers "can give you an

Definitions

Inflammation

Heat, swelling, and redness caused by the body's protective response to injury or infection.

NIH News in Health

ISSN 2375-6993 (Print) ISSN 1556-3898 (Online)

Editor Harrison Wein, Ph.D.

Managing Editor Tianna Hicklin, Ph.D.

Graphics Alan Defibaugh (illustrations), Bryan Ewsichek (original design), Tianna Hicklin (layout)

Contributors Vicki Contie, Tianna Hicklin, and Sharon Reynolds

Use our articles and illustrations in your own publication. Our material is not copyrighted. Please acknowledge *NIH News in Health* as the source and send us a copy.

newsinhealth.nih.gov



Office of Communications & Public Liaison
Building 31, Room 5B52
Bethesda, MD 20892-2094
email: nihnewsinhealth@od.nih.gov
phone: 301-451-8224

opportunity to start prevention much earlier in life," he says.

Hypertension, or high blood pressure, is another important risk factor for stroke and heart attack. High blood pressure has no symptoms. So you may not know you have it.

You can check your blood pressure at home with automatic cuff monitors. These are available at all major pharmacies. Measuring your blood pressure at home if you have hypertension and getting your cholesterol checked by your doctor regularly can help you assess your health risk. Your doctor can advise you on how to lower your risk based on your blood pressure and cholesterol numbers.

Lower Your Risk • If you're at risk for a heart attack or stroke, lifestyle changes and medications can help you lower that risk.

"Eating more vegetables and less red meat, exercising, and quitting smoking all lower heart attack and stroke risk," Ridker says. "And it turns out they all reduce inflammation as well."

Other steps you can take to reduce your risk of a heart attack or stroke include maintaining a healthy weight, getting enough sleep, and managing stress.

"It's never too early to start making healthy changes," says Wei. "It's easy to feel overwhelmed. You can start with small steps. Like taking the stairs instead of an elevator or parking your car a little farther away when you go shopping. Or adding one fruit or vegetable to your day. Then work your way up gradually."

Sometimes, lifestyle changes alone aren't enough to reduce your risk. Medications can also help.

Drugs called statins can help lower cholesterol levels. The U.S. Food and Drug Administration recently approved the first drug to lower inflammation in adults at very high

risk of a heart attack or stroke. It's called low-dose colchicine.

Drugs that lower blood pressure can also help. "As people get older, blood pressure naturally goes up," Wright says. So it's important to make sure to manage your blood pressure as you age.

A large NIH-funded study showed that using more than one medication to reduce blood pressure substantially reduced the number of strokes in people at high risk who couldn't get their blood pressure low enough with only a single drug.

"And we've continued to gain more evidence that the lower your blood pressure, the better," Wright says.

"We all have the power to protect our hearts and lower our risk for heart disease and stroke," Wei explains. ■

**Wise Choices****Are You at Risk for Heart Attack and Stroke?**

Many health conditions and other factors can increase the risk of a heart attack or stroke. These include:

- High blood cholesterol, or high levels of other fats in the blood (triglycerides).
- High blood pressure (hypertension).
- High blood sugar (diabetes).
- Overweight or obesity.
- Smoking.
- A lack of regular physical activity.
- Family history of heart attack or stroke.
- Previous heart attack or stroke.
- Older age.
- Preeclampsia or other pregnancy complications.

**Web Links**

For more about recognizing heart attack and stroke, see "Find More Information" in the online article: newsinhealth.nih.gov/2024/12/halting-heart-attack-stroke

Preventing Food Poisoning

Learn How to Keep Food Safe

Don't let bad food spoil your celebrations this holiday season. Follow safe food practices so everyone can keep enjoying the festivities after their meals.

Germs like bacteria, viruses, and parasites—or the toxins they produce—can get into your food and make you sick. “The difficult thing is you can't see these germs, and you can't taste them,” says Dr. William Alexander, an NIH expert in food-borne illnesses.

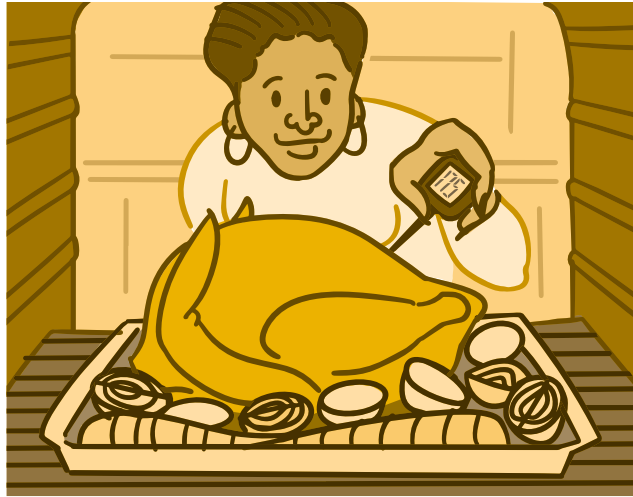
Germs can get into your food many ways. They may already be in some foods you buy, like raw meat, eggs, or fruits and vegetables. To lessen or get rid of germs, rinse your produce well and cook food to appropriate temperatures.

Poor hygiene by food handlers can also lead to food contamination. That's why it's important to wash your hands and any surfaces food touches when you're preparing it.

Leaving food out for too long or not storing it at proper temperatures can help germs grow and multiply. Be sure you're following safe food practices. You can learn more at www.foodsafety.gov/keep-food-safe.

When too many germs get into your food or water, you can get sick. Your symptoms and how long they last depend on the type of germ or toxin, and how much you consumed. You may get diarrhea, abdominal pain, vomiting, fever, or chills.

“Most people who eat infected food get over it with a few, very mild symptoms,” says Dr. Shahida Baqar, an NIH expert on food-borne illnesses. But, sometimes, the bugs can multiply in your gut and lead to



more serious illness and disease.

Certain people are at higher risk for severe illness. These include children under age 5, pregnant women, people with weakened **immune systems**, and those over 65 years old.

If you aren't getting better after a couple of days, have a fever higher than 100 degrees, bloody stool, or are vomiting so often that you can't keep fluids down, contact your doctor. De-

hydration is one of the biggest issues from food poisoning. So be sure to drink plenty of fluids. Watch for symptoms of dehydration, like not peeing much, a dry mouth and throat, and feeling dizzy when standing.

One type of *E. coli* infection produces a toxin that can lead to life-threatening kidney problems for kids. It can't be treated with antibiotics, either. An NIH-funded study is testing whether giving these patients fluids through an IV can prevent kidney complications.

NIH-funded researchers are looking for ways to prevent food-borne illnesses, too. Some are studying the biology of how bacteria and viruses get into and wreak havoc in the body. Others are trying to develop vaccines to help protect against food poisoning. But for now, the best way to avoid getting sick is to follow good hygiene and food safety practices. ■



Wise Choices Food Safety Tips

When preparing food, follow these simple steps:

- **Keep it clean.** Wash your hands with warm, soapy water for at least 20 seconds before handling food. Wash them after handling raw meat, poultry, seafood, or their juices, or uncooked eggs, and again before eating. Wash utensils, cutting boards, and other food prep surfaces often with hot, soapy water. Clean the lids of canned goods before opening.
- **Separate fresh produce and foods that don't get cooked** from raw meat, poultry, or seafood.
- **Cook your food to the proper temperature.** Check the safe minimum internal temperature chart for specific foods at www.foodsafety.gov/food-safety-charts/safe-minimum-internal-temperatures.
- **Chill your foods properly.** Keep your refrigerator set to 40°F (4°C) or below and your freezer to 0°F (-18°C) or below. Don't leave perishables out for more than 2 hours, or 1 hour if it's over 90 degrees.
- **Keep cold food cold and hot food hot** when not stored.
- **Find more tips on food safety** and how to report foodborne illness at FoodSafety.gov.



Definitions

Immune System

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



Web Links

For more about food poisoning, see “Find More Information” in the online article: newsinhealth.nih.gov/2024/12/preventing-food-poisoning



Health Capsules

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

Healthy Eating Linked to Better Brain Health

As the U.S. population ages, more adults are developing thinking and memory problems, called mild cognitive impairment. Scientists have been looking for ways to prevent or delay this type of mental decline and more severe disorders, like dementia.

Some studies have found links between healthy eating and improved thinking and memory. An eating pattern called the MIND diet has shown promise. It features leafy greens and other vegetables. It prefers berries over other fruit. It also encourages eating whole grains,

beans, nuts, and at least one weekly serving of fish. It limits red meat, sweets, cheese, fast food, and fried foods.

To study the effects of the MIND diet, scientists analyzed data from about 14,000 people. Their average age was around 64 at the start. About 57% were female, 70% were White, and 30% were Black. Their eating patterns were assessed. Their cognitive health was measured at the beginning and end of the study, about 10 years later.

Overall, people who were eating foods most similar to the MIND diet

were less likely to have problems with thinking and memory. They also had slower rates of cognitive decline. People who most closely stuck to the MIND diet had a 4% reduced risk of cognitive problems compared to those who ate a very different diet.

“With the number of people with dementia increasing with the aging population, it’s critical to find changes that we can make to delay or slow down the development of cognitive problems,” says Dr. Russell Sawyer of the University of Cincinnati, who led the study. ■

About Pelvic Floor Disorders

The pelvic floor is a group of muscles and other tissues that form a sling or hammock in the pelvis. These pelvic floor muscles do important work. They help to hold essential organs in place. These key organs include the bladder, intestines, and rectum. In women, they also include the uterus, cervix, and vagina.

Trouble can arise if the muscles or tissues in the pelvic floor weaken or are injured. Such problems are known as pelvic floor disorders. One

condition that impacts women, called pelvic organ prolapse, occurs when the support weakens, and organs sink down into the vagina. Other problems from pelvic floor weakening can include bladder or bowel control, which can affect men and women. Pelvic floor disorders can arise at any age. But they’re most likely to occur among older women.

Symptoms can vary widely, depending on the organs involved. Some people feel a sensation of

bulging or pressure in the vagina. Others may start to have an urgent need to urinate or have difficulty making it to the bathroom in time. Others may get urinary leakage when they cough or laugh.

These symptoms may feel embarrassing to some people, so they may hesitate to tell their health care provider. But such problems are often treatable, so it’s important to bring them up. Learn more at www.nichd.nih.gov/health/topics/pelvicfloor. ■



Featured Website

Vision Rehabilitation Services

www.nei.nih.gov/learn-about-eye-health/vision-rehabilitation

Millions of Americans are living with visual impairments. These are vision problems that can’t be fixed with glasses, contacts,

or other standard treatments. Learn how to locate services that can help with daily activities and improve your quality of life.

Vision Rehabilitation

A visual impairment can make it hard to do everyday activities like driving or reading. A visual impairment can be fixed with glasses, contacts, or other standard treatments like medicine or surgery. Millions of people in the United States are living with a visual impairment.

The good news is that vision rehabilitation services can help you with your daily activities so you can keep doing the things you love to do.

Learn more about vision rehab.

What is vision rehabilitation?

If you have a visual impairment, vision rehabilitation can help you make the most of the vision you have and improve your quality of life. There are lots of different types of vision rehabilitation services. Talking with your doctor or your eye care team is a great way to help you figure out which types of services are right for you.

Examples of vision rehabilitation services are:

- Employment and job training
- Assistive products, like lighting and reading stands
- Technology, like magnifiers and screen readers
- Daily living and independent living skills training
- Emotional support, like counseling or support groups
- Transportation and household services



Explore other options for advice

You can also ask other medical professionals — like your primary care doctor — about vision rehabilitation services or get suggestions from other people with a visual impairment. For information, find a specialist, see our list of doctor locators.

How to get NIH News in Health

Subscribe for free!
Visit newsinhealth.nih.gov

Subscribe

Get it in print.

Contact us (see page two) to get print copies free of charge by mail for display in offices, libraries, or clinics within the U.S.

