

# NIH News in Health

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**Inside News:** 3 Eating Disorders 4 Children's Asthma 4 COPD 4 Healthy Bones, Joints, Muscles, and Skin

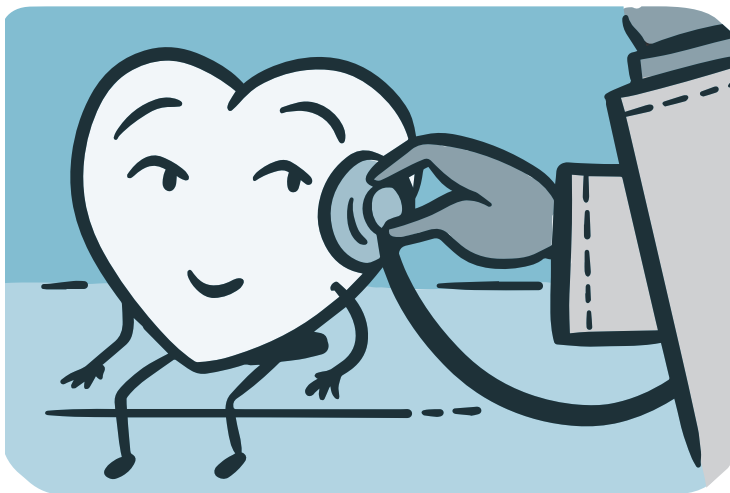
## Healthy Body, Happy Heart Improve Your Heart Health

Every moment of the day, your heart is pumping blood throughout your body. In silent moments, you can hear the thump-thump-thump of its demanding work. Do you take your heart for granted? Most of us will have heart trouble at some point in our lives. Heart disease is the number one killer of women and men in the United States. But you can take steps now to lower your risk.

“About 1 out of 3 people in America will die of heart disease,” says NIH heart disease expert Dr. David C. Goff, Jr. “And about 6 out of every 10 of us will have a major heart disease event before we die.”

Heart disease develops when the blood vessels supplying the heart become clogged with fatty deposits, or plaque. After the blood vessels narrow, blood flow to the heart is reduced. That means oxygen and nutrients can't get to the heart as easily.

Eventually, an area of plaque can break open. This may cause a blood clot to form on the plaque's surface.



A blood clot can block blood flowing to the heart. That can cause a heart attack.

A heart attack happens when a vessel supplying the heart is blocked and the heart can't get enough oxygen, which leads to death of heart muscle.

The three major risk factors for heart disease have been known since the 1960s: smoking, high blood pressure, and high cholesterol levels. These were identified in NIH's Framingham Heart Study, a long-term study of people in Framingham, Massachusetts.

“If we could eliminate cigarette smoking, elevated blood pressure, and elevated cholesterol levels, we could eradicate about 9 out of 10 heart attacks in our country,” says Dr. Daniel Levy, a heart specialist at NIH who oversees the Framingham Heart Study currently.

The study has also uncovered other risk factors, including diabetes, obesity, and physical

inactivity. Levy's research team is now hunting for **genes** that may be risk factors for heart disease. By understanding the factors that play a role in heart disease, scientists hope to find new ways to prevent and treat it.

**Get Tested** • Early heart disease may not cause any symptoms. That's why regular checkups with your doctor are so important.

“The sad truth is that the vast majority of us has heart disease and we don't know it,” Goff says.

Blood pressure and cholesterol levels can provide early signs.

“People should see their doctor, find out their cholesterol and blood pressure numbers, and if needed, take medication,” advises Goff.

There are many other tests to detect heart disease. An electrocardiogram, also called an EKG or ECG, measures electrical activity in your heart. It can show how well your heart is working and pick up signs of a previous heart attack.

Another test called an echocardiogram uses sound waves to detect problems. It shows the size, shape, and structures of your

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### Definitions

#### Genes

Stretches of DNA, a substance you inherit from your parents, that define characteristics such as your risk for certain diseases.

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heart. It can also measure blood flow through your heart.

Although early heart disease might not cause symptoms, advanced heart disease may cause chest pressure, shortness of breath, or fatigue. Some people may feel lightheaded, dizzy, or confused. Tell your doctor if you're experiencing any symptoms.

**Make Healthy Choices** • Talk with your doctor about your risk of heart disease and what you can do to keep your heart healthy.

“The most important things for everyone to do to keep their heart healthy—to keep their entire body healthy—is to eat a healthy diet, get plenty of physical activity, maintain a lean body weight, and avoid smoking and exposure to secondhand smoke,” Goff says.

Following a heart-healthy eating plan is important for everyone.

“When someone puts food on their plate, about half the plate should be fruits and vegetables. About a quarter of the plate should be whole grain. And about a quarter should be lean protein, like lean meat or seafood,” says Goff.

If you have high blood pressure, you may want to follow the DASH (Dietary Approaches to Stop Hypertension) diet. This diet emphasizes fruits, vegetables, whole-grain foods, and low-fat dairy products. To learn more about the diet, see [www.nhlbi.nih.gov/health/health-topics/topics/dash](http://www.nhlbi.nih.gov/health/health-topics/topics/dash).

Goff also advises, “Avoid foods that have a lot of salt in them. Salt is a major contributor to high blood pressure and risk of heart disease.”

**Prevent Diabetes** • Diabetes increases your chances of high blood pressure and high cholesterol. You're also more likely to develop heart disease and have a heart attack.

“Having diabetes is almost like already having heart disease,” says Dr. Larissa Avilés-Santa, a diabetes and heart health expert at NIH. She oversees a large NIH study of heart disease risk factors among more than 16,000 Hispanic/Latino adults.

Avilés-Santa says that sometimes people think that they will develop diabetes and heart disease no matter what they do. But that's not true. Even if you have a family history of these diseases, you can be the messenger of good health for your family, she says. You can help your family by inspiring healthy habits.

The best way to prevent diabetes is through diet and physical activity. “The evidence is outstanding that very modest changes in lifestyle could reduce the risk of developing diabetes much greater than medication,” Avilés-Santa says.

**Get Help** • For some people, having a heart attack is the first sign of heart disease. Pain or discomfort in your chest or upper body, a cold sweat, or shortness of breath are all signs of a heart attack.



## Ask Your Doctor

- Am I at risk for heart disease?
- What tests do I need?
- Is my blood pressure okay? If not, what should I do?
- Is my cholesterol level okay? If not, what should I do?
- Is my weight okay?
- How much exercise do I need?
- Am I at risk for diabetes?
- How can you help me quit smoking?

If you feel any of these signs, get medical help right away. Acting fast can save your life and prevent permanent damage.

Heart disease and heart attacks are major risk factors for cardiac arrest, which is when the heart suddenly stops beating. Blood stops flowing to the brain and other parts of the body. If not treated within minutes, cardiac arrest can lead to death.

Heart disease and heart attacks can also make it harder for your heart's electrical system to work. As a result, an irregular heartbeat, or arrhythmia, can occur. Your heart may beat too fast, too slow, or with an uneven rhythm. A dangerous arrhythmia can lead to cardiac arrest.

Regular checkups help ensure that a doctor will check your heart for problems. Heart disease and arrhythmias can be treated to lower the risk of cardiac arrest.

Be good to your heart. Don't take it for granted. Get tested for heart disease, and follow your doctor's suggestions. See the sidebar for questions you may want to ask your doctor. ■

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**Web Links**

For more about heart health, see “Links” in the online article: [newsinhealth.nih.gov/2017/11/healthy-body-happy-heart](http://newsinhealth.nih.gov/2017/11/healthy-body-happy-heart)

# When Food Consumes You

## Taking Eating to Extremes

How do you feel after you eat? Satisfied? Too full? Or maybe even guilty? Being too focused on food can sometimes turn into an eating disorder.

People with eating disorders have severe, persistent, and unhealthy thoughts and behaviors about food. As a result, they might eat way too little or way too much.

Eating disorders are not a lifestyle choice. They are serious illnesses. They affect your body's ability to get proper nutrition. This can lead to health issues, such as heart and kidney problems, or even death.

The three most widely recognized eating disorders are binge-eating disorder, bulimia nervosa, and anorexia nervosa. Binge-eating disorder is the most common eating disorder in the United States.



### Wise Choices

#### Unhealthy Eating Habits

You can't tell by someone's size if they have an eating disorder. But you can look for certain signs:

- Skipping meals, making excuses for not eating, or eating in secret or separately.
- Persistent worrying or talking about healthy eating, exercise, being overweight, or losing weight.
- Eating much more food in a meal or snack than what's considered normal.
- Eating large amounts of sweets or high-fat foods.
- Leaving during meals to use the toilet.
- Expressing depression, disgust, shame, or guilt about eating habits.
- Frequently checking the mirror for perceived flaws.

"Binge-eating is not just a lot of overeating," explains Dr. Cynthia Bulik, an expert on eating disorders at the University of North Carolina at Chapel Hill. "There's this sense of loss of control. You start eating and you feel like you just can't stop."

People with binge-eating disorder eat well beyond being full. They often eat until they feel very uncomfortable. Afterward, they're usually overcome by feelings of guilt, shame, and distress. Eating too much too often can lead to weight gain and can be associated with obesity.

When binge-eating is followed by "purging," it's called bulimia nervosa. People with bulimia nervosa may follow binge-eating by vomiting or taking laxatives to purge, over-exercising, or fasting. They're often able to maintain a normal weight because they compensate for the extra calories. But bulimia nervosa can cause other health issues, like heart irregularities or problems with the digestive system.

People with anorexia nervosa are on the other extreme. They eat very little. They may see themselves as overweight, even when they are dangerously underweight. It's the least common of the three eating disorders, but is often the most deadly.

An eating disorder can develop for anyone, at any body weight or shape, and at any time. But they often start in the teen or young adult years.

"When young people show signs of an eating disorder, there is this tendency to think that they might outgrow it or that it's just a phase,"



Bulik says. "But the most likely path is in the direction of developing a full-blown eating disorder."

What causes eating disorders isn't known. Genes and family history, mental and emotional health, and environment and culture can all influence whether someone develops one of these complex conditions.

Some NIH-funded researchers are studying possible genetic causes for eating disorders. Others are looking for changes in the brain. They hope their studies will help guide how eating disorders are diagnosed and treated.

Many people with eating disorders may not think they need treatment. So family members and friends can be very helpful. Express concern. Say you're there to listen.

"If you're concerned that you or a family member might have an eating disorder, the key is really to see a health professional with expertise in eating disorders for an evaluation," Bulik says.

Treatment plans are tailored to individual needs. They may include talk therapy, nutritional counseling, and medications. With treatment, you can return to healthier eating habits and prevent serious complications. ■



### Web Links

For more about eating disorders, see "Links" in the online article: [newsinhealth.nih.gov/2017/11/when-food-consumes-you](https://newsinhealth.nih.gov/2017/11/when-food-consumes-you)



## Health Capsules

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

### Reducing Children's Chances of Asthma

A new study looked at whether allergy-causing substances in the home influence kids' risk of developing asthma. The results provide clues for preventing asthma before it develops.

More than 6 million American children have asthma. Asthma makes airways in the lungs prone to swelling and narrowing. It can cause wheezing, coughing, shortness of breath, and chest tightness.

Dust contains things that can trigger an asthma attack, such as mold, animal dander, or dust mites. Eliminating or reducing these

triggers can lessen asthma attacks.

But studies suggest that exposure to these substances early in life may protect children from asthma. To pinpoint how substances in the home influence the development of asthma, NIH-funded researchers began studying newborns in 2005 who had at least one parent with asthma or allergies. Having a parent with asthma or allergies increases the chance of developing asthma.

The researchers collected dust samples from the children's homes during their first three years of life.

They analyzed levels of common allergy triggers in the dust.

About 1 of every 3 children in the study had asthma by age seven. Higher levels of cockroach, mouse, and cat substances in the dust samples were linked to a lower risk of having asthma.

The researchers continue to study the children to pinpoint the factors that might reduce asthma risk.

"Additional research may help us identify specific targets for asthma prevention strategies," says study lead Dr. James E. Gern at the University of Wisconsin-Madison. ■

### Out of Breath? Get Tested for COPD

Many people with chronic obstructive pulmonary disease (COPD) don't realize they have it. COPD is a serious lung disease that makes it hard to breathe. Shortness of breath, a constant cough, and wheezing can all be symptoms.

COPD is very common. It's a leading cause of death in the United States. There's a simple breathing

test, called spirometry, for COPD. It's fast and painless. You take a deep breath and blow as hard as you can into a tube connected to a small machine, called a spirometer. The machine measures how much air you breathe out. It also measures how fast you can blow air out.

Based on this test, your health care provider can tell whether you

have COPD. The test also shows how severe it is. Health care providers who specialize in lung rehab can work with you to help you breathe better and stay more active.

Learn more about COPD, and watch a video that shows how the airways may become damaged at [www.nhlbi.nih.gov/health/health-topics/topics/copd](http://www.nhlbi.nih.gov/health/health-topics/topics/copd). ■



### Featured Website

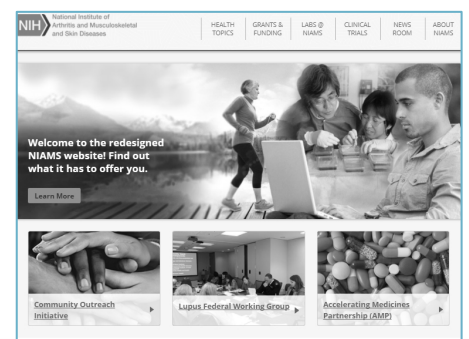
Healthy Bones, Joints, Muscles, and Skin

[www.niams.nih.gov](http://www.niams.nih.gov)

Now it's easier than ever to find materials about bone, joint, muscle, and skin diseases. NIH's National Institute of Arthritis and Musculoskeletal and Skin Diseases

has a new, improved website.

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