

# NIH News in Health

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## Understanding Food Allergies How to Prevent Peanut Allergy and More

Have you noticed food allergy warnings at restaurants? Maybe you've heard about peanut-free classrooms and flights. People who have serious reactions to certain foods must be careful about what they eat, and what others eat around them. There's no cure for food allergies. But researchers are learning more about how to prevent and treat this condition.

Allergic reactions happen when your immune system—your body's defense against germs and foreign substances—overreacts to something that's normally harmless. In the United States, most food allergies are caused by peanuts, tree nuts, fish, shellfish, eggs, milk, wheat, and soy. Allergies show up most often in children. But they can develop at any age.

Food allergy symptoms can range from mild to severe (see [Wise Choices](#) box). Some people experience a life-threatening reaction called



anaphylaxis. Symptoms may include trouble breathing, dizziness, and fainting. When you have a food allergy, there's no way to predict how your body will react when you're exposed. You might have a mild reaction one time and a severe reaction the next.

If you think that you or your child may have a food allergy, see your health care provider. Your doctor will take a detailed medical history and perform a physical examination. If a diagnosis of food allergy seems likely, they may recommend a blood test or **skin prick test**. These results will help determine if you or your child has a food allergy.

NIH researchers have been working to better understand food allergies. "There has been a lot of research on peanut allergy because it is often severe, lifelong, and has a huge impact on quality of life," explains Dr. Scott Sicherer, a pediatric food allergy expert at Mount Sinai's Icahn School of Medicine. Scientists hope the progress they make on peanut allergy will help guide how to handle other food allergies.

Researchers recently carried out a large clinical trial called Learning Early About Peanut Allergy (LEAP). The study looked at infants' chances of developing an allergy if they ate peanut-containing foods at an early age. Six hundred and forty infants who were at high risk of developing a peanut allergy were enrolled in the trial. The infants were randomly placed in either a peanut-eating or peanut-avoiding group. They continued these diets until they were 5 years old. Infants who ate peanut-containing foods beginning early in life had an 81% lower chance of developing a peanut allergy.

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### Definitions

#### Skin prick test

Your skin is pricked with a needle to allow a tiny amount of a substance into your skin. If you are sensitive to the substance, the area will immediately swell.

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“Based on the strength of these findings, an expert panel sponsored by NIH recently issued updated guidelines to help health care providers work with families to introduce peanut-containing foods to infants to help prevent the development of peanut allergy,” Sicherer says.

The panel provided 3 guidelines that describe when and how to give these foods. The recommendations are based on how likely a baby is to develop peanut allergy. Talk with your doctor before you introduce any peanut-containing foods to your

infant. The doctor may tell you when and how to start feeding peanut to your baby or recommend doing allergy testing first.

“It’s important to understand that these guidelines are about preventing peanut allergy, not treating an existing peanut allergy,” Sicherer explains.

The new guidelines may come as a surprise to some people. Almost 20 years ago, experts recommended that babies at high risk for developing peanut allergy avoid peanut-containing foods until age 3. But nearly 10 years ago, experts withdrew this recommendation. There was no proof that it worked.

“The most recent change in guidance was prompted by the very compelling results of the LEAP study,” says Dr. Marshall Plaut, a food allergy expert at NIH. “The new guidelines are based on these results and the clinical knowledge of the expert panel who developed them.”

Whether this strategy works for other food allergies isn’t known. “More research is needed to find out if early dietary introduction of other foods may help prevent allergy to those foods,” Sicherer explains.

NIH scientists are also looking at ways to treat people who already have food allergies. One promising strategy is called oral immunotherapy. It involves eating small, slowly increasing amounts of the allergy-causing food. One recent study tried this approach for peanut-allergic preschool children. Almost

**Web Links**

For more about food allergies, click the “Links” tab at: [newsinhealth.nih.gov/issue/Mar2017/Feature1](http://newsinhealth.nih.gov/issue/Mar2017/Feature1)

80% of children given the treatment could safely eat peanut-containing foods afterward. More studies are being done to improve the safety and effectiveness of the approach. The therapy is also being studied for people with milk and egg allergies in small clinical trials.

There may be other ways to provide this type of therapy. One ongoing study is investigating using a skin patch to deliver small amounts of peanut protein to peanut-allergic patients. Early results have shown some promise among young children with peanut allergy. Researchers will continue to assess this approach.

Food allergy studies have to be done very carefully because reactions can be life threatening. “It’s important to understand how much careful thought goes into ethically designing research studies, particularly those involving vulnerable populations like children,” Plaut says. “Sometimes answers take longer than we would all like. But it’s critical to find them in a way and at a pace that is thoughtful and safe.”

For now, there are no treatments for food allergies. But avoiding allergy-causing foods can help prevent symptoms. Read food labels carefully. Wash your hands and surfaces you touch to prevent accidental contact.

Sometimes it can be difficult to avoid exposure completely. Carrying an epinephrine auto injector can be lifesaving. This device delivers a hormone that maintains blood pressure and can open your airways.

Talk with your health care provider to learn more about preventing and treating food allergies. ■

**Wise Choices  
Food Allergy  
Symptoms**

Pay attention to how you feel after you eat and learn how to recognize the symptoms of a food allergy. Symptoms may include:

- coughing
- tingling in the mouth
- skin reactions like hives or itching
- nausea and vomiting
- stomach pain
- diarrhea

If you have a potentially life-threatening reaction—trouble breathing, dizziness, and fainting—seek immediate medical care by calling 911.

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# To Screen or Not to Screen?

## The Benefits and Harms of Screening Tests

Catching chronic health conditions early—even before you have symptoms—seems like a great idea. That’s what screening tests are designed to do. Some screenings can reduce your risk of dying from the disease. But sometimes, experts say, a test may cause more harm than good. Before you get a test, talk with your doctor about the possible benefits and harms to help you decide what’s best for your health.

Screening tests are given to people who seem healthy to try to find unnoticed problems. They’re done before you have any signs or symptoms of the disease. They come in many forms. Your doctor might take your health history and perform a physical exam to look for signs of health or disease. They can also include lab tests of blood, tissue, or urine samples or imaging procedures that look inside your body.

“I wouldn’t say that all people should just simply get screening tests,” says Dr. Barnett S. Kramer, a cancer prevention expert at NIH. “Patients should be aware of both the potential benefits and the harms when they’re choosing what screening tests to have and how often.”

Teams of experts regularly look at all the evidence about the balance of benefits and harms of different screening tests. They develop guidelines for who should be screened and how often.

Choosing whether you should be screened for a health condition isn’t always easy. Screening suggestions are often based on your age, family health history, and other factors. You might be screened for many conditions, including diabetes, sexually transmitted infections, heart disease, osteoporosis, obesity, depression, pregnancy issues, and cancers.

Every screening test comes with its own risks. Some procedures can cause problems like bleeding or infection. A positive screening test can lead to further tests that come with their own risks.

“Most people who feel healthy are healthy,” says Kramer. “So a negative test to confirm that you’re healthy doesn’t add much new information.” But mistakenly being told that you do or don’t have a disease can be harmful. It’s called a misdiagnosis.

A false negative means that you’re told you don’t have the disease, but you do. This can cause problems if you don’t pay attention to symptoms that appear later on because you think you don’t have the disease. A false positive means that you’re told you may have the disease, but you don’t. This can lead to unnecessary worry and potentially harmful tests and treatments that you don’t need.

Even correctly finding a disease may not improve your health or



help you live longer. You may learn you have an untreatable disease long before you would have. Or find a disease that never would have caused a problem. This is called overdiagnosis. Some cancers, for example, never cause symptoms or become life-threatening. But if found by a screening test, it’s likely to be treated. Cancer treatments can have harsh and long-lasting side effects. There’s no way to know if the treatment will help you live longer.

An effective screening test may decrease your chances of dying of the condition. Most have not been shown to lengthen your overall life expectancy, Kramer explains. Their usefulness varies and may depend on your risk factors, age, or treatment options.

If you’re at risk for certain health conditions—because of a family history or lifestyle exposures, like smoking—you may choose to have screenings more regularly. If you’re considering a screening, talk with your health care provider. ■



### Ask Your Doctor About Screening Tests

- What’s my chance of dying of the condition if I do or don’t have the screening?
- What are the harms of the test? How often do they occur?
- How likely are false positive or false negative results?
- What are possible harms of the diagnostic tests if I get a positive screening result?
- What’s the chance of finding a disease that wouldn’t have caused a problem?
- How effective are the treatment options?
- Am I healthy enough to take the therapy if you discover a disease?
- What are other ways to decrease my risk of dying of this condition? How effective are they?



### Web Links

To learn more about screening tests, click the “Links” tab at: [newsinhealth.nih.gov/issue/Mar2017/Feature2](https://newsinhealth.nih.gov/issue/Mar2017/Feature2)

# Health Capsules

For links to more information, see these stories online:  
[newsinhealth.nih.gov/issue/Mar2017/Capsule1](http://newsinhealth.nih.gov/issue/Mar2017/Capsule1)

## Recovery Time for Sports Concussions

A brain injury-related protein may one day help doctors know when they can safely send young athletes with concussions back into the game.

Millions of sports-related mild brain injuries, or concussions, happen in the U.S. each year. Returning to play before you're fully recovered can be dangerous. It raises the risk for long-term symptoms like headaches, dizziness, and problems with mental function after future concussions.

After a severe brain injury, the brain makes more of a protein called tau. An NIH-led research team looked at changes in blood levels of tau after

sports-related concussions to see if tau levels relate to recovery times.

The scientists measured both tau levels and mental performance in 632 college athletes before their seasons began. Athletes played a range of sports, including soccer, football, basketball, hockey, or lacrosse.

Concussed athletes who needed more than 10 days before returning to play had higher tau levels on average than athletes who were able to return in 10 days or less. This was true for both male and female athletes, and across the different sports studied.

The findings suggest that changes in tau levels after a concussion may signal when young athletes can safely return to play. Scientists continue to study this and other ways to track concussion recovery.

"Keeping athletes safer from long-term consequences of concussions is important to players, coaches, parents, and fans," says Dr. Patricia A. Grady, director of NIH's National Institute of Nursing Research. "In the future, this research may help to develop a reliable and fast clinical lab test that can identify athletes at higher risk for chronic post-concussion symptoms." ■

## Find Help for Low Vision

For people with low vision, everyday activities can be a challenge. People with low vision don't see well even with standard glasses, contact lenses, surgery, or medicine. They may have trouble reading traffic signs or recognizing faces. It can be challenging to match clothes of different colors. The lighting in a room may often seem too dim.

Low vision can be caused by an eye injury or a disease such as glaucoma. Glaucoma damages the nerves that carry visual signals from the eye to the brain. Millions of Americans have low vision. Most are over age 65.

If you have a problem with your vision, you should see a doctor right away. The sooner an eye problem is detected and treated, the greater your chance of keeping your remaining vision.

Some eye doctors specialize in helping people with low vision. These specialists can help you cope with vision loss. They can teach you new ways to do everyday tasks. They can also offer training and devices to help with reading, cooking, shopping, and other activities.

"A vision rehabilitation plan helps people reach their true visual potential when nothing more can be done from a medical or surgical standpoint," says Dr. Mark Wilkinson, a low vision specialist at the University of Iowa Hospitals and Clinics.

NIH offers many resources to help people with low vision. A 20-page booklet *Living With Low Vision: What you should know* and companion video feature inspiring stories of people living with low vision. You can find these and other resources at [www.nei.nih.gov/lowvision](http://www.nei.nih.gov/lowvision). ■



## Featured Website Bone Health Resources

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

How do you keep your bones healthy and strong? It's never too late to improve your bone health. Find out how to eat the right foods, exercise safely, and make other healthy lifestyle choices to protect your bones.

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