Pediatric Allergy
Allergy Related Testing

Allergy and Immunology Awareness Program (AIAP)

AIAP@hamad.qa

http://aiap.hamad.qa

16-0495

مؤسسة حمد الطبية
Hamad Medical Corporation
HEALTH • EDUCATION • RESEARCH صحة • تعليم • بحوث

Allergies are reactions that are usually caused by an overactive immune system. These reactions can occur in a variety of organs in the body, resulting in conditions such as asthma, allergic rhinitis and eczema.

The immune system protects the body by singling out and destroying foreign invaders, such as viruses and bacteria. In an allergic reaction, the immune system overreacts by producing antibodies called Immunoglobulin E (IgE). These antibodies travel to cells that release chemicals, causing an allergic reaction against a normally harmless substance, such as pollen or animal dander (material shed from and animal's body). These allergy-provoking substances are called allergens. This reaction usually causes symptoms in the nose, lungs, throat, sinuses, ears, lining of the stomach or on the skin.

Each type of IgE has specific 'radars' for each type of allergen. That's why some people are only allergic to house dust mites for example (they would only have the IgE antibodies specific to house dust mites), while others experience allergic reactions to multiple allergens because they have many more types of IgE antibodies.

Symptoms

- **Eyes:** red, teary, or itchy eyes, puffiness around the eyes
- **Nose:** runny nose, sneezing, itchy nose, nose rubbing, postnasal drip, nasal swelling and congestion
- **Ears:** itchy ear canals
- **Mouth:** itching of the mouth and throat
- **Lungs:** hacking dry cough or cough that produces clear mucus, wheezing (noisy breathing), feeling of tightness in the chest, low exercise tolerance, rapid breathing, shortness of breath
- **Skin:** eczema (patches of an itchy, red skin rash), hives (welts)
- **Intestines:** cramps and intestinal discomfort, diarrhea, nausea or vomiting
- **Miscellaneous:** headache, feelings of restlessness, irritability, excessive fatigue

Types of Allergens

People get allergies from coming into contact with allergens. Allergens can be inhaled, eaten, or injected (from stings or medicine) or they can come into contact with the skin.

Common allergens include:

- Pollens from trees, grasses and weeds
- Molds (both indoor and outdoor)
- Dust mites that live in bedding, carpeting and other items that hold moisture
- Animal dander from furry animals such as cats, dogs, horses, and rabbits
- Some foods and medicines
- Venom from insect stings

When to Suspect an Allergy

Allergies can result in a range of signs and symptoms. Some are easy to identify by the pattern of symptoms that invariably follows exposure to a particular substance; others are more subtle and may masquerade as other conditions. Here are some common clues that should lead you to suspect you may have an allergy.

- Patches of bumps or itchy, red skin that won't go away
- Development of hives: intensely itchy skin eruptions that usually last for a few hours and move from one part of the body to another
- Repeated or chronic cold-like symptoms, such as a runny nose, nasal stuffiness, sneezing and throat clearing, that last more than a week or two, or develop at about the same time every year
- Nose rubbing, sniffling, snorting, sneezing, or drippy nose
- Itchy, runny eyes
- Itching or tingling sensations in the mouth and throat
- Coughing, wheezing, difficulty breathing and other respiratory symptoms
- Unexplained bouts of diarrhea, abdominal cramps and other intestinal symptoms

Allergy Testing

IgE Skin Tests

This type of testing is the most common. It checks for immediate allergic reactions to as many as 40 different substances at once. This test is usually done to identify allergies to pollen, mold, pet dander, dust mites and foods. The test is usually done on the forearm. Children may be tested on the upper back. Allergy skin tests aren't painful. This type of testing uses needles that barely penetrate the skin's surface. You won't bleed or feel more than mild, momentary discomfort.

Skin injection test (Intradermal tests)

If your prick skin tests are negative but your physician still suspects you might have allergies, more sensitive “intradermal” tests may be used in which a small amount of allergen is injected within the skin (intradermal test). The injection site is examined after about 15 minutes for signs of an allergic reaction. Your doctor may recommend this test to check for an allergy to insect venom or penicillin.

Blood Tests (Specific IgE in the blood)

This test involves drawing blood. The test measures the amount of IgE antibody in the blood. The body makes this type of antibody when trying to fight off allergy causing substances. Because the test is a blood test, the results may not be available as rapidly as skin tests. IgE blood tests are generally used when skin tests might be unsafe or won’t work, such as if you are taking

Oral Allergy Challenge / Oral Food challenges:

An oral allergen challenge may sometimes be required to confirm the diagnosis when the cause of a severe allergic reaction has not been confirmed. This will normally only be performed using foods or medications under the supervision of a clinical immunology or allergy specialist with appropriate resuscitation facilities readily available

Patch Testing and Allergic Contact Dermatitis

Patch testing may help to find the cause of allergic contact dermatitis. Patch testing places substances on the surface of the skin. It aims to identify skin allergies. Skin prick testing checks for allergies that don't necessarily occur on the skin, such as allergies to pollen, foods, etc

Lung Function Tests: Lung function tests (also called pulmonary function tests or PFTs).

The test checks how well the lungs work. The tests determine how much air the lungs can hold, how quickly air can move in and out of the lungs, and how well the lungs get oxygen into and remove carbon dioxide out of the blood. The tests can diagnose lung diseases like Asthma; measure the severity of lung problems, and check to see how well treatment for a lung disease is working.

Are allergy tests safe?

Testing done by a qualified allergist is generally safe and effective for adults and children of all ages. The professionals who perform allergy tests including skin prick testing have emergency medicines and equipment standing by for the very rare occurrence of a serious reaction. They are trained in the reversal of these symptoms. It is important that allergy testing is directed by a healthcare professional with sufficient allergy/immunology training and prompted by your medical history.

When is it needed and when is it not?

Allergy tests may help identify allergies to things you eat, touch or breathe in. They are usually skin or blood tests. However, allergy tests alone are generally not enough. It is important to have a doctor's exam and medical history first to help diagnose allergies. If the exam and medical history point to allergies, allergy tests may help find what you are allergic to. You can then take appropriate steps to avoid the allergy triggers.

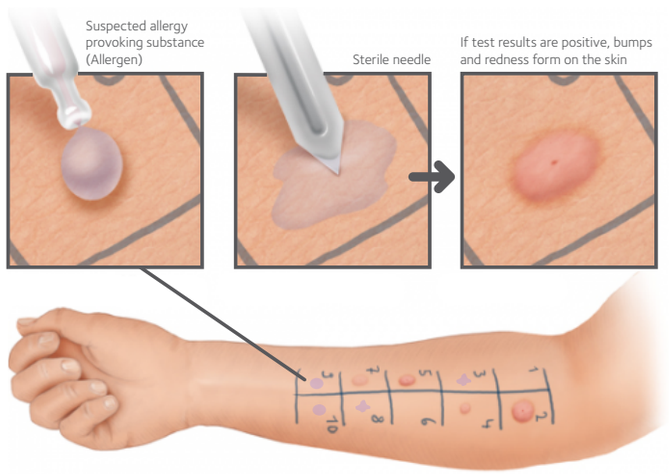
However, if you don't have symptoms and you haven't had a medical exam that points to an allergy, you should think twice about allergy testing. Here's why:

1. Allergy tests, without a doctor's exam, are usually not reliable.

Many laboratories offer allergy screenings. But the results of these tests may be misleading. The tests may say you have an allergy when you do not. This is called a "false positive."

2. Unreliable test results can lead to unnecessary changes in your lifestyle.

If the test says you are allergic to some foods, such as wheat, soy, eggs, or milk, you may stop eating those foods. You may end up with a poor diet, and unnecessary worries, frustration, or food costs. If the test claims you are allergic to horses for example, you may give up a beloved habit of riding them. And tests for chronic hives—red, itchy, raised areas of the skin that last for more than six weeks—can show something that may not look normal but is not a problem. However, this can lead to anxiety and a cycle of more tests.



For more information; please contact us at:

AIAP@hamad.qa