

Conventional Tests for Allergies

Modern allergy tests make life a lot easier.

Allergy symptoms are responsible for more visits to the doctor's office than any other single disease in this country. Over 50 million Americans (about 1 in 5) suffer from one or more of the allergic diseases. Allergies are considered a leading cause of school absenteeism, too. Fortunately, your doctor has a wide range of innovative testing and treatment techniques to make dealing with allergies a lot easier than before.

Early allergy discoveries.

Allergy as a recognizable illness is nearly as old as the history of modern man. However, it was not until 1966 that the exact mechanism for the disease was discovered. Researchers found that some people produce a "skin sensitizing antibody" called IgE (for Immunoglobulin E).

Allergic patients inherit the tendency to produce an overabundance of IgE when exposed to allergens such as dust, ragweed and grass pollens.

What causes an allergic reaction?

A typical allergic reaction happens in the following way:

1. Allergens enter the body by being: inhaled (as with pollens, dust and animal dander), swallowed (as with food or medicine), or injected (as with penicillin or bee stings).
2. If you are allergic, your body may overreact, causing excess production of IgE.
3. Upon further exposure, the allergen binds with the IgE antibody and causes certain cells in your body to release histamine-like substances. These substances cause the allergic symptoms you're all too familiar with, such as watery eyes, sneezing, congestion, runny nose, and rashes.

How allergies are diagnosed.

Accurate diagnosis of your allergy is key to successful treatment. In order to determine the specific allergens responsible, your physician will take the following steps:

History

Reviewing history can establish how and when the symptoms appear, whether they are seasonal or year-round and whether they can be associated with any particular activity, place, or exposure.

Physical Exam

Your physical examination will focus on the eyes, ears, nose, sinuses, throat, lungs, skin, and gastrointestinal tract. Results of the exam will be more informative if performed "in season," or while the symptoms are at their peak.

Testing

Until the discovery of IgE, the skin test was the major diagnostic tool for allergies. With this method, approximately 50 to 200 tiny scratches, pricks or needle sticks are made - usually on the

upper back or arm, with small amounts of the suspected allergens. After an appropriate time period (10-30 minutes), the skin is observed for any reaction.

A new, improved test that can be run on blood samples.

Soon after the IgE antibody was discovered, researchers began to work on a new kind of test, generally referred to as RAST (**R**adio**A**llergo**S**orbent**T**est). The original RAST utilized an allergen bound to a solid phase support and a radioisotope (^{125}I -anti-IgE) as the primary components of the test method. While the original RAST was nearly 100% specific, the test was prone to false negative results in patients with very low sensitivities. To compensate for this, Drs. Fadal and Nalebuff introduced the more sensitive Modified RAST procedure in 1977, allowing physicians to identify those patients whose sensitivities were missed with the original RAST.

Today's allergy tests utilize the same basic principles employed in the original and Modified RAST methods: an allergen-bound solid phase, either ready-to-use or prepared in situ during the test, and an anti-IgE conjugate that specifies the detection method. In addition to the original and Modified RAST based on radioimmunoassay (RIA) methods, enzyme immunoassay (EIA) methods are now available that utilize color development, fluorescence or chemiluminescence for detection of the allergen-specific IgE.

How the test works.

A small portion of your blood sample is mixed with different allergens and observed for a chemical reaction. The laboratory's equipment and computers analyze the reaction and measure the amount of IgE that is specific for each allergen. Results may be reported in international units per milliliter in quantitative assays or in classes from zero (negative) to five (high positive). Your doctor will discuss the importance of these results with you.

The advantages of blood testing for allergy.

Convenient

Since a single blood sample is used to test for many allergens, and serum may be stored for later testing, fewer patient visits are required. It is easier to subject children to one needle stick for a blood test than multiple needle sticks for skin tests.

Safe

Conventional allergy blood tests measure only IgE, and are not affected by any medications you may be taking.

Dependable

Strict laboratory procedures are followed to provide precise and accurate results. The allergy blood test is one of the most sensitive methods available today - it can detect even mild allergies.

We're here to help.

This office has the newest diagnostic testing and treatment procedures available to put to work for you. We'll perform the appropriate tests, develop an effective treatment plan and provide hints to help make living with allergies a lot easier.