

LABORATORY DIAGNOSIS OF ALLERGIC DISEASES

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In recent decades, there has been a marked increase in the incidence of allergies. According to American scientists, 40% of the world's population suffers from this disease.

Allergy is a reaction of the body to the action of substances of antigenic nature, which leads to various disorders in the body. This is a reaction of the hypersensitivity of the immune system to usually harmless substances that enter or come into contact with the body. Subsequently, the body during contact with such substances begins to produce its own antibodies. It has been proven that any substance can be an allergen, but some substances (such as dust, citrus products, cat hair, etc.) provoke allergies much more often than others.

To diagnose allergic diseases use the allergological method of diagnosis. It is performed using laboratory tests and samples. The traditional method of diagnosing allergies is the method of allergy testing (skin allergy testing, pre-test or scarification test). The essence of the method is that during the procedure on the skin of the forearm is applied dropwise a solution containing a pure allergen. A special scarifier is a notch that allows the allergen to overcome the skin barrier. If after 15-20 minutes there is swelling and redness at this site, the result is considered positive. Simultaneous testing for several allergens. It is possible to inject small doses of the allergen into the skin by injection or using a patch containing the antigen. This method has some contraindications and a high probability of false-positive results in children under three years.

In cases where skin tests do not give an unambiguous result or can not be performed according to the patient's contraindications to them, do a blood test from a vein to determine specific *IgE* (antibodies to antigens of house mites, molds, plant pollen, pet hair, food, milk, etc.). Elevated total *IgE* levels may indicate the presence of allergic diseases, as well as other pathological conditions. This method of research is used as a screening test to confirm the allergic nature of the disease.

Currently, the most widespread method of immunoblotting.

Immunoblotting (immunoblot) is a highly specific and highly sensitive reference method for detecting antibodies to individual antigens (allergens), based on enzyme-linked immunosorbent assay on nitrocellulose membranes, which are coated with specific bands of specific proteins. If there are antibodies against certain allergens - a dark line appears at the appropriate locus. The uniqueness of the immunoblot lies in its high informativeness and reliability of the obtained result.

Effective treatment of allergies, as well as any other disease, primarily depends on timely and accurate diagnosis, so we consider laboratory diagnosis of allergic diseases - a topical issue today.