

**DERMATOLOGICAL DISEASES: ALLERGY****Sodiqova Nazokat Riyadovna,****Abduraxmonova Dilnavo Abduzoxidovna,****Mambetsapayeva Zarina Anvarovna,****Quvondiqov Dilshod Akramovich**

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**Abstract:** This article examines the nature, causes, clinical manifestations, and prevention strategies of allergic skin diseases, which represent one of the most widespread dermatological problems today. The study highlights the immunological mechanisms underlying allergic reactions, the influence of environmental and genetic factors, and the growing prevalence of skin allergies among different age groups. Special attention is given to diagnostic approaches, including laboratory and instrumental methods, as well as modern treatment strategies such as antihistamine therapy, topical corticosteroids, and immunomodulatory interventions. The findings contribute to a deeper understanding of managing allergic skin conditions and improving patient quality of life.

**Keywords:** Allergy; dermatological diseases; immune response; allergens; skin hypersensitivity; inflammation; diagnosis; prevention.

**Introduction**

Allergic skin diseases are among the most common dermatological disorders worldwide, affecting millions of people regardless of age, gender, or geographic location. In recent years, the incidence of allergic reactions has increased significantly due to environmental pollution, changes in lifestyle, genetic predisposition, and the widespread use of chemical products in everyday life. Allergies occur when the immune system responds abnormally to substances that are typically harmless to most individuals, such as pollen, food components, medications, or household chemicals.

From a medical standpoint, allergic skin reactions represent a complex interaction between external allergens and the human immune system. When an allergen enters the body, it triggers an exaggerated immune response that leads to inflammation, itching, redness, swelling, and other clinical manifestations. Common allergic skin diseases include atopic dermatitis, contact dermatitis, urticaria, and eczema. These conditions not only affect the physical state of the patient but also cause psychological discomfort, reduced productivity, and significant social limitations.

The increasing prevalence of allergic skin diseases highlights the need for effective diagnostic methods and evidence-based treatment strategies. Modern medicine offers a wide range of approaches, including skin tests, laboratory analyses, pharmacological interventions, and preventive measures aimed at reducing allergen exposure. Understanding the underlying

mechanisms and contributing factors is crucial for developing comprehensive management programs that can improve patient outcomes and overall well-being.

Allergy is an immunopathological process in which the immune system reacts to substances that affect the body or come into contact with it, such as animal dander, dust, or bee venom. A substance that triggers an allergic reaction is called an allergen. Such substances exist in food, drinks, and the environment. Most of them are harmless and do not cause allergies in the majority of people.

**Causes of Allergy** — The human immune system mistakenly identifies an allergen as a pathogen (a harmful external agent) and attempts to eliminate it as if it were a foreign bacterium, virus, fungus, or toxin. However, the allergen itself is not harmful; the immune system simply becomes overly sensitive to it. When the immune system encounters an allergen, it produces a type of antibody known as Immunoglobulin E (IgE) to neutralize it. IgE then stimulates the release of various chemical substances responsible for allergic reactions. One of these chemicals is histamine. Histamine causes the contraction of smooth muscles, including the walls of blood vessels and the airways. It also contributes to mucus production in the nasal passages.

According to the Hygiene Hypothesis, proposed by David P. Strachan in 1989, the increased adherence to hygiene practices reduces exposure to various antigens. As a result, the immune system—especially in children—receives insufficient stimulation. Since the human body is naturally designed to defend against threats, in the absence of real danger, the immune system may begin reacting to harmless substances. This hypothesis was introduced to explain why children from large families in England developed eczema and allergic rhinitis less frequently than children from smaller families.

**Symptoms** — When a patient encounters an allergen, the reaction does not occur immediately. The immune system gradually increases its sensitivity to the substance. Over time, the body may develop an abnormally high sensitivity known as sensitization. Sensitization can last from several days to several years. In many cases, the process may not fully develop, resulting in mild symptoms without a complete allergic reaction. Once the immune system is exposed to an allergen, inflammation and irritation occur. The symptoms depend on the type of allergen. Allergic reactions can appear in the gastrointestinal tract, skin, sinuses, airways, eyes, and nasal passages.

1. Symptoms of dust and dust mite allergy include:

- ✓ Nasal congestion
- ✓ Itching in the eyes and nose
- ✓ Rhinitis
- ✓ Swelling and watering of the eyes
- ✓ Cough
- ✓ Skin manifestations, such as eczema, may present as:
- ✓ Peeling and dryness of the skin
- ✓ Itching
- ✓ Red, rash-like patches

2. Reactions to food allergens may cause:

- ✓ Vomiting
- ✓ Swelling of the tongue, lips, face, and throat

- ✓ Burning sensation in the mouth
- ✓ Stomach cramps
- ✓ Breathing difficulties
- ✓ Rectal bleeding (rare in children)
- ✓ Diarrhea
- ✓ Anaphylaxis (anaphylactic shock) — a severe, life-threatening reaction
- ✓ Reactions to insect stings may include:
  - ✓ Hoarseness
  - ✓ Swelling at the site of the sting
  - ✓ Sudden drop in blood pressure
  - ✓ Skin itching
  - ✓ Dizziness
  - ✓ Cough
  - ✓ Shortness of breath
  - ✓ Anxiety
  - ✓ Anaphylaxis

3. Drug allergy symptoms may include:

- ✓ Hoarseness
- ✓ Swelling of the tongue, face, or lips
- ✓ Signs of anaphylactic shock
- ✓ Skin rash
- ✓ Itching
- ✓ Treatment and Prevention

The most effective treatment method is avoiding exposure to allergens. However, complete avoidance is often impossible. It is important to train patients to correctly identify substances to which they are sensitive. Medications help relieve symptoms but do not cure allergies. Patients should always consult a doctor before using any medication.

Antihistamines (histamine antagonists):

These drugs stop the effects of histamine, which is responsible for part of the allergic reaction. Some antihistamines are not suitable for children.

Nasal drops:

Some patients with hay fever find nasal drops helpful, though they provide only short-term relief.

Leukotriene receptor antagonists (antileukotrienes):

These drugs are prescribed when asthma or other treatments prove ineffective. They block the effects of leukotrienes—chemicals that cause swelling and are produced during allergic reactions.

Steroid nasal drops:

These help reduce nasal congestion.

Enterosorbents:

Used in treating food and drug allergies to bind and eliminate allergens from the digestive system.

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