

Allergy

Allergies: Causes and Precautions

Allergy is a condition which is caused by the hypersensitivity of the immune system to certain substances present in the environment that usually causes no adverse effects to most people.

Allergens are substances that cause allergy. These include dust, food, pollen grains, etc.

The allergic response to an allergen is induced by an inflammatory chemical called histamine, which is produced by basophils (a type of white blood cell). This chemical causes skin rashes, inflammation and constriction of bronchioles (as in asthma).

Entry Routes of Allergens:

Allergens can enter our body through three main routes:

1. Skin: Certain allergies can be caused by the substances that come in contact with the skin, such as latex, infected/dirty linen, etc. This results in allergic reactions called dermatitis/eczema.

2. Mouth: Allergic reactions which are caused by food items occur due to the entry of food from mouth.

90% of allergic reactions are caused by food products, such as milk, soy, eggs, peanuts, etc.

3. Nose: Allergens such as dust, pollen grains gain entry into the body through nose, which can result in conditions like sneezing, coughing etc.

Symptoms of Allergy:

Symptoms of allergy vary with the type of allergen by which it is caused.

Types of allergy	Symptoms
Dust allergy (caused by air borne particles, such as dust, pollen grains, etc)	Sneezing, sniffing, redness and itching of eyes
Food allergy (caused by food items, such as milk, wheat, peanuts, etc.)	Abdominal pain, bloating, vomiting, diarrhoea, itchy skin and asthma
Drug allergy (caused by certain drugs, such as antibiotics)	Skin reactions, bronchio-constriction, swelling, low blood pressure

Common allergic reactions:

Allergic reactions	Allergen	Symptoms
Hay fever	Pollen	Excess mucus production resulting in running nose and sneezing Itchy, sore and weepy eyes
Asthma	Pollen/dust/food	Difficulty in breathing and wheeziness
Hives	Drugs/food	Swollen red bumps or patches on the skin
Anaphylaxis	Insect bites, antibiotics and certain medicines	Decreased blood pressure and shortness of breath

Diagnosis of allergy:

Allergy can be diagnosed by two methods:

Skin prick test: In this test, the skin is pricked with a small plastic or metal device and the allergen may also be injected intradermally. These areas are marked with a pen/dye and then observed for any allergic reaction.

If a person is allergic to the injected substance, then a visible inflammatory reaction will occur.

Allergy blood test: In blood testing, the blood sample of an individual is taken and then the test for allergy is conducted. This is considered safer as compared to the previous method.