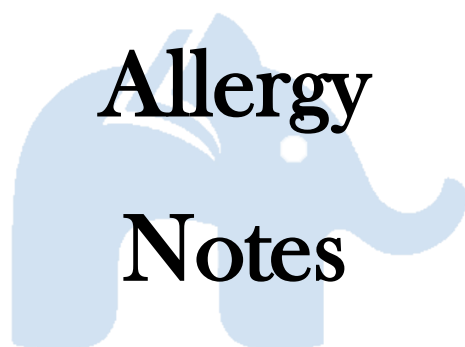


**LearnoHub**  
learning simplified

# **Class 7 - ICSE**

# **BIOLOGY**

[www.learnohub.com](http://www.learnohub.com)



### Allergy

- Concept was introduced in 1906 by “Viennese Pediatrician Clemens Von Pirquet”.
- Allergy in Greek means “other work”.

### Allergic Diseases (Allergies)

Number of conditions caused by hypersensitivity of one’s immune system to something in environment that usually causes no adverse effect to most people.

E.g. Hay fever, asthma, food allergies, etc.



### Allergens

Substances causing allergy are called as allergens.

Common allergens are:

- Dust
- Spores
- Pollen
- Insect stings
- Certain types of clothes
- Food

### Immunoglobulins

- Immune system produces immunoglobulin proteins that are proteins that are specific to allergens.
- Proteins bind to allergens, then WBCs in our body
- Triggers release of an inflammatory chemical called HISTAMINE.

Histamine shows allergic symptoms:

- Inflammation
- Skin rash
- Constriction of bronchioles

### Entry route for allergies

#### Skin

Substances that come in contact with skin like latex, certain types of clothes, insect bites.



#### Mouth

- 90% of allergic responses to foods are caused by cow's milk, soya, eggs, wheat, peanuts, fishes, shell fish

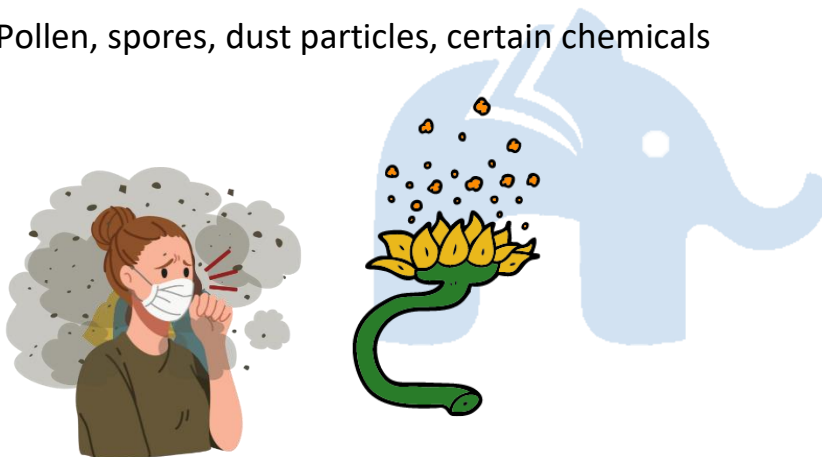
Milk allergy to children



- Most common in children
- Some people are unable to tolerate milk from goats/sheep and even cows

Nose

Pollen, spores, dust particles, certain chemicals



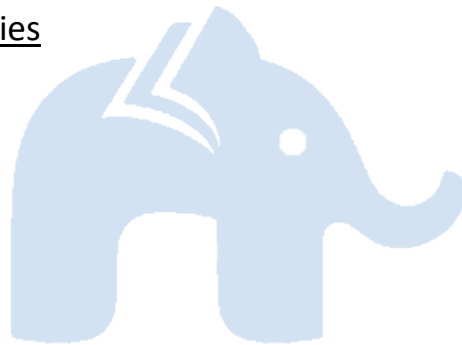
Sign and Symptoms of Allergies

- Air borne particles
- Irritation of nose
- Sneezing & coughing
- Wheezing
- Red & watery eyes
- Increased production of mucus in the lungs
- Shortness of breath



- Food-borne allergies

1. Abdominal pain
2. Bloating
3. Vomiting
4. Diarrhoea
5. Itchy skin
6. Swelling



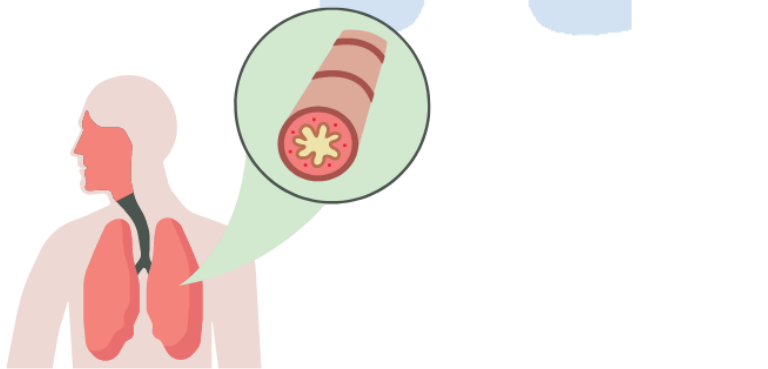
### **Insect Bite and reactions to antibiotics**

Systemic allergic response called ANAPHYLAXIS.

- Skin redness
- Rashes
- Swelling
- Inflammation
- Broncho-constriction
- Low blood pressure

### **Hay Fever**

- Reaction to pollen
- Lining of nasal cavity becomes sensitive and inflamed
- Produce large mucus
- Running nose and sneezing
- Eye may become itchy, sore and weepy



### **Asthma**

- Muscles of the walls of bronchioles contract, tubes get narrow
- Difficulty in breathing
- Caused by pollen, dust, occasionally food

Hives

- Outbreak of swollen, pale red bumps or patches on the skin
- Appear due to allergic reactions to medicines or food

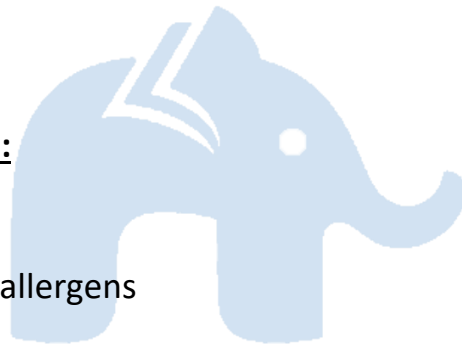


Anaphylaxis

Sudden allergic reaction resulting in decreased blood pressure and shortness of breath.

Precautions to be taken:

- Medication
- Awareness about allergens
- Anti-allergy shots
- Consult your doctor



- Diagnosis of Allergy
- Allergic testing



## Class 7 Biology ICSE | Allergy | Notes

- Correct diagnosis, counselling and avoidance advice reduces incidence of symptoms, need for medication and improves quality of life

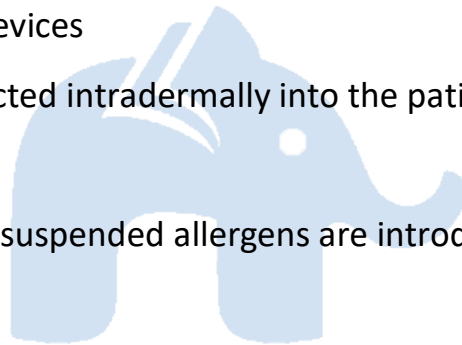
### Diagnosis of Allergy

#### Two Methods

1. Skin Prick Test
2. Allergy blood Test

#### Skin Prick Test

- Puncture Testing or Prick Testing
- Series of tiny punctures or pricks made into the patient skin using small plastic or metal devices
- Allergens are injected intradermally into the patient skin using needle or syringe
- Small amounts of suspended allergens are introduced to sites on skin marked with pen



#### Blood Testing

- Quick and simple
- Patient's blood is taken and analysed in lab
- Safe
- Test measures the concentration of specific antibodies in the blood

\*\*\*\*\*