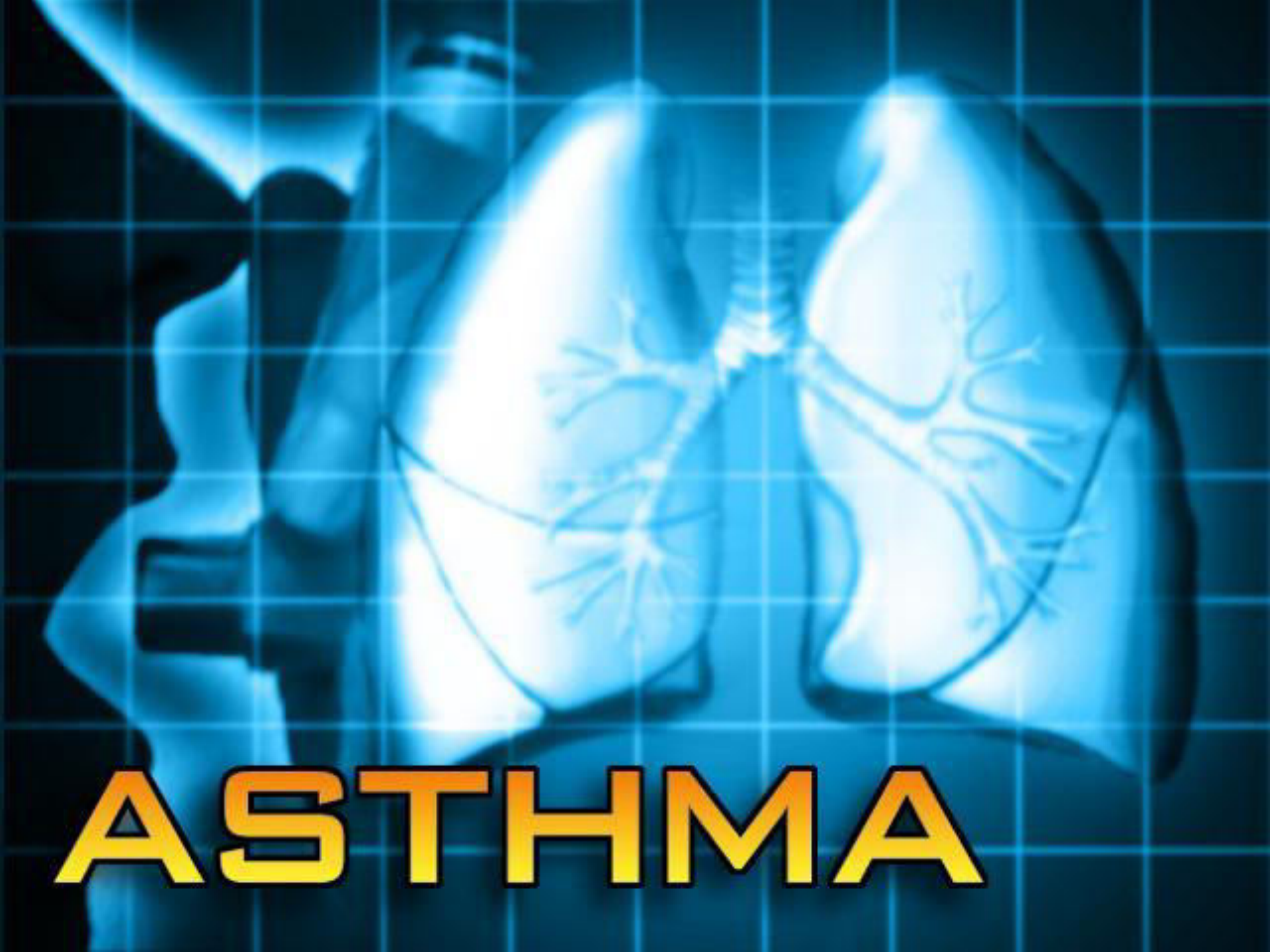

ASTHMA

OBJECTIVES

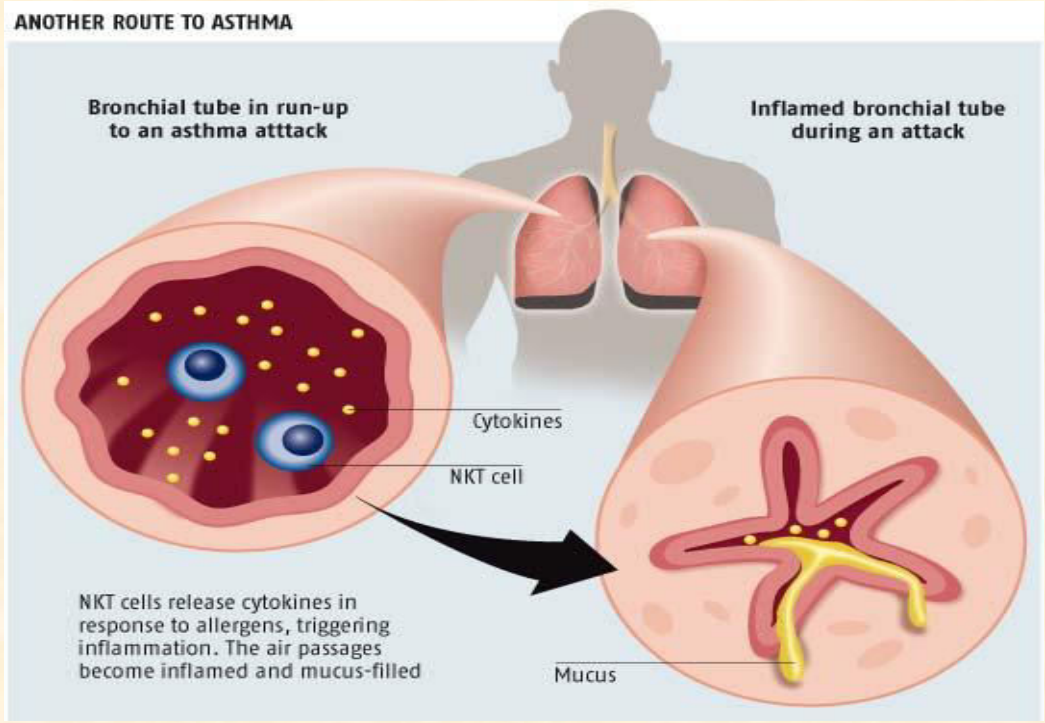
- SPECIFIC:

At the end of the class students will be able to:-

- ✓ Define asthma.
- ✓ Enumerate the causes of asthma.
- ✓ Explain about the pathophysiology of asthma.
- ✓ List out the clinical manifestations of asthma.
- ✓ Enumerate the diagnostic evaluation of asthma.
- ✓ Explain the management of asthma.

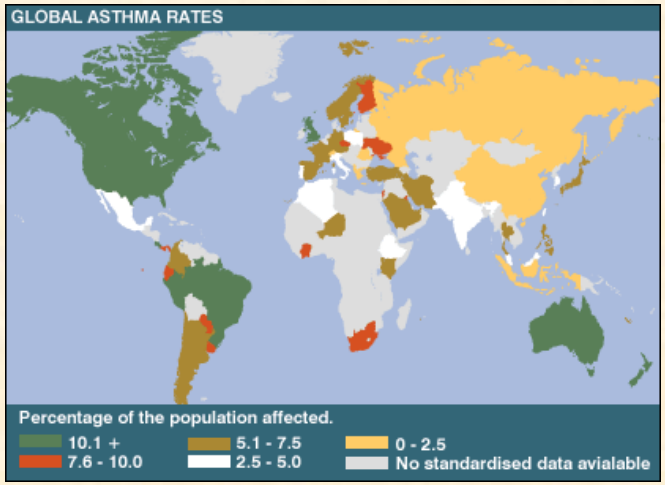
DEFINITION

- It is an chronic inflammatory disease of airway in which inflammation causes varying degree of obstruction in the airway.

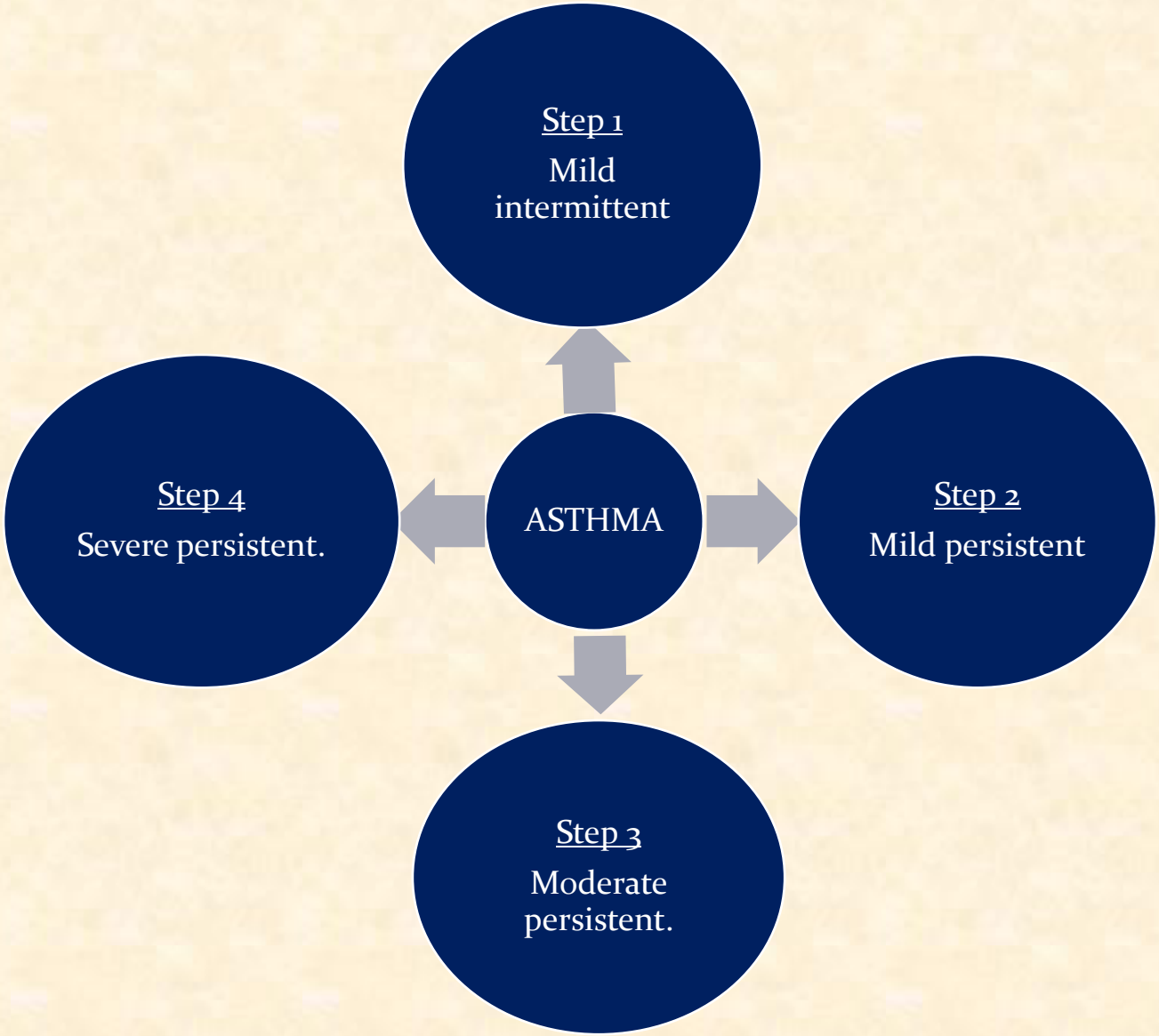


INCIDENCE

- Asthma affect an estimated 20 million Americans.
- Among adults, women have 30 % greater prevalence of asthma than men.
- The asthma prevalence rates are 39% higher in African Americans than in whites.
- There are 4000 deaths per year from asthma.



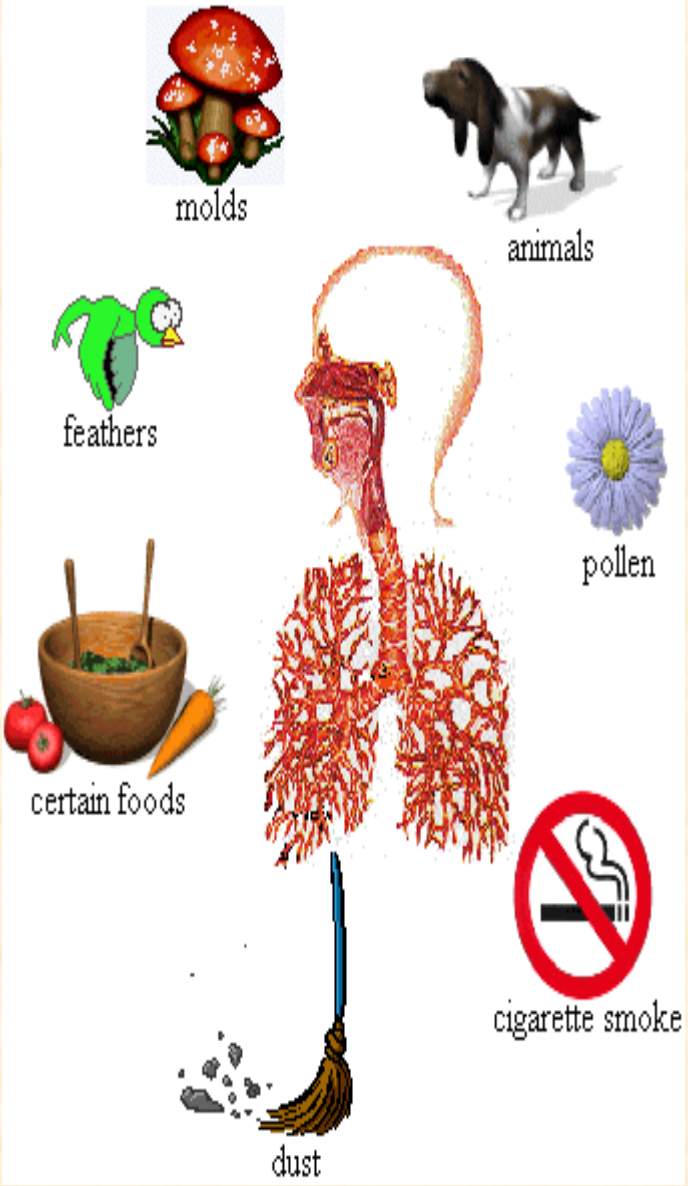
CLASSIFICATION



CAUSES

1. Exact cause unknown.
2. Triggers:-

- ➢ Allergens- IgE receptors mast cells.
- ➢ Exercise induced asthma.
- ➢ Respiratory infections.
- ➢ Nose & sinus problems.
- ✓ Allergic Rhinitis.
- ✓ Nasal polyps.
- ✓ Sinusitis.



CAUSES

- Drugs & food additives.
- Gastro esophageal reflux disease (GERD).
- emotional stress.
- Genetic factors.

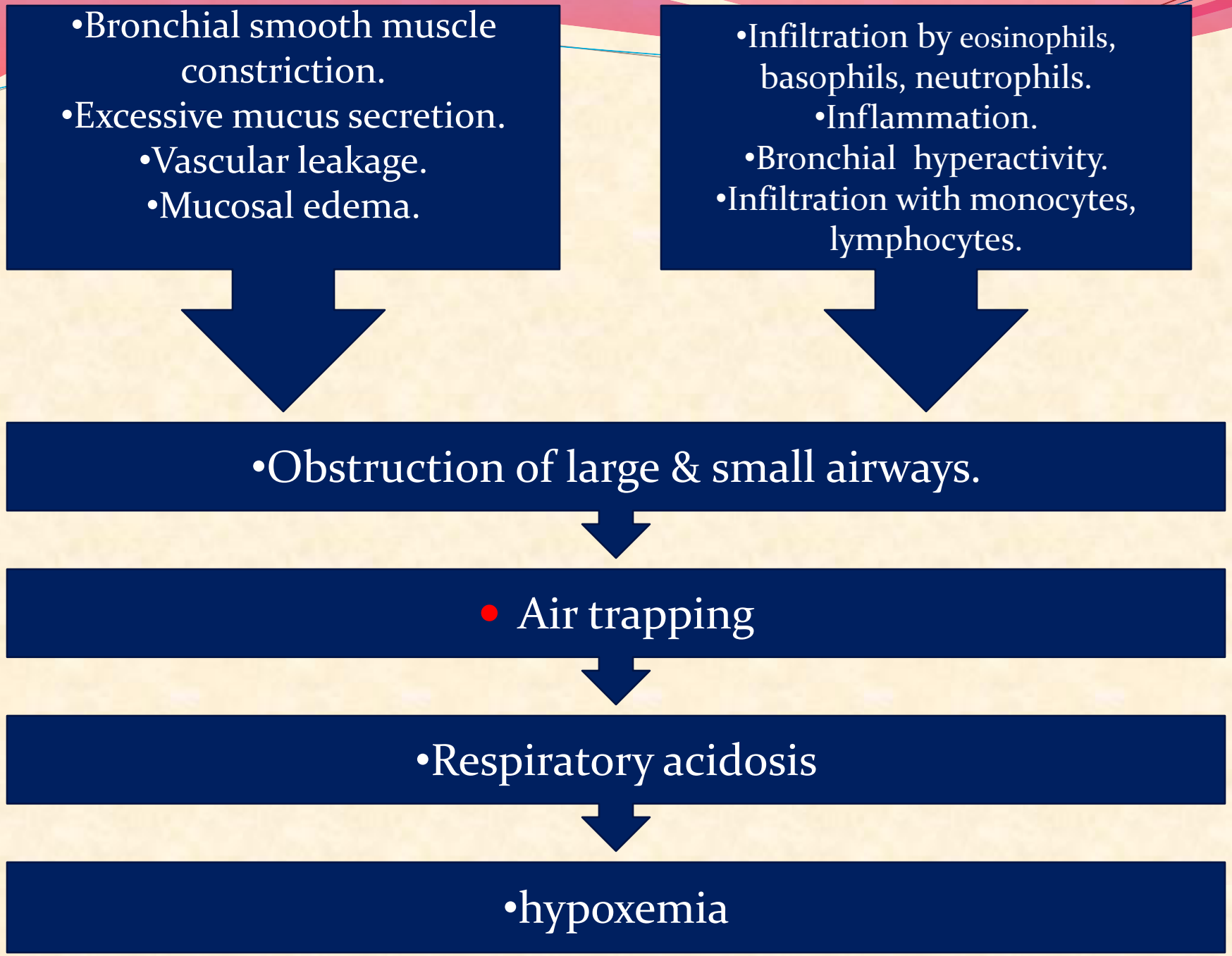
PATHOPHYSIOLOGY

Triggers

IgE mast cells mediated response

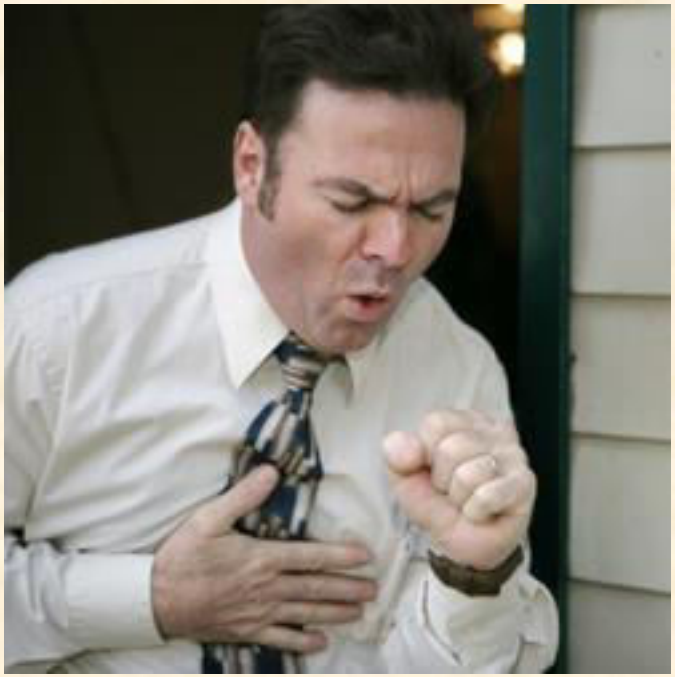
Release of mediators from the mast cells like eosinophils, basophils, macrophages, lymphocytes.

Early phase response (with in 30 – 60 min)	Late phase response (with in 5 – 6 hours).


•Bronchial smooth muscle constriction.
•Excessive mucus secretion.
•Vascular leakage.
•Mucosal edema.
•Infiltration by eosinophils, basophils, neutrophils.
•Inflammation.
•Bronchial hyperactivity.
•Infiltration with monocytes, lymphocytes.
•Obstruction of large & small airways.
• Air trapping
•Respiratory acidosis
•hypoxemia

CLINICAL MANIFESTATIONS

1. Wheezing, fever.
2. Dyspneoa, chest pain.
3. Cough with sputum.
4. Prolonged expiration.
5. Signs & symptoms of hypoxemia.
6. Restlessness & increased anxiety.



CLINICAL MANIFESTATIONS

7. Increased pulse & B.P.
8. Pulsus paradoxus.
9. Tachypnea.
10. Absence of breath sounds.

DIAGNOSTIC EVALUATION

1. History taking.
2. Physical examination.
3. Pulmonary function test.
4. Chest x- ray.
5. Peak flow monitoring.
6. Blood studies.
7. Sputum culture sensitive examination.

TREATMENT

- ✓ **Medical management:**

1. Anti inflammatory drugs.
   i. Corticosteroids
   ii. Chronolyn sodium, nedochronil (for children).
   iii. Lucoterine modifiers, e.g. zafirlucast, zeileuton, montelucast.
2. Bronchodilators;

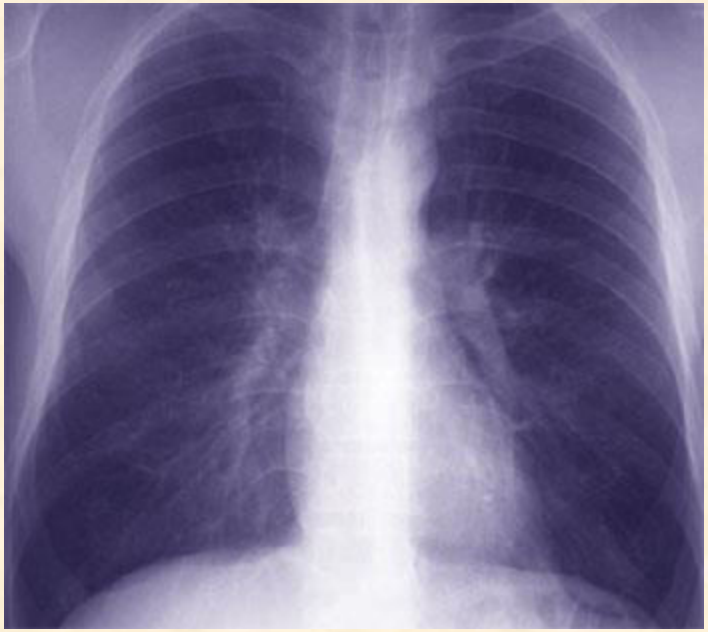
   e.g. β- adrenergic agents, methylxanthine preparations, anticholinergic agents.

TREATMENT

3. Mast cell stabilizers.
4. Anti IgE antibody.
5. B2 sympathomimetics.

COMPLICATIONS

- Pneumothorax.
- Rib fracture.
- Atelectasis.
- Pneumonia.
- Pneumomediastinum.
- Status asthmaticus.



NURSING MANAGEMENT

- ✓ **Assessment.**
- ✓ **Nursing diagnosis.**

i. Ineffective breathing pattern related to disease condition.

ii. Impaired gas exchange related to excessive production of sputum.

iii. Imbalanced nutrition less than body requirement related to anorexia.

NURSING MANAGEMENT

iv. Activity intolerance related to difficult breathing.

v. Anxiety related to disease condition.

vi. Deficient knowledge related to lack of information and education


THANK YOU!