

What is asthma?

- Inflammation of the airways
- Causing repeated episodes of breathlessness
- Usually triggered by allergy

What is inflammation?

- A “final common pathway” of tissue response to injury
- In tissues such as skin and mucous membranes, usually manifested as:
 - redness
 - swelling
 - heat
 - pain

What happens in inflammation?

- Local release of chemical signals (e.g. in the early stages: histamine, prostaglandins and leukotrienes)
- Dilation and increased “leakiness” of small blood vessels
- Movement of white cells and plasma proteins out of the blood
- Secondary effects on mucous glands, smooth muscle

Allergy

- Triggered by common airborne particles such as dusts, pollens, animal fur, feathers
- Develops in persons who are genetically predisposed to this type of response

What happens in allergy?

- Increased production of a specific type of antibody against the allergen (immunoglobulin E or IgE)
- Binding of this antibody to mast cells
- Release of chemical mediators by mast cells when the allergen comes into contact with the antibody
- Development of inflammation

Key points

- Asthma is common, especially in Australia and New Zealand
- Inflammation of the airways underlies the episodes of breathlessness
- Asthma is usually associated with allergy to airborne triggering agents
- Drug treatment for asthma is evolving and improving

Drugs used for treating asthma

- Bronchodilators
- Anti-inflammatory agents
 - corticosteroids
 - other drugs
- Other new agents

