

Fact sheet by EASY BREATH (a division of Medusoft Pty Ltd)

Hay Fever & Allergies

Hay fever, like all allergic reactions, is caused by allergens, foreign "invaders" that enter your body by inhalation, by swallowing, or through your skin.

In hay fever, the allergens are airborne substances that enter your airways (mouth, nose, throat, and lungs) via your breathing and the linings of your eyes and sometimes ears via direct contact.



Most of the time it is difficult to identify a specific allergen.

Once these allergens come in contact with your airway, the white blood cells of your immune system produce antibodies to the offending substance. This overreaction to a harmless substance is often called a hypersensitivity reaction.

The antibody, called immunoglobulin E, or IgE, is stored on special cells called mast cells. When the antibody comes in contact with the corresponding antigen, they promote release of chemicals and hormones called "mediators." Histamine is an example of a mediator.

It is the effects of these mediators on organs and other cells that cause the symptoms of the allergic reaction, in this case hay fever.

The most common allergens in hay fever are pollens.

- o Pollen is small particles released by flowering plants.
- o It is moved around by wind to other plants of the same species, which it fertilises so that the plant can bloom again.
- o Pollens from certain types of trees, grasses, and weeds (such as ragweed) are most likely to cause reactions. Pollens from other types of plants are less allergenic.
- o The time of year when a particular species of plant releases pollen, or "pollinates," depends on the local climate and what it normal for that species.
- o Variations in temperature and rainfall from year to year affect how much pollen is in the air in any given season.

The other common allergens in hay fever are moulds.

- o Moulds are a type of fungus that has no stems, roots, or leaves.
- o Mould spores float through the air like pollen until they find a hospitable environment to grow.
- o Unlike pollen, however, moulds do not have a season. They are present throughout the year in most of our country .
- o Moulds grow both outdoors and indoors.

Outdoors, they thrive in soil, vegetation, and rotting wood.

Indoors, moulds (usually called mildew) live in places where air does not circulate freely, such as attics and basements, moist places such as bathrooms, and places where foods are stored, prepared, or discarded.

Risk factors for hay fever

- o Family members with hay fever
- o Repeated exposure to the allergen
- o Other allergic conditions such as eczema or asthma

The allergens that cause symptoms in an individual as he or she ages. Symptoms decrease in some allergy sufferers, but not all, as they grow older.

Bodily changes of pregnancy may make hay fever worse.