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## Pollen allergies

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### Summary

- Pollen from grass, weeds and trees is a common cause of hay fever symptoms and asthma.
  - Hay fever symptoms such as runny nose and itchy and watery eyes occur in seasons, depending on what type of pollen you are allergic to.
  - One way to help with pollen allergies is to stay indoors when there is a lot of pollen in the air.
  - Visit your doctor to discover what is causing your allergy.
  - Treatments such as antihistamines and nasal sprays are available for your symptoms.
  - If you have an asthma attack and breathing is difficult, call triple zero (000) and ask for an ambulance.
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Pollen is a powdery, granular substance in the flowers of trees, grasses and weeds that leads to fertilisation of plants. Pollen can be spread by insects or dispersed in the wind. Some people develop allergic symptoms to pollen, which are together called hay fever (runny nose and itchy and watery eyes), and asthma.

Trees and grasses that are not native to Australia are more likely to cause seasonal allergies. It is difficult to avoid pollen because it is also in the wind and easily inhaled, but you can take steps to reduce your exposure. Your doctor can prescribe medication for hay fever or asthma.

A medical specialist may also give you a series of injections, which is a treatment called desensitisation, to stop your body from reacting to the pollen.

If you have an asthma attack and breathing is difficult, in case of emergency, call triple zero (000) and ask for an ambulance.

### Symptoms of pollen allergies

Everyone's immune system is different and allergies to pollens can cause diverse signs and symptoms. This means that diagnosing an allergy can be difficult. If you think you may have an allergy, keeping a record of your symptoms can help you and your doctor to understand what is causing your symptoms.

### Keeping a record of your symptoms

Keep a diary that describes your symptoms and when and where they occur. Your diary could include information about whether your symptoms occur:

- inside your home, outside or both
- for a short time or longer
- at night, during the day or when you wake up
- at a particular time of the year
- near animals
- after you have been stung or bitten by an insect
- after you have had a particular food or drink
- after you have taken a particular medication, either prescription or over the counter from a pharmacy or supermarket
- after you have taken a herbal medicine.

### Asthma from pollen allergies

Pollen can be breathed into the lungs and directly cause asthma in some people. This can be unrelated to hay

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fever symptoms. Symptoms of asthma include:

- chest tightness or pain
- shortness of breath
- difficulty breathing
- wheezing – whistling noise when breathing
- coughing.

### **Hay fever symptoms from pollen allergies**

Hay fever is also known as seasonal allergic rhinitis, because the symptoms appear only when it is pollen season. Hay fever originally only referred to allergies caused by grass pollens, but the term is now also used to describe the symptoms of rhinitis (inflammation of the mucous membrane inside the nose).

Allergies to pollen commonly cause symptoms of hay fever including:

- sneezing
- itchy and runny nose
- red, itchy and watery eyes
- itchy roof of the mouth or throat
- cough
- congestion of the nose
- blocked sinuses
- extreme tiredness.

One in five Australians experience hay fever symptoms and they can be debilitating. People with hay fever are more likely to develop sinus infections, and can have interrupted sleep that leads to extreme tiredness. Severe hay fever symptoms can affect learning in children and productivity in adults. Hay fever can also make it more difficult to control asthma in those who are more likely to get it.

### **Causes of pollen allergies**

For all allergies, the immune system reacts to specific allergy trigger molecules (allergens). Your immune system produces antibodies that detect the allergen and cause inflammatory reactions and the release of a chemical called histamine. Histamine causes hay fever symptoms, such as itchy and watery nose and eyes, and sneezing.

In general, pollen from grass, weeds and trees that are not native to Australia cause more allergies than native plants. Wattle is rarely a cause of allergic symptoms, although people can think it is the cause of their hay fever symptoms.

In Victoria, inland areas tend to have higher pollen counts and northerly winds can bring pollens from inland regions to the coastal areas, including Melbourne. In contrast, the east coast of Australia often has less pollen, because winds tend to blow in from the sea and the Great Dividing Range protects the coast from inland winds. In South Australia and Western Australia, levels of pollen in the air vary, depending on wind direction.

### **Pollen allergies are seasonal**

The season for pollen allergies can last for several months and occurs when the plants are flowering. This will vary depending on location and the type of plant. For instance:

- Non-native trees tend to pollinate in late winter and spring.
- In Victoria, winds from the north tend to bring pollen from non-native grasses growing inland between October and December.
- White Cypress (Murray) pine is the only Australian tree that produces highly allergenic pollen and it flowers between late July and the end of August.
- Species of casuarina or Australian oak trees produce pollen throughout the year and can cause hay fever symptoms at any time.

The medical specialists who diagnose allergies (Australasian Society of Clinical Immunology and Allergy) have online calendars showing when common species of pollen cause allergies in the states and territories of Australia.

### **Wheat allergies**

A wheat allergy is often confused with coeliac disease and gluten sensitivity (also known as gluten intolerance). Wheat allergy is an immune response to allergy triggers (allergens) in wheat, including molecules in the pollen and seed. Wheat allergies can cause symptoms of the digestive system (cramps, nausea or vomiting), as well as those described for the pollen allergies. Symptoms can occur after eating or touching wheat, or products containing wheat.

In contrast, coeliac disease is a condition where your own immune system damages the intestine in the presence of gluten. Gluten sensitivity is not an allergic reaction, but a food intolerance or sensitivity.

### **Herbal medicines and allergies**

Asteraceae is a family of flowering plants, including many common species, and some are used in herbal medicines. Pollen from plants in this family is a common cause of hay fever, asthma and dermatitis.

Plants from the Asteraceae family include:

- plants grown for their flowers – chrysanthemums, dahlias, sunflowers, marigolds, safflower and daisies
- edible foliage plants – lettuce, safflower, chicory and artichoke
- weeds – ragweed, mugwort, sagebrush, wormwood, feverfew
- plants used in some herbal medicines – echinacea, dandelion, chamomile, feverfew, milk thistle and wormwood.

Echinacea can cause severe allergic reaction (anaphylaxis), asthma attacks, severe hives and swelling in some people, and this can occur when the first dose of echinacea is taken.

Pollen from plants in the Asteraceae family can also cause an allergic skin reaction on contact. The pollen can be found in herbal medicines, shampoos, cosmetics and massage oils, and includes pollen from plants such as the:

- chamomile
- chrysanthemum
- daisy
- dandelion
- echinacea
- feverfew
- sunflower
- tansy.

Sensitisation to pollen of plants from the Asteraceae family has also been linked with allergic reactions to other substances that are similar. This is known as cross-reactivity and has caused allergic reactions to:

- plant-derived herbal medicines – echinacea, royal jelly, bee pollen extracts and chamomile
- foods – celery, honey, sunflower seeds, carrot, lettuce, watermelon and nuts.

### **Diagnosis of pollen allergies**

If you have allergic symptoms that seem to appear at certain times of the year, you should visit your family doctor, who will ask some questions about your allergic reactions. You can also discuss your record of your symptoms. To diagnose your allergy, your doctor may refer you to a specialist doctor known as an allergist or clinical immunologist.

Allergists can test for allergies using a number of methods depending on the type of potential allergy. To test for an allergy to pollens, the allergist may use a skin prick test or a blood test for allergies.

### **Unproven methods to test for allergies**

A number of methods claim to test for allergies, but they have not been medically or scientifically proven. They can be costly and could lead to dangerous avoidance of certain foods. The organisation representing allergists (Australasian Society of Clinical Immunology and Allergy) recommends that you do not use certain methods to have potential allergies tested. These methods include:

- cytotoxic food testing
- electrodermal testing
- hair analysis
- iridology
- kinesiology
- pulse testing
- reflexology
- Vega testing.

Always speak with your doctor if you are thinking of using a complementary medicine or therapy to test for allergies.

### **Treatment for pollen allergies**

A direct way to manage pollen allergies is to reduce your exposure to pollens. Pollen counts are published in the media and can help you to plan to avoid exposure.

Tips to reduce your exposure to pollen include:

- stay indoors in the morning, if possible – grass pollens mainly circulate in the morning
- avoid mowing the grass or wear a mask if you do – stay indoors when grass is being mowed
- keep windows closed in your home and car
- avoid picnics in parks or in the country during the pollen season
- wear sunglasses to protect your eyes
- plant a low-allergy garden around your home, especially near the windows of your home.

### **Treatment for hay fever symptoms from pollen allergies**

If you are unable to avoid pollen, your doctor may suggest medication to reduce hay fever symptoms including:

- antihistamines – either prescribed or over the counter at a pharmacy
- decongestants – either oral or as a nasal spray
- nasal corticosteroid sprays to reduce symptoms in the nose – either prescribed or over the counter at a pharmacy

Decongestant tablets and sprays can cause side effects, so use with caution or ask your doctor or pharmacist for advice.

### **Treatment for asthma from pollen allergies**

If you have asthma caused by pollens, your doctor will prescribe the correct medication and help you to develop a plan to manage your asthma. Make sure you follow your asthma action plan.

Asthma can be well controlled with the appropriate medication in almost all people. The main types of medication are:

- relievers that act quickly to relax the muscles around the airways – this is the medication used during an asthma attack
- preventers that slowly make the airways less sensitive to allergy triggers and reduce inflammation inside the airways – these are taken daily
- combination therapies with preventers containing two different medications.

If you have an asthma attack, follow your asthma action plan. In case of emergency, call triple zero (000) and ask

for an ambulance. Tell the operator that someone is having an asthma attack.

The signs of an emergency include when the person:

- finds it very difficult to breathe
- is unable to speak comfortably or if their lips are turning blue
- has symptoms that get worse very quickly
- is getting little or no relief from their reliever inhaler.

While waiting for the ambulance, give four puffs of reliever medication every four minutes.

### **Immunotherapy for allergies to pollen**

In some cases, your allergist may suggest an immunotherapy treatment known as desensitisation, which involves a series of injections of very small doses of the allergen over a long time. This can help to improve tolerance of the pollens that are triggering your allergy and reduce symptoms.

### **Where to get help**

- Your doctor
- In an emergency, always call triple zero (000)
- Emergency department of your nearest hospital
- NURSE-ON-CALL Tel. 1300 60 60 24 – for expert health information and advice (24 hours, 7 days)
- Asthma Foundation of Victoria Tel. 1800 ASTHMA (1800 278 462)

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