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Hay Fever

Hay fever is caused by an allergy to pollen. Common hay fever symptoms are a runny, itchy and/or blocked nose, sneezing and itchy eyes. Common treatments are an antihistamine nasal spray or medicine and/or a steroid nasal spray. Other treatments are sometimes used if these common treatments do not work so well.

What is hay fever?

Hay fever is an allergy to grass or hay pollens. Pollen is the name given to the fine powder that is produced by plants, trees or flowers to fertilise other plants, trees or flowers of the same species.

Grass pollen is the most common cause and tends to affect people every year in the grass pollen season from about May to July (late spring to early summer). However, the term is often used when allergies are caused by other pollens such as tree pollens.

Tree pollens tend to affect people from March to May (early to late spring) each year. Other people may be allergic to weed pollens (including nettles and docks). Weeds tend to pollinate from early spring to early autumn.

In medical terms, hay fever causes a condition called seasonal allergic rhinitis. This means inflammation of the nose (rhinitis), that occurs due to an allergy (allergic), occurring usually at the same time, or in the same season, each year (seasonal). It can also cause allergic inflammation of the outer part of the eyes (allergic conjunctivitis).

Hay fever symptoms

The symptoms of hay fever are due to your immune system reacting to pollen. Cells on the lining of the nose and eyes release chemicals (for example, histamine) when they come into contact with pollen. This causes inflammation in the nose (rhinitis) and eyes ([conjunctivitis](#)). Sometimes the sinuses and throat can also be affected.

Despite the name, hay fever does not cause a [fever \(high temperature\)](#). A high temperature (higher than 38°C) is usually caused by an infection instead.

The symptoms of hay fever can vary from person to person. Some people only have mild symptoms that tend to come and go. Others can be severely affected with symptoms that are present every day during the pollen season:

Common symptoms

Many people get one or more of:

- A runny nose or a blocked nose.
- An itchy nose.
- Sneezing.
- Red, itchy and watery eyes.
- An itchy throat.
- A cough, due to mucus running down the back of the nose to the throat (postnasal drip).

Less common symptoms

Less common symptoms of hay fever include:

- Loss of smell.
- Face pain (from blocked sinuses).
- Sweats.
- [Headache](#).

Asthma symptoms

Some people develop asthma symptoms such as [wheeze](#) and [breathlessness](#). People who already have asthma may get worsening symptoms. Some people have asthma symptoms only during the hay fever season. If you have hay fever, you are more likely to develop asthma.

The symptoms may be so bad in some people that they can affect sleep. They may interfere with school and examinations, or interfere with work.

Hay fever and other seasonal allergies may also be associated with [oral allergy syndrome](#).

How long does hay fever last?

Hay fever symptoms usually last for the length of the pollen season. For example, people allergic to grass pollen may get symptoms from May to July, and people with tree pollen allergies can experience symptoms from March to May. Some people are allergic to more than one type of pollen, and experience symptoms for longer.

Pollen levels change depending on the weather, geographical location, and many other things, and so symptoms can flare up and improve at different points during the season.

Many people find that their hay fever symptoms get better as they get older. A study of American college students found that, amongst people who had hay fever in their first year at university, over half found that their hay fever symptoms had improved 23 years later. About 20% of them had no hay fever symptoms at all.

Like other allergies, some people seem to grow out of hay fever. We don't really know why this happens in some people, and not others.

Some people have perennial allergic rhinitis, which means they have allergic symptoms throughout the entire year. This is usually due to allergies to things like dust mites, or cat and dog fur. However, they might also be allergic to pollen as well, meaning that their symptoms get worse during hay fever season.

How common is hay fever?

Hay fever is very common. Estimates vary; some say it affects about 1 in 5 people in the UK, but others suggest it may affect up to half of all people.

Hay fever - like other allergies - is becoming more common in the UK and other countries. We don't fully know why this is happening.

Hay fever usually starts in children and teenagers, and often gets better with age. However, some people continue to get symptoms throughout their life. It can also develop for the first time in adulthood.

Is hay fever genetic?

The reasons why people develop hay fever are very complicated, and not fully understood. We think it's a combination of things in the environment, like exposure to potential allergens, and genetics.

Hay fever tends to run in families. People with hay fever are also more likely to have [asthma](#) and [eczema](#). Asthma, eczema, and hay fever together are known as atopic conditions; these conditions probably have similar underlying causes.

Researchers have found several different genes which are linked with an increased risk of hay fever and other atopic conditions.

It's likely that some people inherit a set of genes which make them more likely to develop hay fever, but that something else needs to happen (an environmental trigger) too for them to develop the condition.

How do I know if I have hay fever?

Hay fever can usually be diagnosed if you have any of the typical symptoms that occur during the hay fever season. You don't always need to see a doctor if you think you have hay fever. It is more common if you have a history of asthma or eczema.

A pharmacist can suggest treatments to improve hay fever symptoms. All of the initial treatments for hay fever (antihistamine tablets, nasal sprays, and eye drops) are available from a pharmacy without prescription in the UK.

If you're not sure if you have hay fever, or if these treatments haven't worked, speak to a doctor.

A doctor should be able to tell you if your symptoms are due to hay fever, or something else.

Allergy tests usually aren't needed if the cause of the allergy (pollen) is clear. They might be useful if it isn't obvious, or if other allergies, such as dust mite allergies, are suspected.

[See the separate leaflet called Skin Prick Allergy Test for more details.](#)

Very occasionally, other tests may be needed. Scans or tests to check the airflow through your nostrils may be rarely used to rule out other causes of the symptoms.

How to help hay fever

Unfortunately, it is impossible to avoid pollen totally. However, symptoms tend to be less severe if you reduce your exposure to pollen. The pollen count is the number of pollen grains per cubic metre of air. The pollen count is often given with TV, radio, internet, or newspaper weather forecasts. A high pollen count is a count above 50.

You can check the current pollen forecast [here](#). The following may help when the pollen count is high:

- Stay indoors as much as possible and keep windows and doors shut.
- Avoid cutting grass, large grassy places and camping.
- Shower and wash your hair after being outdoors, especially after going to the countryside.
- Wear wraparound sunglasses when you are out.
- Keep car windows closed and consider buying a pollen filter for the air vents in your car. These should be changed at every service.

Hay fever treatment

For advice in pregnancy, see the "Treating hay fever in pregnancy" section below.

Although there is no cure for hay fever, the commonly used hay fever treatment options are:

- [Antihistamine tablets](#).
- [Steroid nasal sprays](#).
- Antihistamine nasal sprays.
- [Eye drops](#).

If your hay fever symptoms are not controlled on the medication that you are taking after 2-4 weeks, you should discuss this with your doctor. You may need to try a different treatment or add in another treatment.

If you are taking hay fever medication regularly and your hay fever is well controlled on your current treatment, you should continue this treatment until the end of the pollen season.

If you're a regular hay fever sufferer, treatments such as antihistamine tablets work best if you start taking them before symptoms start. Try to start taking antihistamine tablets 2-4 weeks before pollen season starts; you can continue taking them throughout the season.

Antihistamine nasal spray

A dose from an antihistamine nasal spray can rapidly ease itching, sneezing and watering (within 15 minutes or so). It may not be so good at easing congestion. [Antihistamines work by blocking the action of histamine](#). This is one of the chemicals involved in allergic reactions. A spray can be used as required if you have mild symptoms. It can also be taken regularly to keep symptoms away.

Antihistamine tablets (or liquid medicines)

Antihistamines taken by mouth (tablets or liquids) are an alternative. They ease most of the symptoms but may not be so good at relieving a blocked nose (nasal congestion).

Antihistamines taken by mouth are good if you have eye symptoms as well as nasal symptoms. They are also usually given to small children instead of a nasal spray. A dose usually works within an hour. Therefore, one can be taken as required if symptoms come and go. One can also be taken regularly if symptoms occur each day.

There are several types and brands of antihistamines that you can buy at pharmacies or get on prescription. Older antihistamines, such as [chlorphenamine](#), work well but make some people drowsy. So, they should not be taken if you are driving or operating machinery. Non-drowsy histamines are a better first choice, as they are less likely to cause drowsiness.

Commonly used non-drowsy antihistamines include:

- [Loratadine](#).
- [Cetirizine](#).
- [Fexofenadine](#).
- [Acrivastine](#).

All of these are available without prescription. Until 2020, fexofenadine was prescription only, but fexofenadine 120mg tablets can now be bought without prescription.

Antihistamine medicines such as loratadine and cetirizine may be used by children from the age of 2 years.

Steroid nasal sprays and drops

A [steroid nasal spray](#) usually works well to clear all the nasal symptoms (itch, sneezing, watering and congestion). It works by reducing inflammation in the nose. A steroid nasal spray also tends to ease eye symptoms. It is not clear how it helps the eye symptoms - but it often does. [Steroid nasal drops](#) are also sometimes used.

It takes several days for a steroid spray to build up its full effect. Therefore, there is no immediate relief of symptoms when you first start it. In some people it can take up to three weeks or longer to be fully effective. So do persevere. (It is best to start taking it a few weeks before the hay fever season is likely to begin if you know that you have hay fever.)

A steroid nasal spray tends to be the most effective treatment when symptoms are more severe. It can also be used by adults in addition to antihistamines if symptoms are not fully controlled by either alone.

You need to use the spray each day over the hay fever season to keep symptoms away. However, once symptoms have gone, the dose of a steroid spray can often be reduced to a low maintenance dose each day to keep symptoms away.

There are several brands which you can buy at pharmacies, or obtain on prescription. Side-effects or problems with steroid nasal sprays are rare (read the packet leaflet for details).

Commonly used steroid nasal sprays and drops include:

- [Mometasone](#).
- [Fluticasone](#).
- [Betamethasone](#).
- [Beclometasone](#).
- [Budesonide](#).
- [Triamcinolone](#).

Other hay fever remedies/treatment options

Eye drops

If necessary, you can use eye drops in addition to other treatments:

- **Mast cell stabiliser** eye drops. These drops are thought to work by stopping the release of histamine from certain cells called mast cells. You need to use them regularly to prevent symptoms. They can be used throughout the hay fever season if you need to. There are several different ones. Commonly used ones include [sodium cromoglicate](#), [nedocromil](#) and [lodoxamide](#).
- **Antihistamine eye drops** work quickly, so you can use them as required to ease a flare-up of eye symptoms. You can also use them regularly if needed. It is best not to use them for more than six weeks at a time, however. There are several different ones, including [antazoline](#), [azelastine](#) and [epinastine](#).
- **Anti-inflammatory eye drops**, such as [diclofenac](#), are also sometimes used for hay fever.

Other nasal sprays

The following are sometimes used. They tend to be used if there are problems with any of the above treatments. Sometimes one is used as an add-on treatment in addition to one or more of the above treatments if symptoms are not fully controlled:

- **Sodium cromoglicate nasal spray**. Like steroid sprays, it takes a while to build up its effect and needs to be taken regularly. It is thought to work by stopping the release of histamine from certain cells. One disadvantage is that it needs to be taken 4-5 times a day (steroid sprays are taken 1-2 times a day). This appears to be the safest medicine to use for hay fever in the first three months of pregnancy.
- **Ipratropium bromide nasal spray** may be worth a try if you have a lot of watery discharge. It has no effect on sneezing or congestion.
- **Decongestant nasal sprays** that you can buy at pharmacies are not usually advised for more than a few days. They have an immediate effect to clear a blocked nose. However, if you use one for more than 5-7 days, a rebound, more severe congestion of the nose often develops. One may be useful for a few days to clear a blocked nose when you first use a steroid nasal spray. The steroid can then get to the lining of the nose to work. Don't use decongestant nasal sprays for more than seven days. Don't use decongestant sprays or tablets if you are pregnant.

Leukotriene receptor antagonists

These medicines block the effect of chemicals called leukotrienes which trigger hay fever symptoms. They work well when taken with antihistamine tablets, especially in people who also have asthma. These are mostly prescribed by specialists. One example is [montelukast](#).

Nasal saline washouts

This is done by some people. The aim is to wash pollen out of the nostrils. This can sometimes help to reduce the need for steroid nasal sprays. Washouts can be bought from a pharmacist and are comprised of a delivery system such as a squeezable plastic bottle containing salt water (saline) connected to a tube inserted into the nose.

You can also make your own nasal rinse solution, eg, by mixing 250mL of sterilised (boiled and then cooled) water with 0.5 tsp of salt and 0.5 tsp of bicarbonate of soda in a clean container.

More sophisticated devices with pumps to control the pressure of the liquid are also available. For most benefit, washouts should be on a daily basis.

Treatment for severe symptoms

In severe cases, a [short course of steroid tablets is prescribed for a week or so](#). For example, students sitting examinations, who have severe symptoms which are not eased by other treatments, may benefit from a short course of steroids. Steroid tablets usually work well to reduce inflammation.

A short course is usually safe. However, you should not take steroid tablets for long periods to treat hay fever, as serious side-effects may develop. Repeated courses of steroid tablets can also have serious side-effects.

Immunotherapy (desensitisation)

This treatment is sometimes used, mainly in cases where symptoms are severe and not helped by other treatments. There are two methods:

- Subcutaneous immunotherapy (SCIT). This is done using a series of injections of the allergen (in this case pollen) into the tissue just under the skin (the subcutaneous tissue). The idea is that your immune system will become desensitised to the pollen. This means that the allergic response that your body mounts when it is exposed to the pollen in the future is reduced, so improving your symptoms.
- Sublingual immunotherapy (SLIT). This is similar to the above but the allergen (pollen) is placed under the tongue (that is, sublingually). Typically, the dose is one tablet a day, starting four months before the start of the pollen season and continued for up to three years.

Immunotherapy is normally supervised by a specialist after careful assessment. It is not suitable for everyone. For example, people with certain diseases, pregnant women and people taking certain medicines will not be able to have this treatment. Your doctor will advise if this treatment is suitable for you.

Note: immunotherapy is unlikely to cure hay fever totally but will often greatly reduce the severity of symptoms. The less severe symptoms will then tend to be much easier to control with standard treatments such as antihistamines and nasal sprays. Also, immunotherapy has been shown to give long-lasting benefit for some years after stopping treatment.

Treating hay fever in pregnancy

Most drug manufacturers recommend caution before using hay fever medicine in pregnancy, because these medicines haven't been tested in pregnant women in clinical trials. However, some medicines have been used widely in pregnant women, outside of research studies, without any signs that they are harmful.

If hay fever symptoms in pregnancy are mild or otherwise manageable, then no treatment is required. There is no evidence that hay fever itself causes harm in pregnancy - the only reason to treat it is to improve symptoms.

There isn't a national guideline in the UK on how best to treat hay fever in pregnant women, even though it is a very common problem. The following recommendations are based on the UK Teratology Information Service's Best Use of Medicines in Pregnancy information - see Further Reading for more.

Although we think certain drug treatments are probably safe in pregnancy, to minimise any risks, it's probably a good idea to start with non-drug treatments, then move on to drugs that are very unlikely to be absorbed and reach the baby, and finally to use tablets if none of these have worked.

This stepwise approach looks like this:

- Start by trying to reduce or eliminate exposure to the allergen (eg, pollen).
- Apply Vaseline® or another petroleum jelly or wax-based ointment around the nostrils. This can trap pollen and other allergens and stop them reaching the nose.
- Use a nasal saline rinse or nasal saline douche. These clear allergens and mucus out of the nose. You can make your own, or buy them in a pharmacy (eg, Neilmed®).

These don't involve taking any medicine and avoid any theoretical risks of medication in pregnancy.

If they don't work, further options include:

- Nasal sprays, including nasal steroids, mast-cell stabilisers and intranasal antihistamines. It's thought that very little of the drug enters the body, and so there is very little or no exposure of the fetus to these medicines.
 - **Avoid nasal or tablet/capsule decongestants in pregnancy.** These work by shrinking blood vessels in the nose. There is a theoretical risk that they might reduce the blood supply to the placenta in pregnancy. This risk is probably very small, but best avoided.

- Eyedrops, including mast cell stabilisers or antihistamines. Again, it's thought that very little of the drug can enter the body.

If these don't work, oral (tablet) antihistamines can be used. These get into the bloodstream and therefore might reach the fetus.

- [Cetirizine](#) and [loratadine](#) are usually recommended.
- [Chlorphenamine](#) can also be used, but is more likely to cause drowsiness.

All three of these medicines have been given to pregnant women before. Currently, we don't have evidence linking them to harm in pregnancy. Some research studies have specifically looked at women who used them in pregnancy, and found no signs of harm; however, more research is needed, as these studies were quite small and may not detect rare side-effects.

Talk to your doctor or midwife about hay fever treatment if you are pregnant and think you might need medications.

Hay fever and asthma

If you develop asthma symptoms during the hay fever season you may be prescribed an [inhaler](#). If you already have asthma, your asthma may become worse in the hay fever season. You may need an increase in the dose of your usual inhalers (or other treatment that you take for asthma) during the hay fever season.

Further reading & references

- [Allergic rhinitis](#); NICE CKS, December 2022 (UK access only)
- [Treatment of allergic rhinitis](#); Best Use of Medicines in Pregnancy, UK Teratology Information Service, 2019
- [Immunotherapy for allergic rhinitis](#); British Society for Allergy and Clinical Immunology (2011)
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- [Lipworth B, Newton J, Ram B, et al](#); An algorithm recommendation for the pharmacological management of allergic rhinitis in the UK: a consensus statement from an expert panel. NPJ Prim Care Respir Med. 2017 Dec;27(1):3. doi: 10.1038/s41533-016-0001-y. Epub 2017 Jan 23.
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Last updated by: Dr Doug McKechnie	Peer reviewed by: Dr Pippa Vincent	
Last updated: 09/06/2023	Next review date: 12/05/2028	Document ID: 4261 (v44)

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