

## Atopic eczema

Eczema is sometimes called dermatitis which means inflammation of the skin. There are different types of eczema, but most are chronic conditions. The most common type is atopic eczema.

In this type of eczema there is a typical pattern of skin inflammation which causes the symptoms. Moisturisers (emollients) and steroid creams or ointments are the common treatments. About 2 in 3 children with atopic eczema grow out of it by their mid-teens.

## What is atopic eczema?

Atopic eczema is an inflammation of the skin, which tends to flare up from time to time. It usually starts in early childhood. The severity can range from mild to severe. There is no cure but treatment can usually control or ease symptoms.

The word atopic describes people with certain allergic tendencies. However, atopic eczema is not just a simple allergic condition. People with eczema have an increased chance of developing other atopic conditions, such as [asthma](#) and [hay fever](#).

## Are atopic dermatitis and eczema the same thing?

Generally, yes. When people say 'eczema' on its own, they usually mean 'atopic dermatitis', and vice versa.

'Eczema' can also mean chronic inflammation of the skin generally, so sometimes the term eczema is used alongside another word to describe a different condition. For example, there is [discoid eczema](#), and venous eczema, and the condition [seborrhoeic dermatitis](#) is sometimes called 'seborrhoeic eczema'.

## What does atopic eczema look like?



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## Atopic eczema symptoms

Symptoms of atopic eczema include:

- Dry skin.
- Red and inflamed skin. (The most commonly affected areas are next to skin creases, such as the front of the elbows and wrists, backs of knees, face and scalp and around the neck. However, any areas of skin may be affected. The face is commonly affected in babies with atopic eczema.)
- [Itchy skin](#).
- Scaly patches of skin and thickened skin, caused by scratching a lot.
- Blistered and weepy skin.

Typically, inflamed areas of dry skin tend to flare up from time to time and then tend to settle down. However, sometimes inflamed areas of itchy skin do become infected.

## How long does a flare-up last?

The severity and duration of eczema flare-ups varies from person to person and from time to time in the same person.

- In mild cases, a flare-up may cause just one or two small, mild patches of inflammation. Often these are behind the knees, or in front of elbows or wrists. Eczema flare-ups may occur only now and then.
- In severe cases, the flare-ups can last several weeks or more and cover many areas of skin. This can cause great distress.
- Many people with atopic eczema are somewhere in between these extremes.

## Who gets atopic eczema?

Most cases first develop in young children under the age of five years. Current figures suggest about 1 in 3 children have some degree of atopic eczema. However, statistics show that it is becoming more common year on year.

By the mid-teenage years the flare-ups of eczema have either gone completely, or are much less of a problem for 2 out of 3 young people. However, there is no way of predicting who will still be affected as adults.

It is unusual to develop atopic eczema for the first time after the age of 20. About one in ten adults have eczema.

[See the separate article called What causes sudden eczema in adults](#) for more details.

# What causes atopic eczema?

There is no proven single cause for atopic eczema but factors which may play a part include:

- Changes in climate.
- Pollution.
- Allergies to house dust mite or pollens.
- Diet.
- Infections.
- Other early-life factors.

The cause is not fully understood. The oily (lipid) skin barrier tends to be reduced in people with atopic eczema. This leads to an increase in water loss and a tendency towards dry, itchy skin. Also, some cells of the immune system release chemicals under the skin surface, which can cause some inflammation.

## Genetic factors

Inherited (genetic) factors play a part. Atopic eczema occurs in about 8 in 10 children where both parents have the condition and in about 6 in 10 children where one parent has the condition.

For many people, the exact genetic cause is not clear. In severe eczema, though, about half of all people have mutations in the filaggrin gene, which is important for maintaining the defensive barrier of the skin.

## House dust mite allergies

Many people with atopic eczema are allergic to house dust mite.

If you have moderate or severe atopic eczema which is difficult to control with the usual treatments, you may wish to consider reducing the number of house dust mites in your home. See the separate leaflet called [House Dust Mite and Pet Allergy](#), which gives more details on how to reduce house dust mites.

## Multiple eczema triggers

There may be a combination of factors in someone who is genetically prone to eczema, which causes the drying effect of the skin and the immune system to react and cause inflammation in the skin.

## Other atopic eczema triggers

Other possible factors which may trigger symptoms, or make symptoms worse, include:

- Stress and habit scratching.
- Pollens, moulds, and dander from pets.
- Pregnancy and hormonal changes before a period in women.
- However, some of these may not be avoidable.

See the separate leaflet in this series, called [Eczema Triggers and Irritants](#), for more details.

# Atopic eczema treatment

The usual treatment consists of three parts:

- **Avoiding irritants** to the skin and other causes (triggers) wherever possible.
- **Moisturisers** (emollients) – used every day to help prevent inflammation developing.
- **Steroid creams and ointments** ([topical steroids](#)) – mainly used when inflammation flares up.

## Avoid triggers and irritants

Many people with atopic eczema have flare-ups from time to time for no apparent reason. However, some eczema flare-ups may be triggered or made worse by irritants to the skin, or by other factors. It is commonly advised to:

- Avoid soaps, bubble baths, etc, when you wash. They can dry out the skin and make it more prone to irritation. Instead, use a soap substitute plus a bath/shower moisturiser.
- Biological washing powders and fabric conditioners can also sometimes cause problems.
- Try as much as possible not to scratch. To help with this, keep nails short and use anti-scratch mittens in babies. If you need to relieve an itch, rub with fingers rather than scratch with nails.
- Wear cotton clothes next to skin rather than irritating fabrics such as wool. However, it is probably the smoothness of the material rather than the type of the material which helps. Some smooth man-made fabrics are probably just as good as cotton.
- Avoid getting too hot or too cold as extremes of temperature can irritate the skin.
- After you wash clothes with detergent, rinse them well. Some biological detergents are said by some people to be irritating. But there is little proof that commonly used detergents that are used in the normal way make atopic eczema worse.

[See the separate article called How to wash your hands if you have eczema or dry skin.](#)

## **Avoid food allergies**

About 1 in 2 children with atopic eczema [have a food allergy](#) which can make symptoms worse. In general, it is young children with severe eczema who may have a food sensitivity as a trigger factor. The most common food allergies which trigger symptoms in some people include cow's milk, eggs, soya, wheat, fish and nuts.

If you suspect a food is making your child's symptoms worse then see a doctor. You may be asked to keep a diary over 4–6 weeks. The diary aims to record any symptoms and all foods and drink taken. It may help to identify one or more suspect foods.

If food allergies are suspected, it should be confirmed by a specialist. They may recommend a diet without this food if the eczema is severe and difficult to control by other means.

## **Use moisturisers (emollients)**

Emollients are lotions, creams, ointments and bath/shower additives which prevent the skin from becoming dry.

They oil the skin, keep it supple and moist and help to protect the skin from irritants. This helps to prevent itch and helps to prevent or to reduce the number of eczema flare-ups.

**Warning:** some types of moisturiser contain paraffin or other oils, which are flammable. Oils from moisturisers can sink into clothes and bedding and create a fire risk.

Be careful around naked flames (including cigarettes) when using emollients. Avoid smoking in bed.

The regular use of moisturisers is the most important part of the day-to-day treatment for atopic eczema. Your doctor, nurse or pharmacist can advise on the various types and brands available and the ones which may suit you best.

Some points about emollients include:

- **Thicker, greasy ointments** work better and for longer than thinner creams but they are messier to use.
- **Apply liberally to all areas of skin.** You cannot overdose or overuse emollients. They are not active medicines and do not get absorbed through the skin.

- **Apply emollients in the general direction of hair growth.** If applied in the opposite direction the base of the hair shafts can get blocked, leading to possible infection.
- **Use emollients every day.** A common mistake is to stop using emollients when the skin appears good. Patches of inflammation may quickly flare up again.
- **Various emollient preparations come as bath additives and shower gels.** These may be considered in people with extensive areas of dry skin. However, there is some debate as to how well these work. If you do use them, they should be used in addition to, not instead of, creams, ointments or lotions that you rub on to the skin.
- **Pump dispensers are better than pots** because they are less likely to harbour germs. If you need to use a pot, use a clean spoon or spatula to get the contents out, rather than your fingers.

Many people with atopic eczema use a range of different moisturisers. For example, a typical routine for a person with moderately severe atopic eczema might be:

- Consider adding an emollient oil to bath water or as you shower. This will give your skin a general background oiling.
- Use a thick emollient ointment as a soap substitute for cleaning. You can also rub this into particularly dry areas of skin.
- After a bath or shower it is best to dry by patting with a towel rather than by rubbing. Then apply an emollient cream or ointment to any remaining dry areas of skin.
- Between baths or showers, use an emollient cream, ointment or lotion as often as necessary.
- A dry dressing may be helpful if your eczema is more severe, as this helps to keep the emollient from being rubbed off the skin and stops scratching. However, you should not use a dressing if a skin infection is present.



- Use an emollient ointment at bedtime.

**Note:** emollients used for eczema tend to be bland and non-perfumed. Occasionally, some people become allergic (sensitised) to an ingredient in an emollient. This can make the skin worse rather than better.

If you suspect this, see your doctor for advice. There are many different types of emollients with various ingredients. A switch to a different type will usually sort out this uncommon problem.

**Warning:** bath additive emollients will coat the bath and make it greasy and slippery. It is best to use a mat and/or grab rails to reduce the risk of slipping. Warn anybody else who may use the bath that it will be slippery.

[See the separate leaflet called Moisturisers for Eczema \(Emollients\) for more details.](#)

## **Steroid creams and ointments (topical steroids)**

[Topical steroids work by reducing inflammation in the skin.](#) They are grouped into four categories depending on their strength – mild, moderately potent, potent and very potent. There are various brands and types in each category.

For example, hydrocortisone cream 1% is a commonly used steroid cream and is classed as a [mild topical steroid](#). The greater the strength (potency), the more effect it has on reducing inflammation but the greater the risk of side-effects with continued use.

Creams are usually best to treat moist or weeping areas of skin. Ointments are usually best to treat areas of skin which are dry or thickened. Lotions may be useful to treat hairy areas such as the scalp.

As a rule, a course of topical steroid is used when one or more patches of eczema flare up. You should use topical steroids until the flare-up has completely gone and then stop them. In many cases, a course of treatment for 7–14 days is enough to clear a flare-up of eczema.

In some cases, a longer course is needed. Many people with atopic eczema require a course of topical steroids every now and then to clear a flare-up. The frequency of eczema flare-ups and the number of times a course of topical steroids is needed can vary greatly from person to person.

It is common practice to use the lowest-strength topical steroid which clears the flare-up. If there is no improvement after 3–7 days, a stronger topical steroid is usually then prescribed. For severe eczema flare-ups a stronger topical steroid may be prescribed from the outset.

Sometimes two or more preparations of different strengths are used at the same time. For example, a mild steroid for the face and a stronger steroid for patches of eczema on the thicker skin of the arms or legs.

## High-strength steroids

### Short bursts of high-strength steroid as an alternative

For adults, a short course, usually three days, of a [strong topical steroid](#) may be an option to treat a mild-to-moderate flare-up of eczema. A strong topical steroid often works quicker than a mild one.

(This is in contrast to the traditional method of using the lowest strength wherever possible. However, studies have shown that using a high strength for a short period can be more convenient and is thought to be safe.)

### Side-effects of topical steroids

Short courses of topical steroids (fewer than four weeks) are usually safe and normally cause no problems. Problems may develop if topical steroids are used for long periods, or if short courses of strong topical steroids are repeated often. The concern is mainly if strong topical steroids are used in the long term. Side-effects from mild topical steroids are uncommon.

- Thinning of the skin has always been considered a common problem. However, recent research suggests that this mainly occurs when high-strength steroids are used under airtight dressings. In normal regular use skin thinning is unlikely and, if it does occur, it often reverses when the topical steroid is stopped.
- With long-term use of topical steroid the skin may develop permanent stretch marks (striae), bruising, discolouration, or thin spidery blood vessels (telangiectasias).
- Topical steroids may trigger or worsen other skin disorders such as [acne](#), [rosacea](#) and [perioral dermatitis](#).
- Some topical steroid gets through the skin and into the bloodstream. The amount is usually small and normally causes no problems unless strong topical steroids are used regularly on large areas of the skin. The main concern is with young children who need frequent courses of strong topical steroids. The steroid can have an effect on growth. Therefore, children who need repeated courses of strong topical steroids should have their growth monitored.

- Recently, there has been more awareness in the media about topical steroid withdrawal (TSW). TSW is still being studied and is poorly defined. Some people find that their skin gets worse after stopping topical steroids, or that their skin seems 'addicted' to topical steroids. There are a few possible reasons:
  - Some people have severe eczema which rebounds when topical steroids are reduced or stopped. If so, the problem is the eczema, not the steroids – and further, stronger, eczema treatments may be needed.
  - Occasionally people can develop an allergic reaction to ingredients in a particular steroid cream – meaning they have to use more and more of the steroids, as if they were 'addicted'. If this is suspected, allergy tests can look for the allergy, and different brands of steroids can be used.
  - Some people have reported red, painful, flaking and peeling skin that appears shortly after stopping topical steroids. This is probably 'true' TSW. It's not clear how often this happens but is probably rare. When it has happened, it's usually occurred after using strong topical steroids on thin areas of skin (eg, the face) for a long time (over a year). TSW is probably much less likely if you avoid using topical steroids for long uninterrupted courses, and avoid using strong steroids on delicate areas of skin.

[For more details about side-effects see the separate leaflet called Topical Steroids for Eczema.](#)

### **Short-duration treatment to prevent flare-ups (weekend therapy)**

Some people have frequent flare-ups of eczema. For example, a flare-up may subside well with topical steroid therapy. But then, within a few weeks, a flare-up returns. In this situation, one option that might help is to apply steroid cream on the usual sites of flare-ups for two days every week.

This is often called weekend therapy. This aims to prevent a eczema flare-up from occurring. In the long run, it can mean that the total amount of topical steroid used is less than if each flare-up were treated as and when it occurred. You may wish to discuss this option with your doctor.

**Note:** don't forget you can use emollients as well when you are using a course of topical steroids. [See the separate leaflet called Fingertip Units for Topical Steroids for more details.](#)

## Using moisturisers and topical steroids together

Most people with eczema will be prescribed emollients to use every day and a topical steroid to use when flare-ups develop. When using the two treatments, apply the emollient first. Wait 10–15 minutes after applying an emollient before applying a topical steroid.

That is, the emollient should be allowed to sink in (be absorbed) before a topical steroid is applied. The skin should be moist or slightly tacky but not slippery, when applying the steroid.

### Infected eczema patches

Sometimes, one or more patches of eczema become infected during a flare-up. Characteristics of infected eczema include:

- Weeping blisters.
- Infected skin lumps (pustules).
- Crusts.
- Failure to respond to normal treatment.
- Rapidly worsening eczema.

If the skin infection becomes more severe, you may also develop a high temperature (fever) and generally feel unwell. If infected eczema develops and you are unwell in yourself or feverish, then a course of an [antibiotic tablet or liquid medicine](#) will usually clear the infection.

This is used in addition to usual eczema topical treatments.

The UK's National Institute for Health and Clinical Excellence (NICE) updated its guidance on treating infected eczema in 2021. It noted that:

- Weeping blisters and crusted eczema do not always mean that eczema has become infected.
- There is not much evidence to suggest that treating eczema flare-ups with antibiotics makes a big difference to the outcome (most people get better without them).
- Giving antibiotics, especially repeated courses, increases the risk of developing resistant bacteria (meaning that future courses of antibiotics might not work when needed).

They therefore recommend that antibiotics should be only be given if someone with an eczema flare-up is also generally unwell (eg, they have a fever). For people with an infected eczema flare who are otherwise well, they recommend avoiding antibiotics and instead using the usual eczema treatment. In some cases, doctors might recommend antibiotics anyway, if someone is at high risk of a serious complication from infected eczema.

Skin swabs usually aren't helpful in most eczema flares. They can't tell between bacteria that are causing infection, and bacteria that are simply sitting on the skin (which is normal).

There is a rare condition where eczema becomes infected with a virus called herpes simplex. This requires antiviral medication rather than antibiotics. [See the separate leaflet called Eczema Herpeticum for more details.](#)

Once the infection is cleared, it is best to throw away all your usual creams, ointments and lotions and obtain fresh new supplies. This is to reduce the risk of applying creams, etc, that may have become contaminated with germs (bacteria).

Also, if you seem to have repeated bouts of infected eczema, you may be advised to use a topical antiseptic such as chlorhexidine on a regular basis. This is in addition to your usual treatments. The aim is to keep the number of bacteria on your skin to a minimum.

## What if the eczema treatment doesn't work?

See your doctor if a flare-up of atopic eczema is getting worse or not clearing despite the usual treatments with moisturisers (emollients) and topical steroids. Things which may be considered include:

- Whether the strength of the topical steroid should be increased.
- Whether emollients are being used often enough to keep the skin supple and moist.
- The need for an antibiotic if the inflamed skin has become infected.
- Allergy. Occasionally, some people become allergic (sensitised) to an ingredient in a cream (such as a preservative which is included with the steroid or emollient). This can make the skin inflammation worse rather than better.

You may be referred to a skin specialist if a flare-up does not improve with the usual treatments.

## Other treatments for atopic eczema

### Tacrolimus ointment and pimecrolimus cream

They work by suppressing some cells involved in causing inflammation. (They are called topical immunomodulators.) [Tacrolimus ointment](#) and [pimecrolimus cream](#) are not steroids.

They seem to work well to reduce the skin inflammation of atopic eczema. They are licensed for use in people aged 2 years and over who have atopic eczema which is not controlled very well with usual treatments. They should not be used on infected skin.

### Steroid tablets

In some cases, [steroid tablets](#) are prescribed for a short time if the eczema becomes severe and topical treatments are not helping much.

### **Eczema soaks**

Eczema with blisters may need special soaks to dry up the weepy blisters.

### **Hospital treatment**

This is sometimes needed for severe cases. Treatments which are sometimes used include wet wraps, tar and/or steroid occlusion bandages, light therapy and immunosuppressive/immune-modifying medication.

### **Tar shampoos**

These types of shampoo are useful to lift scale from affected scalps.

### **Antihistamine tablets**

[Antihistamine tablets](#) do not have a great effect on reducing itch but some types of antihistamines can make you drowsy. A dose at bedtime may help young children who are troubled with itch to get to sleep.

### **Dilute bleach baths**

Bathing with diluted bleach has been used to good effect in some children with long-term difficult-to-control eczema. The logic is that it helps to clear the skin of [germs](#) (bacteria).

**Note:** this should only be done under the direct supervision and advice of a doctor. Bleach can seriously harm and using the wrong dilution can be very damaging. Do not try this on your own without individual professional advice.



# Alternative remedies for atopic eczema

Alternative remedies for eczema, such as herbal medicines, are sometimes tried by some people. However, you should be cautious about using them, especially if their labels are not in your usual language and you are not sure what they contain. Some herbal treatments are mixed with steroids and some (particularly Chinese remedies) have been linked to liver damage.

## How to prevent atopic eczema in newborns

It may be worth [breastfeeding a newborn baby](#) for three months or more if several members of the family suffer from allergies such as eczema, hay fever or asthma. There is, however, no evidence to suggest that the mother should avoid any particular foods during pregnancy or breastfeeding.

## Complications of atopic eczema

Eczema can lead to other problems, such as:

- Infected eczema, as discussed above.
- Mental health difficulties. Eczema can cause a lot of distress to people, and affect their daily lives. In both adults and children, mental health can suffer as a result of eczema symptoms, potentially leading to poor self-image, poor self-confidence, and [depression](#). In children, eczema can lead to problems such as missing school, and being teased or bullied.
- Sleep problems. Itchy eczema can stop children and adults from being able to sleep.
- Allergy. People with eczema are more likely to get hay fever and asthma – two other atopic conditions. Eczema in infants seems to be linked with a higher risk of developing allergy, particularly food allergy, later on. One theory is that food particles get onto the skin, and can sink into the leaky skin of children with eczema, where the immune system learns to recognise them as allergens.

- Changes in skin colour. After a patch of inflamed eczema has healed, the skin can look lighter or darker than the surrounding areas. This is called post-inflammatory hypopigmentation (if the skin is lighter) or hyperpigmentation (if it's darker). It's more common in people with black or brown skin. It can take several months to heal.
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## Further reading

- [Tacrolimus and pimecrolimus for atopic eczema](#); NICE Technology appraisal guidance, August 2004
- [Atopic eczema in children](#); NICE Clinical Guideline (December 2007, last updated June 2023)
- [Huang JT, Abrams M, Tloutan B, et al](#); Treatment of Staphylococcus aureus colonization in atopic dermatitis decreases disease severity. Pediatrics. 2009 May;123(5):e808-14.
- [Secondary bacterial infection of eczema and other common skin conditions: antimicrobial prescribing](#); NICE Guideline (March 2021)
- [Abrocitinib, tralokinumab or upadacitinib for treating moderate to severe atopic dermatitis](#); NICE Technology appraisal guidance, August 2022

- [Eczema – atopic](#); NICE CKS, April 2022 (UK access only)

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