

Eczema (atopic dermatitis)

How common is eczema?

Eczema (also known as atopic dermatitis) is most common in infants where it occurs in around 1 in 5 children under 2 years of age. It can also occur in older children and adults but usually improves with age. Although eczema can be effectively treated and managed, no cures are currently available.

What causes eczema?

Why some people develop eczema is not well understood. It is common for people with eczema to have or develop other allergies, suggesting that inherited (genetic) factors increase the tendency to develop eczema. That does not mean that allergy to any particular substance causes an individual to get eczema.

The skin in people who suffer from eczema is different from those people who do not have eczema. In people with eczema the skin barrier does not work as well. The skin has less water retaining properties, and moisture is easily lost from the skin causing it to dry out easily. This does not mean that people with eczema can improve their skin by drinking more water, or that the skin cannot provide adequate protection from the environment.

What symptoms does eczema cause?

Eczema affects the skin, causing redness, itching, oozing and over time rough hard thickened skin may occur. It is a disease that gets better or worse over the space of days, weeks and/or months. When eczema worsens this is called an eczema flare. Usually there is no single factor responsible for an eczema flare.

- Infantile eczema usually starts in the first 6 months of life and symptoms include a red itchy rash and dry skin. Infantile eczema usually improves significantly between the ages of 2 to 5 years.
- Childhood eczema may follow or can start for the first time between the ages of 2 to 4 years. The rash and dryness are usually found in the creases of the elbows, behind the knees, across the ankles and may also involve the face, ears and neck. This form of eczema usually improves with age. Although some children will completely outgrow their eczema, most will continue to have the tendency for dry and sensitive skin into adulthood.
- Adult eczema is similar to that of older children with areas of very dry, itchy, reddened skin at the elbow creases, wrists, neck, ankles and behind the knees. Skin may also have weeping areas. Although the condition tends to improve in middle life and is unusual in the elderly, it can still occur.

Eczema can be associated with other allergic disorders

Eczema is often called atopic eczema or allergic eczema. This is because many people with eczema either already have other allergies, such as allergic rhinitis (hay fever), asthma and/or food allergy, or will go on to develop them later. Many people with eczema are allergic to dust mite (www.allergy.org.au/patients/allergy-treatment/allergen-avoidance) or become so with time. In some studies it has been reported that up to 3 in 10 infants with eczema and a family history of allergy will develop food allergy and up to 4 in 10 develop asthma and/or allergic rhinitis (hay fever).

Eczema and food allergy

Many infants with moderate or severe eczema will also have an immediate allergy to food(s). This does not mean that the food allergy is the cause of the eczema and therefore removal of the food(s) will not result in eczema cure, but will prevent the child from having an immediate reaction (e.g. hives, swelling, breathing difficulty etc) to the foods they are allergic to.

In some young infants with severe eczema, removal of certain food(s) may result in better eczema control. This should always be conducted under the supervision of a medical specialist (clinical immunology/allergy specialist) in association with an accredited practising dietitian, with specialised knowledge in food allergies. If the skin improves, foods are introduced one at a time (food challenges) to determine if it causes the eczema to flare. If there is no improvement in two weeks on the elimination diet, it means that food is unlikely to be a problem.

Testing for food allergies by skin tests or blood tests in the absence of intense itch and swelling or hives within 2 hours of eating the food is not usually helpful in identifying a food allergy which is making eczema worse. Children with eczema and/or food allergy can have falsely positive allergy tests and this can lead to unnecessary removal of foods. Any allergy test results should be interpreted by a medical specialist (clinical immunology/allergy specialist) to avoid this problem. Further information about allergy testing is available from the ASCIA website: www.allergy.org.au/patients/allergy-testing/allergy-testing

What can trigger eczema?

Having eczema means that when the skin barrier is damaged, moisture evaporates and this makes the skin more susceptible to allergens and irritants. This irritation can trigger the skin to release certain chemicals that make the skin itchy. If you scratch, more chemicals are released and the skin feels even itchier. This "scratch and itch" cycle can be most distressing.

Known triggers (or aggravating factors) for eczema in some people include:

- Dry skin
- Scratching (night gloves and clipped fingernails may be needed in young children)
- Viral or bacterial infections
- Swimming in chlorinated swimming pools
- Playing in sand and particularly sandpits
- Sitting directly on carpets or grass
- Inhalant allergens – worsening of eczema in spring and summer may also be due to pollen sensitivity
- Food intolerances to artificial colour and preservative in some people
- Irritants such as perfumes, soap, chemicals, woollen or synthetic fabrics
- Temperature changes (such as heat) or overly heated rooms
- Stress (this can make it worse but eczema is not a psychological condition).

These triggers may be relevant for some people however it is not routinely recommended that everyone avoids all these potential triggers. You should discuss these potential triggers with your doctor.

Contact with allergens can worsen eczema, and allergen avoidance or minimisation often brings about improvement. For example:

- Close contact with animals can cause itching or hives, as can sitting and playing on the grass.
- Contact with house dust mite allergen on the skin can increase inflammation.
- Constant exposure to water, soap, grease, food or chemicals can damage the protective barrier function of the skin. Once the protective barrier of the skin is lost, eczema frequently develops.

Routine eczema treatment – See ASCIA Action Plan for Eczema

Other forms of eczema treatments

- Oral cortisone tablets are generally not recommended and are rarely used to treat eczema, and even then only for short periods.
- Immune suppressants are used when multiple therapies have been tried and the eczema remains severe affecting the person's quality of life. They need to be used carefully and under close medical supervision.
- Ultraviolet light ("PUVA") can reduce inflammation and is administered by some skin doctors (dermatologists).
- Evening Primrose Oil is very popular to moisten the skin. Evidence of effectiveness is controversial.
- Oral fish oil tablets are often used to help skin with eczema, but are not recommended if you have seafood allergy.
- Goat's and soy milk products for washes, moisturisers and formulas are not recommended for people with severe cow's milk or soy allergy. Most of the proteins in goat's and cow's milk are the same and often those with cow's milk allergy are also allergic to soy.
- In general it is better to avoid skin products which contain food oils and food derived proteins.
- Probiotics have not been shown to be effective in treating established eczema.

Websites

- ASCIA: www.allergy.org.au/patients/skin-allergy (includes ASCIA Action Plan for Eczema and other articles about allergy and the skin)
- Eczema Association of Australasia: www.eczema.org.au
- New Zealand Dermatological Society: www.dermnetnz.org
- National Eczema Society (UK): www.eczema.org

ASCIA Action Plan for Eczema - Explained

1. Maintain and protect skin

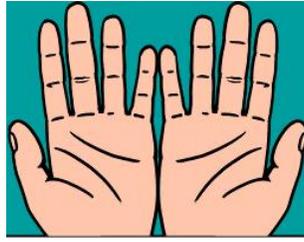
It is vital to keep skin prone to eczema well hydrated with regular moisturising even when there is not much current eczema. This is the most important single thing anyone with eczema can do.

- Use a non-soap based wash or oil in the bath or shower. It helps replace the oil content of the skin and is an essential part of eczema management. Soap and bubbly products damage and dry out the skin.
- Moisturise the skin as frequently as possible (2-3 times per day) and always after a shower or bath. This usually equates to about 250g of moisturiser per week for a child and 500g per week for an adult.

2. Treat flare

It is important to treat flares quickly and with sufficient topical steroid or topical calcineurin inhibitors prescribed by your doctor. People are often afraid to use topical medication and don't use enough and therefore end up needing to treat the flare for much longer. Both of these medicines work to reduce the redness and inflammation in the skin, but they are not a cure for eczema.

- Keep moisturising the skin
- Use topical corticosteroids or topical calcineurin inhibitors prescribed by your doctor to actively treat the redness and inflammation in the skin.
- Ensure that adequate amounts of these medications are used. There is very little evidence that these topical treatments will cause skin thinning when used as your doctor has prescribed. As a guide, one finger tip unit (FTU) is the amount of ointment from the first bend in finger to the fingertip, as shown below. This will cover an area equal to two adult hands.



- Scarring results **from under treatment of eczema** and trauma to the skin by itching.
- It is best to apply moisturiser a short time (ideally around 10 minutes) after the corticosteroid cream or ointment has been applied.

3. Control Itch

Itch can be a very distressing symptom in eczema and is difficult to treat. Itching to areas of unaffected skin can rapidly cause eczema lesions to appear, so it is vital to try and control itch as much as possible.

- Cold compresses may help with itch.
- Wet wraps can often help with itch. Information about wet wraps is available at: www.dermnetnz.org/procedures/wet-wraps.html
- Antihistamines are usually not particularly effective for the itch of eczema, but may sometimes help.
- Sedating antihistamines are sometimes suggested to help people sleep through their itch, but are generally not recommended and should not be used in young children without specialist supervision.

4. Control and prevent infection

Eczema is very prone to infection with bacteria like Staph (Staphylococcus aureus) and viruses such as the cold sore virus. Some people with eczema just need infection treated as it occurs and others may require long term prevention strategies.

- Diluted bleach baths are sometimes used to help prevent future skin infections.
- Long term oral antibiotics are sometimes helpful for those patients who suffer from recurrent infected eczema.

5. Avoid triggers and irritants

Avoiding triggers can be very helpful in keeping eczema under control and in decreasing the severity of flares. Common flares are listed above in the “What triggers eczema section”.

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