ATOPIC ECZEMA

What are the aims of this leaflet?

This leaflet has been written to help you understand more about atopic eczema (AE) which is also known as atopic dermatitis (AD). For simplicity we shall use atopic eczema in this leaflet. This leaflet explains what it is, what causes it, how it can be treated, and where more information can be found about it.

What is atopic eczema?

Atopic eczema is a common skin condition and may start at any age, but the onset is often in childhood: It is estimated that up to 1 in 5 children will be affected by eczema at some point.

The term '*atopic*' is used to describe a group of conditions, which include asthma, eczema and hay-fever[1]. These conditions are all linked by an increased activity of the allergy reaction of the body's immune system. '*Eczema*' is a term which comes from the Greek word 'to boil' and is used to describe red, dry, itchy skin which sometimes weeps, blisters, crusts, scales and thickens.

What causes atopic eczema?

Atopic eczema is a complex condition and a number of factors appear important for its development including patient susceptibility and environmental factors. Patients typically have alterations in their skin barrier, and increased inflammatory and allergy responses. Environmental factors include contact with soaps, detergents and any other chemicals applied to the skin, exposure to allergens, and infection with certain bacteria and viruses. A tendency to atopic conditions often runs in families (see below). An alteration

in a gene that is important for maintaining a healthy skin barrier has been closely linked to the development of eczema. This makes the skin of patients affected by eczema much more susceptible to infection and allows irritating substances/particles to enter the skin, causing itching and inflammation. Atopic eczema cannot be caught from somebody else – it is not infectious.

Is atopic eczema hereditary?

Yes, AE tends to run in families. If one or both parents have eczema, it is more likely that their children will develop it too. Approximately one third of children with atopic eczema will also develop asthma and/or hay fever. Atopic eczema affects both males and females equally.

What are the symptoms of atopic eczema?

The main symptom is itchiness. Scratching in response to an itch may cause many of the changes seen on the skin. The itch can be severe enough to interfere with sleep, causing tiredness and irritability. Typically, atopic eczema goes through phases of being severe, less severe, and then gets worse again. Sometimes a flare-up can be due to the reasons outlined below, but often no cause can be identified.

What does atopic eczema look like?

Atopic eczema can affect any part of the skin, including the face, but the areas that are most commonly affected are the creases of the joints at the elbows and knees, as well as the wrists and neck (called a flexural pattern). Other common appearances of atopic eczema include coin-sized areas of inflammation on the limbs (a discoid pattern), and numerous small bumps that coincide with the hair follicles (a follicular pattern).

Affected skin is usually red and dry, and scratch marks (accompanied by bleeding) are common. When atopic eczema is very active, it may become moist and weep during a flare-up and small water blisters may develop, especially on the hands and feet. In areas that are repeatedly scratched, the skin may thicken (a process known as lichenification) and this may cause the skin to itch more. Sometimes affected areas of the skin may become darker or lighter in colour than the surrounding, unaffected skin.

How is atopic eczema diagnosed?

The features of atopic eczema are usually easily recognised by health visitors, practice nurses and doctors, when they assess the skin. Blood tests and skin tests are usually not necessary.

What makes atopic eczema flare-up?

- Many factors in a person's environment can make atopic eczema worse; these include irritants such as soaps, detergents and other chemicals, heat, dust, woollen clothing, and pets.
- Being unwell, for example having a common cold can cause a flare-up.
- Infections with bacteria or viruses can make atopic eczema worse. Bacterial infection (usually with a type of bacteria called Staphylococcus) makes the affected skin yellow, crusty and inflamed, and may need specific treatment. An infection with the cold sore virus (herpes simplex) in skin affected by eczema can cause a sudden painful widespread (and occasionally dangerous) flare-up of atopic eczema, with weeping small sores.
- Dryness of the skin.
- Teething in babies.
- Rarely, food allergens may cause a flare-up
- Stress

Can atopic eczema be cured?

No, it cannot be cured, but there are many ways of controlling it. Most children affected by atopic eczema will see improvement as they get older, with 60% clear of it by their teens. However, many of these people continue to have dry skin and will therefore benefit from lifelong avoidance of irritants such as soaps, detergents and bubble baths.

Atopic eczema may be troublesome for people in certain jobs that involve contact with irritant materials, such as catering, hairdressing, cleaning, or healthcare work. In later life, atopic eczema can present as hand dermatitis and as a result exposure to irritants and allergens should be avoided both in the home and at work.

Can atopic eczema be prevented?

There is no clear proven way to prevent eczema.

Although exclusive breast-feeding has been advocated for the prevention of eczema in susceptible infants, there is no evidence that this is effective. There is also no definite evidence that organic dairy products help to reduce the risk of eczema, or that eating fish oil during pregnancy helps to prevent eczema in childhood.

Can someone with atopic eczema lead a normal life?

Yes, you can lead a full life including sports, swimming and travel. You may need to make minor changes such as keeping moisturiser with you at school, work or when away from home.

How can atopic eczema be treated?

'Topical' means 'applied to the skin surface'. Most eczema treatments are topical, although for more severe eczema some people may need to take 'oral' (by mouth) medication as well.

'Complete emollient therapy' is the most important treatment for all patients affected by eczema. This means regular application of a moisturiser (also known as an emollient) and washing with a moisturiser instead of soap (known as a soap substitute).

Moisturisers (emollients): These should be applied several times every day to help the outer layer of skin to function better as a barrier to the environment. The drier the skin, the more frequently moisturiser should be applied. Many different moisturisers are available, varying in their degree of greasiness, and it is important to choose the most suitable to use. The best one to use is the greasiest one you are prepared to apply.

Aqueous cream was originally developed as a soap substitute. It is often used as a moisturiser but can irritate the skin and make atopic eczema worse. For this reason, it is recommended that aqueous cream is not used as a moisturiser.

CAUTION:
This leaflet mentions 'emollients' (moisturisers). Emollients, creams, lotions and ointments contain oils. When emollient products get in contact with dressings, clothing, bed linen or hair, there is a danger that they could catch fire more easily. There is still a risk if the emollient products have dried. People using skincare or haircare products should be very careful near naked flames or lit cigarettes. Wash clothing daily and bedlinen frequently, if they are in contact with emollients. This may not remove the risk completely, even at high temperatures. Caution is still needed. More information may be obtained at *https://www.gov.uk/guidance/safe-use-of-emollient-skin-creams-to-treat-dry-skin-conditions*.

Topical steroid creams or ointments: These will usually improve the redness and itching of active atopic eczema. They come in different strengths and the doctor or specialist nurse will advise which type needs to be used, where and for how long. Use a fingertip unit (squeeze steroid from the tube to cover the length of your index fingertip – about 1 inch) to cover the same area of skin as two hands laid flat with the fingers together.

Used appropriately, topical steroids are very effective and safe to use. Used inappropriately (too strong or for too long and on the wrong body site), topical steroids may cause side effects, including thinning of the skin. However, insufficient treatment with topical steroids is generally considered by doctors to be more of a problem than overuse.

Weaker topical steroids are usually prescribed for use on the face, breasts, genitals, eyelids and armpits. This is because the skin is much thinner in these sites. Stronger steroids can be used at other sites, especially thicker areas such as hands and feet.

It is recommended that 'natural' herbal creams are not purchased as they can cause irritation and allergic reactions. Some so-called 'natural' creams have been shown to contain potent steroids. Other herbal creams have been shown to contain high levels of harmful bacteria including MRSA which may cause skin infections and septicaemia.

Antibiotics and antiseptics: If atopic eczema becomes wet, weepy and crusted, it may be infected and a course of antibiotics may be necessary. Antiseptics, when applied to the skin alone or as part of a moisturising preparation, can be helpful in stopping the infection. Incorrect use of antiseptics can, however, irritate the skin and make atopic eczema worse.

Antiseptics should not be used continuously as this can result in excessive drying of the skin.

Topical calcineurin inhibitors: Calcineurin inhibitors, tacrolimus ointment and pimecrolimus cream, may be used when atopic eczema is not responding to topical steroids, or at skin sites which are more susceptible to the side effects of steroids, such as the face, eyelids and armpits and groin. The most common side effect is stinging on application, but this normally disappears after a few applications. These topical treatments are associated with an increased risk of skin infections and should not be applied to infected (weeping, crusted) skin. For some patients, intermittent use of topical steroids or calcineurin inhibitors may reduce their number of flare-ups.

Antihistamines: Antihistamine tablets can be helpful for some patients. Antihistamines that make people sleepy can be helpful when taken at night to reduce sleep disruption. They have no effect on the inflammation of atopic eczema.

Bandaging (dressings): Cotton bandages and cotton or silk vests/leggings worn on top of creams can help keep creams from rubbing off and stop scratching. Sometimes these may be applied as 'Wet wraps' which can be useful for short periods. Wet wraps can upset babies/young children because they can become too cold. For some patients the use of medicated paste bandages may be helpful, as they are soothing and provide a physical barrier to scratching. It is important to be taught how to use the dressings correctly and the doctor or nurse will advise regarding the suitability of the various bandages and dressings available.

Avoidance of allergens:
People affected by atopic eczema often have allergies:

- Air borne allergens from cats, dogs, pollen, grass or the house dust-mite, can cause flare-ups of atopic eczema for some patients.
- Latex (rubber) allergy is more common in people who have atopic eczema. The symptoms may, consist only of itching of the skin after contact with rubber products.
- Contact allergy to creams and ointments used to treat atopic eczema can rarely occur. It is advisable to inform the doctor know if treatments seem to be making the skin worse (see Patient Information Leaflet on contact dermatitis).
- Food allergies. In infants and young children where the atopic eczema is severe, intensely itchy and difficult to control, food allergens may be

aggravating the skin. Dietary avoidance should only be undertaken with medical advice.

Ultraviolet light: Some people with chronic eczema benefit from ultraviolet light treatment, which is usually given in a specialist hospital department (see Patient Information Leaflet on phototherapy). This is not usually recommended for children.

Other treatments: People with severe or widespread atopic eczema not responding to topical treatments may need oral (taken by mouth) or injected treatments. These work by dampening down the immune system and are given under the close supervision of a healthcare professional. Options include:

- Oral steroids (prednisolone)
- *Azathioprine*
- *Ciclosporin*
- *Methotrexate*
- *Mycophenolate mofetil*
- *Dupilumab*

Chinese herbal treatment: This is a complementary therapy that has been reported to benefit some patients, but doctors do not generally recommend these. Potentially serious side effects, such as inflammation of the liver, have been known to occur with Chinese herbal treatment.

Many people with eczema benefit from a psychological approach to their condition, in addition to their use of creams, ointments, etc., such as habit reversal techniques.

Self-care (What can I do?)

- Moisturise your skin as often as possible, ideally at least 2-3 times each day. The most greasy, non-perfumed moisturiser tolerated is the best. This is the most important part of skin care. Smooth the moisturiser on in the direction of hair growth. Do not put your fingers back and forth into the pot of moisturiser, as it may become contaminated and be a source of infection. It is best to remove an adequate amount to cover the skin with a spoon or spatula and put this on a saucer or piece of kitchen roll.

- Wash with a moisturiser instead of soap (known as a soap substitute), and avoid soap, bubble baths, shower gels and detergents.
- Treat eczema early - the more severe it becomes, the more difficult it is to control.
- Wear non-powdered, non-rubber gloves (e.g. vinyl gloves) to protect your hands and avoid skin contact with irritants when doing jobs such as housework.
- Rinse well after swimming and apply plenty of moisturiser after drying. Make sure the shower at the swimming pool contains fresh water and not chlorinated water from the swimming pool.
- Wear comfortable clothes made of materials such as cotton and silk and avoid wearing wool next to your skin.
- Try to resist the temptation to scratch. It may relieve the itch briefly, but it will make the skin itchier in the long term. Smooth a moisturiser onto itchy skin.
- Avoid close skin contact with anyone who has an active cold sore as patients with eczema are at risk of getting a widespread cold sore infection.
- Do not keep pets to which there is an obvious allergy.
- Keep cool. Overheating can make eczema itch more.
- Wash clothes with a non-biological washing powder and use a double rinse cycle to remove detergent residues from the clothing.

Where can I get more information about atopic eczema?

Patient support groups providing information:

Eczema Outreach Support
Bryerton House
129 High Street
Linlithgow EH49 7EJ
Web: https://eos.org.uk/
Tel: 01506 840395

National Eczema Society
11 Murray Street
London NW1 9RE
Web: www.eczema.org
Tel: 0800 448 0818

Weblinks to other relevant resources:
NICE Guidance on atopic eczema
https://cks.nice.org.uk/eczema-atopic

Please note that the British Association of Dermatologists (BAD) provides web links to additional resources to help people access a range of information about their treatment or skin condition. The views expressed in these external resources may not be shared by the BAD or its members. The BAD has no control of and does not endorse the content of external links.

This leaflet aims to provide accurate information about the subject and is a consensus of the views held by representatives of the British Association of Dermatologists: individual patient circumstances may differ, which might alter both the advice and course of therapy given to you by your doctor.

This leaflet has been assessed for readability by the British Association of Dermatologists' Patient Information Lay Review Panel

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