ATOPIC ECZEMA

What are the aims of this leaflet?

This leaflet has been written to help you understand more about atopic eczema. It tells you what it is, what causes it, how it can be treated, and where you can find out more about it.

What is atopic eczema?

Atopic eczema is an extremely common inflammatory condition of the skin. It may start any age but is most common in children, affecting 1 in every 5 children in the UK at some stage. The term '*atopic'* is used to describe a group of conditions which include asthma, eczema and hay-fever. These conditions are linked by an increased activity of the allergy component of the immune system.

'Eczema' is a term which comes from the Greek word 'to boil' and is used to describe red, dry, itchy skin which can sometimes become weeping, blistered, crusted, scaling and thickened. The words *eczema* and *dermatitis* mean the same thing, and thus *atopic eczema* is the same as *atopic dermatitis*. For simplicity we shall use *atopic eczema* in this leaflet.

What causes atopic eczema?

Atopic eczema is a complex condition which is not catching. A number of factors appear important for its development. These include defects in the skin barrier, and abnormalities in the normal inflammatory and allergy responses. A tendency to atopic conditions often runs in families (see below) and is part of your genes. An abnormality in the gene which is important for maintaining the skin barrier has been closely linked to the development of eczema. The defect in the skin barrier makes the skin in affected patients much more susceptible to infection and to irritation and allows allergy-inducing substances to enter the skin, causing itch and inflammation.

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Is atopic eczema hereditary?

Yes. Atopic eczema (as well as asthma and hay fever) tends to run in families. If one or both parents have eczema, asthma or hay fever, it is more likely that their children will develop them too. In addition, there is a tendency for these conditions to run true to type within each family; in other words, in some families most of the affected members will have eczema, and, in others, asthma or hay fever. In some families, though, only one person has eczema. Approximately one third of children with eczema will also develop asthma and/or hay fever. Atopic eczema affects both males and females equally. There is some evidence that atopic eczema may be more common in people from African-Caribbean backgrounds.

What are the symptoms of atopic eczema?

Atopic eczema usually starts in the first months of life but it may also develop for the first time in adulthood. The main symptom is itch. Scratching in response to itch may cause many of the changes seen on the skin. Itch can be severe enough to interfere with sleep, causing tiredness and irritability. This can have an enormous impact on the whole family. Typically it goes through phases of being severe, then less severe, and then worse again. Sometimes flares can be due to factors 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 area's that are most commonly affected are the joints at the elbows and knees, as well as the wrists and neck (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 the eczema is very active, it may become moist and weepy (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.

How is atopic eczema diagnosed?

The features of atopic eczema are usually easily recognised by health care professionals, such as health visitors, practice nurses and general practitioners, when they look at the skin. Sometimes, however, the pattern of eczema in older children and adults is different, and the help of a hospital specialist may be needed. Blood tests and skin tests are usually not necessary. Occasionally the skin may need to be swabbed (by rubbing a sterile cotton bud on it) to check for bacterial or viral infections.

What makes atopic eczema flare-up?

- Many factors in a person's environment can make eczema worse; these include heat, dust, wool, pets and irritants such as soap and detergents.
- Being unwell, for example having a common cold can make eczema flare.
- Infections with bacteria or viruses can make eczema worse. Bacterial infection (usually with a bug called Staphylococcus) makes the affected skin yellow, crusty and inflamed, and may need specific treatment. An infection with the cold sore virus (herpes simplex) can cause a sudden painful widespread (and occasionally dangerous) flare of eczema, with weeping small sores and may need treatment with oral antiviral treatment. Topical steroids should not be used if this is a possibility.
- Dryness of the skin.
- Teething in babies.
- In some people food allergens may cause flares in eczema.
- Whilst stress is associated with flares of atopic eczema, it is not fully understood.

Can atopic eczema be cured?

No, it cannot be cured, but there are many ways of controlling it. Most children with atopic eczema improve as they get older (60% clear by their teens). However, many continue to have dry skin and need to continue to avoid irritants such as soaps or 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.

Can atopic eczema be prevented?

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 maternal fish oil consumption during pregnancy helps to prevent eczema in childhood.

For some patients who flare frequently, intermittent use of a topical steroid or calcineurin inhibitors (see below) to reduce the number of flare-ups may be useful.

Can someone with atopic eczema lead a normal life?

Yes. You can swim and take part in other sports, travel and lead a full life. You may need to make minor changes such as keeping moisturiser with you at school or work.

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 need to take 'oral' medication (by mouth) as well.

'Complete emollient therapy' is the mainstay of treatment for all patients with eczema as the most important part of their treatment - this means regular application of a moisturiser, washing with a moisturiser instead of soap (known as a soap substitute), and use of a moisturising bath oil.

Moisturisers (emollients): These should be applied several times every day to help the outer layer of your skin function better as a barrier to your environment. The drier your skin, the more frequently you should apply a moisturiser. Many different ones are available, varying in their degree of greasiness, and it is important that you choose one you like to use. The best one to use is the greasiest one you are prepared to apply. Moisturisers containing an antiseptic may be useful if repeated infections are a problem.

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

Topical steroid creams or ointments: These will usually settle the redness and itching of eczema when it is active. They come in different strengths (mild,

moderately-strong, strong and very strong). Your doctor will advise you on which type needs to be used where, and for how long. In general, ointments are preferred to creams. Use a fingertip unit (squeeze steroid from the tube to cover the length of your index fingertip) to cover an area the size of the front and back of your hand.

Use of a topical steroid once daily is usually adequate, however, they should not be applied more than twice daily.

Used appropriately topical steroids are very effective and safe to use. However used inappropriately, (too strong or for too long), topical steroids may cause side effects, including thinning of the skin, Doctors vary in their preference for how to stop topical steroids: some may suggest they are stopped abruptly, others may prefer to gradually decrease the potency of the steroid preparation, and yet others will advise a "maintenance regimen" of using them intermittently for a few weeks after a flare of eczema has settled.

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

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

Topical immunosuppressants (calcineurin inhibitors): Calcineurin inhibitors, tacrolimus ointment and pimecrolimus cream, may be used when eczema is not responding to topical steroids or in skin sites which are more susceptible to the side effects of steroids such as the face, eyelids and armpits and groin. These treatments are usually prescribed initially by a dermatologist. Their commonest side effect is stinging on application, and this usually disappears after a few applications. They are associated with an increased risk of skin infections and, should not be applied to infected (weeping, crusted) skin. Theoretically they may increase the risk of skin cancer, and should not be applied to sun-exposed sites in the long term, nor used at the same time as ultraviolet light treatment. There is however no evidence that this occurs in practice. There has also been some suggestion there may be an increased risk of lymphoma but there is no evidence to support this from the studies carried out on their use in the short to medium term.

A maintenance regimen using intermittent calcineurin inhibitors (see below) is licensed for use in patients who have frequent flares of eczema.

Antihistamines: Your doctor may recommend antihistamine tablets, which in some patients can be helpful. Those antihistamines that make people sleepy (such as chlorphenamine and hydroxyzine) are most useful, and are generally given at night. They have no effect on the inflammation of eczema and are helpful largely as a result of their sedating effects, reducing sleep disruption.

Bandaging (dressings): Cotton bandages or cotton vests/legging worn on top of creams can help keep creams in the skin and stop scratching. Sometimes these may be applied as 'Wet wraps' which can be useful for short periods. For some patients the use of medicated paste bandages may be helpful, as they are soothing and provide a physical barrier to scratching. If the skin is infected, appropriate treatment is necessary if dressings are being considered. Your doctor or nurse will advise you regarding the suitability of dressings, and can also advise on the use of special silk garments which can be helpful for some people.

Avoidance of Allergens:
Allergy and atopic dermatitis: Atopic people often have allergies, but some allergens are more important for eczema than others.

- *Air borne allergens* from cats, dogs, pollen, grass or the house dust mite more frequently cause flares in asthma and hay-fever but in some patients may exacerbate eczema and if this is suspected avoidance measures should be undertaken.

- *Food allergies.* In some patients food allergens may aggravate eczema. This is seen more frequently in infants and young children and may be suspected if the eczema is difficult to control or if the child is intensely itchy even without a severe rash. The avoidance of certain foods, after appropriate investigation, *may* help to control their eczema. A healthy, well-balanced diet is important, especially for children. Foods should not be excluded without advice from your doctor or a dietician.

- *Latex (rubber) allergy* is more common in people who are atopic. The symptoms may be minor, consisting only of itching of the skin after contact with rubber products, or they may be more severe, requiring hospital treatment.

- *Contact allergy* to creams and ointments used to treat atopic eczema can occur. Let your doctor know if your treatments seem to be making your skin worse (see Patient Information Leaflet on Contact Dermatitis).

Ultraviolet light: Some people with chronic eczema benefit from ultraviolet light treatment, which is usually given in a specialist hospital department and supervised by a dermatologist (see Patient Information Leaflet on Phototherapy). This is rarely used for children.

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

- *Oral steroids* (prednisolone) are sometimes used for a short time if the eczema has flared badly: they work well but should not be used long term because of the risk of side effects
- *Azathioprine*
- *Ciclosporin*
- *Methotrexate*
- *Mycophenolate mofetil*

Details of these treatments can be found in the patient information leaflets produced by the British Association of Dermatologists (www.bad.org.uk/public/leaflets/).

Chinese herbal treatment: This is a complementary therapy that has been reported to benefit some patients, but these are not generally prescribed by dermatologists as the herbal ingredients are not regulated. Potentially serious inflammation of the liver has been known to occur with Chinese herbal treatment.

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

Treatments that are not recommended:

- 'Natural' herbal creams, as they can cause irritation and allergic reactions. Some so- called 'natural' creams have been shown to contain potent steroids.
- Evening primrose oil tablets, as research has not identified any consistent benefit.

- Water softening - research has not identified any benefit.
- Homœopathy - there is no evidence to suggest it is helpful.

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 best. This is the most important part of your skin care. Smooth it 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.
- Wear gloves to protect your hands if they come into contact with irritants, such as when doing housework.
- Rinse well after swimming, and apply plenty of your moisturiser after drying.
- Wear comfortable clothes made of materials such as cotton, and avoid wearing wool next to your skin.
- Try to resist the temptation to scratch. It may relieve your itch briefly, but it will make your skin itchier in the long term. Smooth a moisturiser onto itchy skin.
- Avoid close 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.
- Treat eczema early - the more severe it becomes, the more difficult it is to control.

Where can I get more information about atopic eczema?

Links to patient support groups:

National Eczema Society
Hill House
Highgate Hill
London, N19 5NA
Tel: 0800 089 1122
Email: helpline@eczema.org
Web: www.eczema.org

NICE Guidance
Web: www.nice.org.uk/CG057

The NHS systematic review of atopic eczema treatments
Web: www.ncchta.org/execsumm/summ437.htm

For details of source materials used please contact the Clinical Standards Unit (clinicalstandards@bad.org.uk).

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: its contents, however, may occasionally differ from the advice 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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