Atopic Eczema in children

Diagnosis

Approximately 1 in 5 children will develop atopic eczema (AE). It usually presents with itchy skin plus visible flexural dermatitis (cheeks or extensor areas if aged 18months or under) or a personal history of atopy (asthma or allergic rhinitis). In Asian/Black Afro-Caribbean children, AE can affect the extensor surfaces rather than the flexures, and discoid (circular) or follicular (around hair follicles) patterns may be more common.

The disease tends to relapse and remit but up to two thirds of children will have cleared by the age of ten.

Important questions to ask:

- time of onset, pattern and severity of the AE
- response to previous and current treatments
- possible trigger factors including irritant* and allergic**
- personal and family history of atopic disease
- the impact of the AE on children and their parents or carers e.g. sleep
- growth and development
- dietary history including any dietary manipulation – need to ensure child is on a balanced diet

*Irritants include soaps and detergents (shampoos, bubble baths, shower gels and washing-up liquids)

**Allergy: parents are often concerned about allergy but most children DO NOT need an allergy test.

Food allergy is only considered in children with AE who have reacted previously to a food with immediate gut symptoms i.e. colic/ vomiting/ altered bowel habit, or failure to thrive.

Allergy is more likely in infants under 6 months and might be suggested by moderate or severe AE that **has not been controlled by optimal treatment**. In these cases a 6-8 week trial of an extensively hydrolysed protein formula or amino acid formula in place of cow's milk formula for bottle-fed can be offered.

Management

AE is a chronic condition with two treatment components; **emollients**: to restore skin barrier function, prevent flares and reduce the total amount of steroid use AND **topical steroids:** used to treat flares (red, sore, itchy areas) in 'bursts' to settle inflammation.

General

Avoid soaps/detergents/bubble baths, use emollient or soap substitute e.g. Dermol 500. Use cotton clothing next to skin where possible. Trim fingernails to reduce damage of scratching.

Emollients

Emollients should be applied 3-4 times a day to hydrate the skin, in adequate quantities (at least 250-500g/week). Some patients may prefer cream to ointment or vice versa, please offer a range and let patients/parents choose the one they prefer and most likely to use.

JAPC emollient prescribing guide can be found here
http://www.derbyshiremedicinesmanagement.nhs.uk/clinical-guidelines/chapter_13/

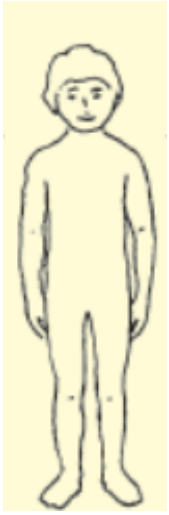
Topical steroids

Topical steroids should be used daily for flares and intermittent for maintenance. Ensure adequate quantities are given on repeat prescription e.g. 30g tube for the face/month, 60g tube for the body/month (may need 100g in children over ten years of age).

Ointments are generally more effective than creams however should be patient/parent preference.

Antibiotic/steroid combinations should only been given for a maximum of 2 weeks duration because of the risk of developing resistance.

Strength depends on site and severity, as a general guide please see below:

REGULAR/MAINTENANCE		FLARE UPS
Above neck → *Weak potency* 1% hydrocortisone once daily days/week		Above neck *moderate potency* Clobetasone butyrate 0.05% once x2-3 daily 3-5 days
Below neck *Moderate potency* Clobetasone butyrate 0.05% once daily x2-3/week for 7-10 days		← Below neck *potent* Betamethasone 0.1% (Betnovate) (Eumovate) once daily

Concern about side effects of skin thinning may lead to under usage - refer to the fingertip unit guidance for applying topical steroids per age group on National Eczema guidance website to ensure optimal use.

https://nationaleczema.org/wp-content/uploads/2018/03/FactSheet_Topical_STEROIDS_FINAL.pdf

Infection

If weeping or yellow crust suspect infection and take a swab. Many infections will settle with appropriate topical therapy but in cases with clear pustules or flare despite topical treatment oral antibiotics such as Flucloxacillin or Erythromycin (penicillin allergic) would be appropriate.

Antihistamines

If the child has difficulty sleeping, you can offer a short course of sedating antihistamines e.g. Chlorpheniramine or Hydroxyzine.

When to refer to Dermatology

Urgent same day on-call referral if:

- Suspected eczema herpeticum
- Systemically unwell child with eczema flare

Urgent within 2 weeks if:

- Suspected bacterial secondary infection **not** responding to optimal topical and oral treatment with confirmed swab

Routine if:

- Uncontrolled eczema despite adequate treatment (1-2 flares/month)
- Suspected allergic contact dermatitis e.g. feet
- Significant impact on quality of life
- Uncertain diagnosis

Where disease not severe and management advice needed consider paediatric advice and guidance referral via consultant connect.

Useful resources

National eczema society: https://eczema.org/

Derby Teaching Hospital NHS Foundation trust Patient information leaflet: Treating atopic eczema in children: P159/1728/09.2015/VERSION1

Birmingham Children's Hospital treatment video: https://bwc.nhs.uk/eczema-information-video

PCDS paediatric 0-12yrs eczema pathway:
http://www.pcds.org.uk/ee/images/uploads/general/Paediatric_Eczema_Pathway-web.pdf

Nottingham parent support: http://www.nottinghameczema.org.uk/

Treating atopic eczema in children

What is Atopic Eczema?

Eczema is a very common skin condition. The skin becomes red, dry and very itchy.
The commonest type of eczema in children is Atopic Eczema. This type of eczema affects about 20% of children under 5 years of age.

In babies, atopic eczema usually starts on the face. As the child becomes older, the front of the elbows and back of the knees are often affected. Sometimes it can be more widespread, or have a different pattern.

What is Atopy?

Atopy is group of conditions including eczema, asthma and hay fever. These often run in families.

What causes Atopic Eczema?

We believe atopic eczema is caused by a combination of 'genetic' and 'environmental' factors. These are not well understood. Atopic eczema has become much more common in Britain in the last 40 years.

Does changing diet or allergy testing help?

Changing the diet or allergy testing is not usually helpful.

Will my child get better?

Most children grow out of atopic eczema.

How do I treat my child's atopic eczema?

We do not have a cure for atopic eczema. We are good at controlling eczema using a combination of moisturisers and steroid creams.

Moisturisers are used all the time. Steroids are used in short bursts when the eczema becomes red and itchy.

Moisturisers

Children with eczema have a dry, red skin. Even when the skin isn't red, the dryness remains. It is thought this dryness is an important part of why children have eczema. Moisturisers (emollients) treat the dryness and also relieve itching.

When eczema flares up, steroid creams are also needed.

How often should a moisturiser be used?

Moisturiser should be applied at least twice a day. It can be used more often if the skin becomes dry or starts to itch.

Unlike steroid creams, which are used for a week or two at a time, moisturisers should be used all the time.

Often it helps if you talk to your child's teacher, so some moisturiser can be left at school for your child to put on.

Which moisturiser should my child use?

The moisturiser your GP prescribes for eczema is different from ordinary moisturiser.

Some moisturisers are thin, some thick. Thick moisturisers are good for children with more severe eczema; they need to be used less often than thin moisturisers.

Sometimes your child might not like a particular moisturiser, or it might irritate. Ask your GP for a different moisturiser.

How much moisturiser will my child need?

Moisturiser needs to be used thickly. Children with eczema need at least 250g a week.

You should make sure you have put in a repeat prescription with your GP before the moisturiser runs out.

How to use the moisturiser

Place generous spots of cream evenly all over your child's skin, including the face. Smooth the cream into the skin in a downward direction; this stops pores being blocked and spots forming. The skin should be greasy afterwards.

If the moisturiser is in a tub, it is important to spoon the moisturiser you will need for an application into a separate dish. If you don't do this, bacteria normally found on your child's skin can be transferred to the tub, and their level can then increase to a point where they might cause your child's eczema to become infected.

Baths

The child should be bathed daily or every other day. This gets rid of old skin and moisturiser. Don't use soap, shower gel, or bubble-bath; they make the skin very dry. Use the moisturiser like a liquid soap. If you need to use a shampoo, use an unscented baby shampoo. Pat the child's skin dry and re-apply the moisturiser.

Steroid Creams

What are steroid creams?

Steroid creams are a type of medicine you put on eczema when it flares (becomes red, sore and weepy). They work by reducing 'inflammation' in the skin.

What types of steroid creams are there?
Steroid creams are usually divided according to strength:

- *Mild e.g. Hydrocortisone*
- *Moderate e.g. Clobetasone butyrate 0.05% (Eumovate), Betamethasone 0.025% (Betnovate RD)*
- *Potent e.g. Betamethasone 0.1% (Betnovate), Mometasone furoate 0.1% (Elocon)*
- *Super potent e.g. Clobetasol propionate 0.05% (Dermovate)*

These are just some of the steroid creams available. You can ask your GP what strength the steroid is that they have prescribed.

Steroids are also divided in to creams and ointments. Creams are white and rub in well. Ointments are greasy and a little messy. Ointments work better.

How do I use steroid creams?
Steroid creams are usually used when the eczema flares. They are applied only to the red sore areas.

Steroids may be used once or twice a day and are usually applied 30 minutes before or after applying the moisturiser.

The weakest steroid that will settle the eczema is usually chosen. If the eczema is severe, a stronger steroid may be needed. A mild steroid such has hydrocortisone is usually chosen for the face.

How much steroid should I use?
A common reason for eczema not getting better is that not enough steroid cream has been used.

Imagine squeezing a line of cream along the end of your index finger. This is called a fingertip unit (FTU).

A fingertip unit is enough steroid cream to treat an area of skin the size of the front of two adult hands.

Using this measure, you can work out how much steroid is needed.

For a child aged 3-6 months

- *Entire face and neck - 1 FTU.*
- *An entire arm and hand - 1 FTU.*
- *An entire leg and foot - 1.5 FTU.*
- *The entire front of chest and abdomen - 1 FTU.*
- *The entire back including buttocks - 1.5 FTU.*

For a child aged 1-2 years

- *Entire face and neck - 1.5 FTU.*
- *An entire arm and hand - 1.5 FTU.*
- *An entire leg and foot - 2 FTU.*
- *The entire front of chest and abdomen - 2 FTU.*
- *The entire back including buttocks - 3 FTU.*

For a child aged 3-5 years

- *Entire face and neck - 1.5 FTU.*
- *An entire arm and hand - 2 FTU.*
- *An entire leg and foot - 3 FTU.*
- *The entire front of chest and abdomen - 3 FTU.*
- *The entire back including buttocks - 3.5 FTU.*

For a child aged 6-10 years

- *Entire face and neck - 2 FTU.*
- *An entire arm and hand - 2.5 FTU.*
- *An entire leg and foot - 4.5 FTU.*
- *The entire front of chest and abdomen - 3.5 FTU.*
- *The entire back including buttocks - 5 FTU.*

You should make sure you have put in a repeat prescription with your GP before the steroid cream runs out.

How long do I use the steroid for?
Mild steroids can be used on the face, twice a day, for five days at a time.
On the trunk and limbs, steroids can be used twice a day, for up to 14 days at a time.

What do I do if the eczema flares up?
The course of steroid cream should be repeated.

If the eczema comes back almost as soon as the steroid is stopped, you can treat the troublesome areas in-between flares, twice weekly as a preventative.

Will steroids damage my child's skin?
When steroid creams first became available, they were used in very large amounts, daily, for long periods. This caused thinning of the skin.

We now understand how to use steroids safely. If you follow these instructions, your child will not develop skin thinning.

Resources

***Birmingham Children's Hospital** has made a film that shows how to treat a child's eczema. This is available on the internet at the address below:*

- *http://www.bch.nhs.uk/story/information-video-parents-children-eczema*

National Eczema Society

- *http://www.eczema.org/*

Reference Code: P1959/1728/09.2015/VERSION1