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Eczema Education Pack

East Lancashire NHS Hospitals Trust

Dermatology Department

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Atopic eczema

- General Information

Atopic eczema (AE) is a common chronic inflammatory skin disorder. The words eczema and dermatitis can be used interchangeably. The causes are complex and not fully understood. Both genetic and environmental factors are likely to contribute.

The disorder affects both sexes equally and usually starts in the first months of life. In the UK, 15-20% of school-aged children and 2-10% of adults will be affected by the condition at some stage. Most resolves during childhood, but it can persist into adult life or recur in the teenage or early adult years. Occasionally, it may develop for the first time in adulthood.

'Eczema' is a term which comes from the Greek word 'to boil'. It is usually itchy and characterised by observable changes including some or all of the following: redness, blistering, oozing, crusting, scaling, thickening and colour change. The term atopic is used to describe conditions such as eczema, asthma and hay-fever, which often have a genetic basis and may be associated with sensitisation to common environmental allergens.

- Diagnosis

There are no diagnostic tests for AE; diagnosis is based solely on visual assessment and patient history.

The patient (or parent) must report an itchy skin in the last 12 months, plus three or more of the following:

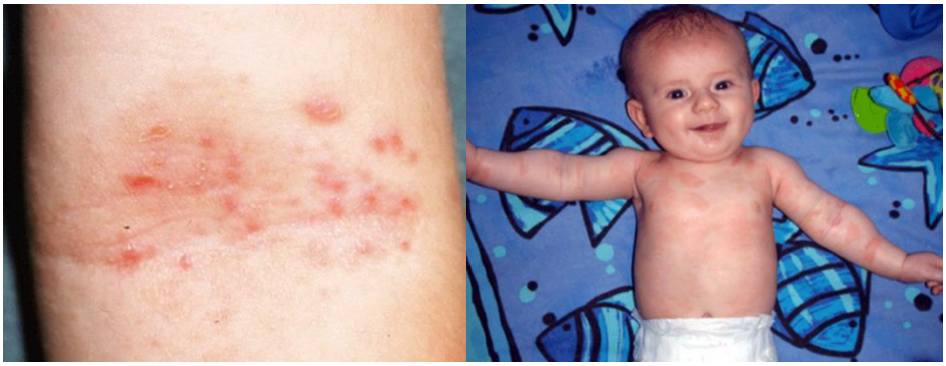
• History of involvement of the skin creases (front of elbows, behind knees, fronts of ankles, around neck or around eyes)

• Personal history of asthma or hay fever (or history of atopic disease in first degree relative if child aged under four years)

• A history of generally dry skin in the last year

• Onset under the age of two years (not used if child aged less than four years)

• Visible flexural dermatitis (including dermatitis affecting cheeks or forehead and outer aspects of limbs in children less than four).



- **Chronic disease management**

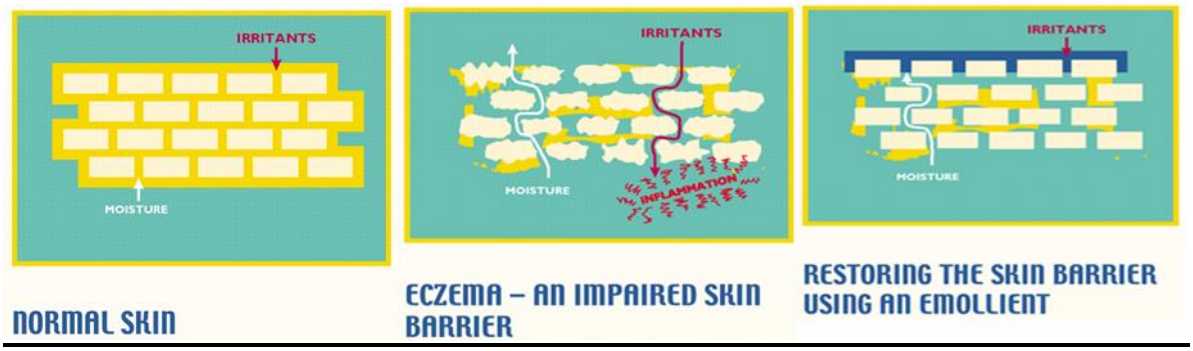
AE cannot be cured, but there are many ways of controlling it. Most children with AE improve as they get older (60% clear by their teens).

Emollients

Emollients are **moisturisers** to soften the skin. They aid in restoring the impaired barrier function of the epidermis, reduce itching, increase the efficacy of topical corticosteroids and have a steroid sparing action.

The skin's outermost layer, the stratum corneum, provides a protective barrier, preventing water loss and controlling secretions. This layer is necessary for maintaining the skin's elasticity and firmness. AE damages this barrier, leaving the skin vulnerable to infection and uncontrolled secretions. Emollients replace the natural surface oils that are deficient in AE sufferers, thus prevent irritants and infection from entering and water from leaving the skin.

- **Brick Wall Analogy**



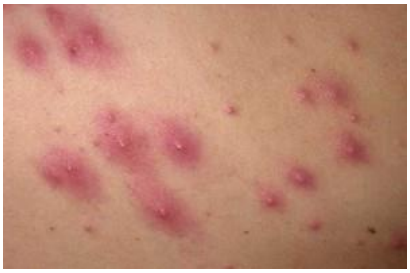
Healthy skin is like a solid brick wall, the natural lipids act as the mortar. It is waterproof and protective.

Skin affected by eczema is like an old dry stone wall, the cells are shrunken and lipids are reduced. It lets water out and dirt, irritants and bacteria in.

The **Emollient** creates a protective layer to restore the waterproof nature of the skin.

- **Correct application**

Apply emollients **liberally and frequently** (at least 3-4 times a day). It is particularly important to use emollients during or after bathing.



The emollient should be applied smoothly in the general **direction of growth of body hair** in order to prevent accumulation at hair bases which might predispose to **folliculitis** (see picture). They should not be rubbed in.

- **Types of emollients**

Healthcare professionals should offer a choice of un-perfumed emollients to use every day for moisturising, washing and bathing. This should be tailored to the individual's needs and preferences.

Ointments	Creams
Greasy base	Lighter and more cosmetically acceptable
Ideal for dry skin	Ideal for wet or infected skin
Has occlusive properties	Contain preservatives which may cause an allergic reaction
Unsuitable for infected and hairy areas	Can sting
Contain fewer preservatives	Soak into skin faster than ointments.

'Leave-on' emollients should be prescribed in large quantities (250–500 g weekly) and made easily available for use at nursery, pre-school, school or work.

Emollient soap substitutes contain emollient ingredients with very mild emulsifiers. They are used instead of soap and other detergents e.g. Cetraben cream, Epaderm ointment, Hydromol ointment.

Adjuvant emollient products contain additional ingredients such as antipruritics and antiseptics e.g. Dermol 500, Dermol 200.

- **Total emollient therapy**

1) Cleanse with a soap substitute (try an emollient that doubles up as a soap).
2) Gently pat skin dry with a soft towel (do not rub).
3) Liberally apply emollient to whole of body (in the direction of the hair).
4) Apply topical steroids when the emollient has absorbed.
5) Frequently apply emollients during the day at least 3-4 times or when the skin feels dry.

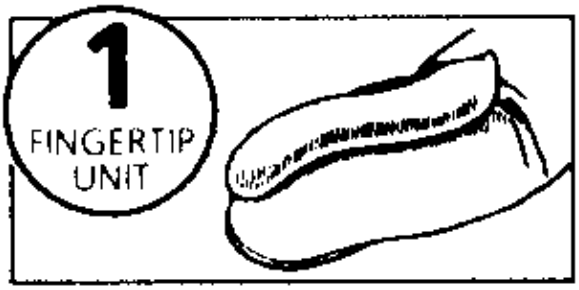
Caution

- Aqueous cream has been shown to damage the skin barrier rather than repair it and it can sting.
- **Olive oil is not recommended** as it has high levels of oleic acid which may have a negative impact on the skin barrier.
- Paraffin based products – potential fire hazard (avoid naked flames/smoking).
- Greasy emollients can be very slippy!

Application of topical steroids

'Steroids' are a group of natural hormones, but are also produced synthetically for drug treatments. Topical steroids are a valuable tool in the management of eczema. They reduce redness and soreness (inflammation) and can be very effective in controlling flare-ups, as they give the skin a chance to heal. They come in different strengths (mild, moderate, potent and very potent). In general, ointments are preferred to creams.

The **finger-tip unit** is a validated method for applying topical corticosteroids in safe quantities. One finger-tip unit is a squeeze of cream or ointment along the index finger from the tip to the first finger joint. This weighs approximately half a gram and will cover a surface area of two adult hands (including the fingers).



Fingertip units required for a single treatment of various regions in children and adults adapted from. The unit is measured using an adult finger.

Age	Face and neck	One upper limb	One lower limb	Trunk	Whole body
3–6 month	1	1	1.5	2.5	8.5
1–2 years	1.5	1.5	2	5	13.5
3–5 years	1.5	2	3	6.5	18
6–10 years	2	2.5	4.5	8.5	24.5
Adult	2.5	4.5	7.6	13.5	40

- **Different strengths and frequency of application**

Topical steroids should be used **once to twice daily** (Elocon is only once daily). Used appropriately topical steroids are very effective and safe to use. However used inappropriately topical steroids may cause side effects including thinning of the skin.

Potency (strength)	Topical steroid
Mild	• **Hydrocortisone** cream, ointment 0.5%, 1%, 2.5% • Fluocinolone 0.0025% cream (**Synalar 1 in 10 Dilution**®)
Mild with anti-microbial/ antifungal	• Hydrocortisone 1% & miconazole 2% cream, ointment (**Daktacort**®) – (antifungal) • Hydrocortisone 0.5% & nystatin 100,000 units/g cream (**Timodine®**) - (antifungal)
Moderate	• Clobetasone butyrate 0.05% cream, ointment (**Eumovate**®) • Betamethasone valerate 0.025% cream, ointment (**Betnovate RD**®) • Fluocinolone 0.00625% cream, ointment (**Synalar 1 in 4 Dilution**®)
Moderate with anti-microbial and antifungal	• Clobetasone butyrate 0.05%, oxytetracycline/® nystatin cream (**Trimovate**®) – (antifungal and antibiotic)
Potent	• Betamethasone valerate 0.1% cream, ointment, scalp application (**Betnovate**®) • Fluocinolone 0.025% cream, ointment, gel (**Synalar**®) • Mometasone furoate 0.1% cream, ointment, lotion (**Elocon**®)
Potent with anti-microbial/ antifungal	• Betamethasone dipropionate 0.064% & clotrimazole 1%, cream (**Lotriderm**®)- (antifungal) • Fluocinolone acetonide 0.025% & clioquinol 3% cream, ointment (**Synalar C**®) – (antiseptic)
Very potent	• Clobetasol 0.05% cream, ointment, scalp application (**Dermovate**®)
Very potent with antimicrobial and antifungal	• Clobetasol 0.05%, neomycin/nystatin cream, ointment (**Dermovate NN**®) – (antibiotic & antifungal)

The potency should be tailored to the severity of the person's atopic eczema. They should be used as follows:

- Mild topical steroids for use on the face, breasts, genitals, eyelids and armpits. Except for short-term (3–5 days) where moderate or potent preparations can be used for severe flares in vulnerable sites. Consult clinician before use of potent substances in these areas.
- Do not use very potent preparations in children without specialist dermatological advice.
- Use moderate or potent steroids for 7-14 days mazimum in skin creases.

- Do not use very potent steroid (e.g. Dermovate/ Dermovate NN) without specialist advice.

Doctors vary in their preference for how to stop topical steroids: some may suggest they are stopped abruptly, others suggest a gradual decrease in potency, and others advise a “maintenance regimen”: using them intermittently for a few weeks after a flare of eczema has settled.

A different topical corticosteroid of the same potency should be considered as an alternative to stepping up treatment if tachyphylaxis to a topical corticosteroid is suspected in children with atopic eczema.

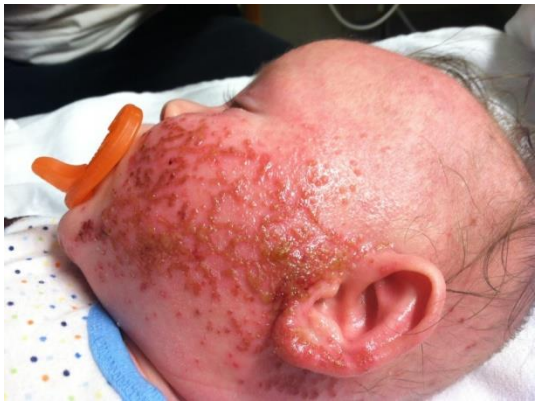
Identification, prevention and management of infection

- **Bacterial infection**

Atopic eczema can cause the skin to become cracked and broken increasing the risk of infection with bacteria including staphylococcus and/or streptococcus.

Signs of a bacterial infection:

- fluid oozing from the skin
- a yellow crust on the skin surface
- small yellowish-white spots appearing in the eczema
- the skin becoming swollen and sore
- a high temperature (fever) and generally feeling unwell



Treatment: Systemic antibiotics active against Staphylococcus aureus and streptococcus for 1–2 weeks.

The use of topical antibiotics in people with atopic eczema, including those combined with topical corticosteroids, should be reserved for cases of clinical infection in localised areas and used for **no longer than 2 weeks**.

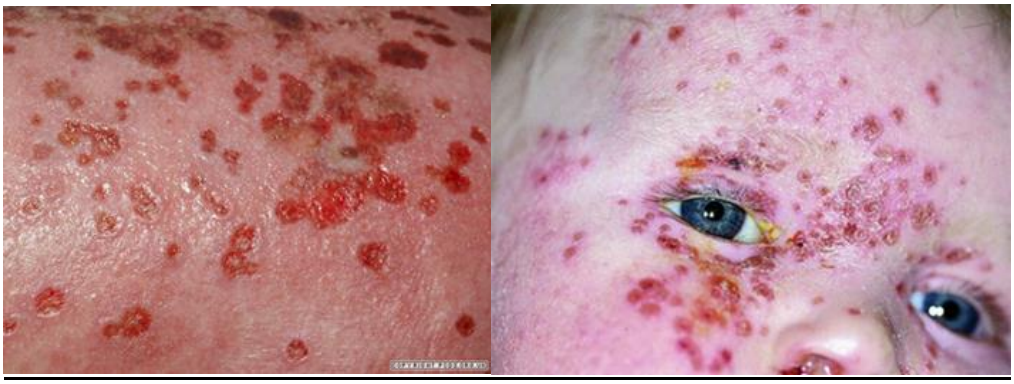
- **Eczema herpeticum**

Parents are advised not to allow people who have the cold sore virus to have close contact with their child who has eczema.

Signs of eczema herpeticum are:

- Areas of rapidly worsening, painful eczema
- Clustered blisters consistent with early-stage cold sores

- Punched-out erosions (circular, depressed, ulcerated lesions) usually 1–3 mm that are
- Uniform in appearance (these may coalesce to form larger areas of erosion with crusting)
- Possible fever, lethargy or distress.



Treatment: Systemic aciclovir should be started immediately and the child should be referred for same-day specialist dermatological advice.

- If eczema herpeticum involves the skin around the eyes, the person should be treated with systemic aciclovir and referred for same-day ophthalmological and dermatological advice

- **After Infection**

Obtain **new supplies of topical atopic eczema medications after treatment** for infected atopic eczema. Products in open containers can become contaminated with micro-organisms and act as a source of infection.

Antiseptic products with Benzylkonium chloride, Triclosan or Chlorhexidine (e.g Dermol 200, 500 & 600 and Oilatum plus bath additive) should be used, at appropriate dilutions, as adjunct therapy to decrease bacterial load in children who have recurrent infected atopic eczema. (Long-term use should be avoided.)

Environmental management

Temperature

Extremes in temperature can flare eczema and cause discomfort. Cooler temperatures are preferential. Turn radiators off in rooms and keep areas well ventilated.

Pets

Furry pets can exacerbate eczema. Eczema sufferers should be advised not to buy/acquire furry animals in view of this. Even when cats are removed from an environment the protein in the saliva, which causes the allergic reaction can remain for several years.

Smoking

Cigarette smoke will irritate the skin and smoking near people with eczema should be avoided.

Clothing

Natural fibres are best suited but woollen fibres should be avoided as they irritate the skin.

Management at nursery/ school

Creams for nursery/ school/ work

Schools and nurseries can only store and apply prescribed medicaments. It is the parents'/ carers responsibility to ensure medicaments are in date and they do not run out.

Parental communication with nursery or school

Parents/ carers must update school or nursery of any changes of updates.

Need for health care plan?

Health care plans can help schools and nurseries when treatments are complex or the child has allergies. Speak to the health visitor or school nurse they can write and implement the plan with the parent/ carer.

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Practical tips

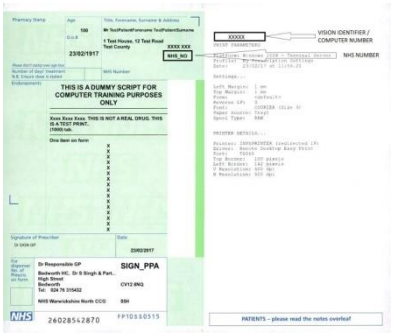
Clean scoop- A clean teaspoon should be used to remove medicaments from tubs in order to reduce cross contamination. New tubs should be prescribed after a skin infection to reduce the likelihood of reinfection.

Washing machine maintenance- A build-up of creams and ointments in a washing machine can perish rubber pipes and seals. Patients should be advised to regularly do a boil wash in an empty machine with a scoop of biological powder in.

Making a bubble bath- If children miss a bubble bath a scoop of their ointment emollient eg Hydromol ointment or Epaderm ointment can be whipped up with a small amount of water and added to a running bath.

Support groups- Patients and their families should be signposted to support groups. A current list can be found on: www.BAD.org.uk

Fun- Make treatment times fun for young people. Treatment tubs can be decorated with stickers and star charts can help to ease treatment times.



Managing prescriptions- Patients should be encouraged to obtain a further supply of treatment when they are half way through their current stock.

DON'T use other people's medicaments or bought products of unknown provenance- the active ingredients are unknown, could be detrimental to the treatment and can cross react with prescribed medicaments. People should be advised not to use them and that prescriptions cannot be issued while they are still using the products.

Little tips to make your life easier:

1) Ask for a small tub/tube of emollient to be prescribed to keep in nappy bag.
2) Don't apply a greasy emollient prior to going out in the sun.

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Eczema Guidelines

Severity of eczema

Mild
Areas of dry skin, infrequent itching (with or without areas of redness)

Moderate
Areas of dry skin, frequent itching, redness (with or without excoriations and localised skin itching)

Severe
Widespread areas of dry skin, incessant itching, redness (with or without excoriation, extensive skin thickening, bleeding, oozing, cracking)

Quality of Life
should be assessed during the consultation (doesn't always correlate with severity)

Mild Impact
Little impact on everyday activities, sleep and psychosocial wellbeing

Moderate Impact
Moderate impact on everyday activities and psychosocial wellbeing, frequently disturbed sleep

Severe Impact
Severe limitation of everyday activities and psychosocial functioning, nightly loss of sleep

Emollients
These smooth, soothe, hydrate and protect the skin. They should be used in all patients with eczema. Patient choice is key.

Mild Eczema
- Cetraben Cream
- E45 Cream

Moderate Eczema
- Aveeno Cream
- Diprobase Cream
- Doublebase Gel
- Oilatum Cream
- Unguentum M Cream

Severe Eczema
- Hydromol Ointment
- Epaderm Ointment
- WSP:LP (50:50)
- WSP
- YSP

Recommended routine for emollients

- Wash with soap substitute in bath.
- Apply as required throughout the day
- Apply emollient in a downward direction.

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- Apply emollients 3 – 4 times per day
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- If required elasticated viscose stockinette garments at night.

- Wash with soap substitute in bath.
- Apply emollients 3 – 4 times per day
- Apply emollient in a downward direction.
- If required elasticated viscose stockinette garments during the day and/or at night.

All emollients (except Doublebase Gel and Liquid Paraffin) can be used as soap substitute. (Aqueous cream may be used as a soap substitute but not recommended as an emollient because it may cause stinging in a high proportion of patients). Paste bandages may be considered in patches of lichenified eczema on the limbs.
Generally an adult using regular emollients will require 500g and a child 250g per week.

Topical steroids

Mild Eczema
First line
- 1% Hydrocortisone cream/ ointment

Second line
- Synalar 1 in 10 cream

Moderate Eczema
First line
- Eumovate cream/ ointment

Second line
- 2.5% Hydrocortisone cream/ ointment
- Betnovate-RD cream/ ointment
- Synalar 1 in 4 cream/ ointment

Severe Eczema
First line
- Betnovate cream/ ointment

Second line
- Synalar cream/ gel/ ointment

Do not use if under 12 months of age unless under specialist advice

Guidance for topical steroid use
1 FTU (0.5g) will cover an area of affected skin the size of two adult palms

- Apply to affected areas once or twice daily (before or after emollient) until redness and itching has completely settled, and then continue for a further two days then reduce frequency of application not potency. Restart as soon as redness and itching appears.
- Consider secondary infection if not improving with a potent steroid after 14 days.
- Use mild topical steroids for face and neck but moderate for 3-5 days during flares.
- Use moderate or potent steroids for 7-14 days max in flexures.
- It may take 6 weeks of a potent topical steroid to gain control in some cases. Consider a combined antibiotic and topical steroid preparations for localised infections but do not use for more than 2 weeks (e.g. Fucidin H or Fucibet).
- Do not use very potent steroid (e.g. Dermovate cream/ ointment) without specialist advice.
- Complete a treatment plan and give to the patient/ carer.