GUIDELINES FOR THE DIAGNOSIS AND ASSESSMENT OF ATOPIC ECZEMA/DERMATITIS

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Definition:

Atopic Eczema is a common chronic inflammatory skin disease. The cause is complex and not fully understood. Both genetic and environmental factors are likely to contribute, with defects in epithelial barrier function arising from abnormalities in structural proteins such as filaggrin making the skin both excessively permeable and more prone to damage from environmental irritants and allergens.

Atopic Eczema is usually itchy and is characterised by observable changes within the skin that include redness, blistering, oozing, crusting, scaling, thickening and sometimes colour change although not all of these changes will necessarily occur together.

Atopic Eczema affects both sexes equally and usually starts in the first months of life. In the UK it affects 15-20% of children and 2-10% of adults. The most common progression of Atopic Eczema is for it to resolve during childhood, but may persist into adult life or recur in the teenage or early adult years. Occasionally, it may develop for the first time in mature adulthood.

Diagnosis:

The diagnosis of Atopic Eczema is based on visual assessment, clinical/physical examination and patient history. There are no laboratory or diagnostic tests for Atopic Eczema. Features to consider when making a diagnosis are summarized in the Table 1 below: The UK Working Party Diagnostic Criteria. Please note this criterion was designed for research and cannot be applied to young children.

Table 1: UK Working Party Diagnostic Criteria for Atopic Eczema:

The patient must report an itchy skin condition (or parental report of scratching or rubbing in a child) in the past 12 months, plus three or more of the following:

- Visible flexural Atopic Eczema involving the skin creases, such as the bends of the elbows or behind the knees (or visible eczema of the cheeks and/or extensor surfaces in children aged 18 months and under)
- Personal history of Eczema as above
- Personal history of dry skin in the last 12 months
- Personal history of Asthma or Allergic Rhinitis (or history of Eczema in a first degree relative of children aged under 4 years old)
- Onset of signs and symptoms under the age of 2 years (this criterion should not be used in children under 4 years)

Healthcare professionals should be aware that in Asian, black Caribbean and black African children, Atopic Eczema may present differently, it can cause skin darkening as opposed to skin reddening (erythema) and can affect the extensor surfaces rather than the flexures. Discoid (circular) or follicular (around hair follicles) patterns of Eczema may be more common.

Assessment: Assessment requires a careful history and physical examination.

Identification of triggers:

- Irritants like soaps, detergents (including shampoo, bubble bath, washing up liquid), chlorinated swimming pools, sodium lauryl sulphate containing emollients.
- Skin infections: Staphylococcus aureus, Streptococcus pyogenes, herpes simplex (eczema herpeticum) and molluscum contagiosum.
- Contact allergens
- Food and inhalant triggers
- Exposure to family pets
- Stress

Assessment of current and previous treatments:

History should cover:

- Bathing/showering frequency
- Use of soap, soap free cleansers, shampoos
- Use of bath additives
- Emollient/moisturiser including frequency of application, quantity used per week
- Topical steroids including types, site of application, quantity used per week
- Any adverse reaction to topical agents e.g. stinging
- Anti-histamines, antibiotic use
- Localised paste bandages, cotton garment use

Impact of Atopic Eczema:

History should address:

- Psychosocial impact
- Frequency of infections
- Frequency of days off school/activities
- Sleep

Physical Examination:

The examination should include:

- Assessment for diagnostic features of Atopic Eczema or other diagnoses
- Assessment of extent and severity of Atopic Eczema
- Assessment for clinical evidence of secondary infection
- Growth and development – regular monitoring of height and weight is recommended for all children with moderate to severe disease

Investigations: In some instances investigations may be needed to confirm the diagnosis of Atopic Eczema in order to exclude other diagnoses. This should only be done if clinically indicated.

Table 2: Holistic Assessment (Taken from NICE Guidelines 2007)

Skin/Physical Severity	Impact on Quality of Life
Clear - Normal skin, no evidence of active Atopic Eczema	**None** - No impact on quality of life
Mild - Areas of dry skin, infrequent itching (with or without small areas of redness)	**Mild** - Little impact on everyday activities, sleep and psychosocial wellbeing
Moderate - Areas of dry skin, frequent itching, redness (with or without excoriation and localised skin thickening)	**Moderate** - Moderate impact on everyday activities and psychosocial wellbeing, frequently disturbed sleep
Severe - Widespread areas of dry skin, incessant itching, redness (with or without excoriation, extensive skin thickening, bleeding, oozing, cracking and alteration of pigment)	**Severe** – Severe limitation of everyday activities and psychosocial functioning, nightly loss of sleep

Table 3: Topical Steroid Ladder ***Potent/very potent topical steroids should always be avoided in flexures or on faces* the steroids highlighted red are topical preparations we commonly use within Dermatology at both St Helens & Whiston Hospitals**

Mild	Moderate	Potent	Very Potent
Hydrocortisone 0.5% **Hydrocortisone 1%** Hydrocortisone 2.5% With Antimicrobials Canestan HC Daktacort Fucidin H Vioform Hydrocortisone Nystaform HC With Crotamiton Eurax Hydrocortisone	**Eumovate** Betnovate RD Haelan Synalar 1 in 4 Dilution With Antimicrobials **Trimovate** With Urea Alphaderm	**Betnovate** Betamethasone - Valerate Betacap Bettamousse Cutivate Diprosone Elocon Locoid Nerisone Propaderm With Antimicrobials Betnovate N Betnovate C **Fucibet** Locoid C Lotriderm Synalar C Synalar N With Salicylic Acid Diprosalic	**Dermovate** Nerisone Forte
Mild	**Moderate**	**Potent**	**Very Potent**

Stepped Approach to management of Atopic Eczema

Healthcare professionals should use a stepped approach to managing Atopic Eczema. This means tailoring the treatment step to the severity of the Atopic Eczema. Emollients should form the basis of its management and should always be used even when the Atopic Eczema is clear. Management should be stepped up or down according to the severity of symptoms, with the addition of other treatments as listed in **(Table 4 below).**

Table 4: Treatment Options for Atopic Eczema

Mild Atopic Eczema	Moderate Atopic Eczema	Severe Atopic Eczema
Emollients	Emollients	Emollients
Mild Potency topical corticosteroids	Moderate Potent topical corticosteroids	Potent topical corticosteroids
	Topical Calcineurin inhibitors: Protopic / Elidel	Topical Calcineurin inhibitors: Protopic / Elidel
	Paste Bandages: Steripaste / Viscopaste Comfifast Cotton Garments	Paste Bandages: Steripaste / Viscopaste Comfifast Cotton Garments
		Phototherapy
		Systemic Therapy

Emollients:

These are essential in the management of Atopic Eczema, but are generally under prescribed and used. Regular use may reduce flare ups of Atopic Eczema and have a steroid sparing effect. Emollients do not control inflammation. Choice of emollient depends on the patient and their acceptability of a given product. Generally 'greasy' products provide the best emollient effect, but patients may prefer a less oily preparation especially during summer months as it may cause a sweat rash. Emollients come in several forms creams, lotions, ointments and bath / shower oils / gels. Compliance can be improved by explanation on how to use them. Emollients should be applied liberally and frequently within 10 minutes of bathing and 3 to 4 times per day. Approximately 25 g of emollient should be applied per application, sufficient quantities should be prescribed. Emollients should be used even when the Atopic Eczema has improved or even cleared. There is no general consensus as when to apply steroid creams in relation to emollients, most consultant dermatologists advise patients to apply emollients to the whole skin and steroid preparations to the patches of Atopic Eczema, preferably 15 to 20 minutes later.

Topical Corticosteroids:

Topical Corticosteroids are usually used if emollients alone are not enough to manage Atopic Eczema. They are used for short periods during flare ups to reduce inflammation and itchiness and to help the skin heal. They come in four different strengths- mild, moderate, potent and very potent **(SeeTable 3**) they should be applied once or twice daily depending on the severity of the Atopic Eczema and according to body site. Use lowest potency capable of controlling symptoms. Potent preparations should not be used on the face, axilla or groin and in children without specialist dermatological advice. Unlike emollients, which are used several times per day, topical corticosteroids will normally only be used during a flare up of Atopic Eczema.

Topical Calcineurin inhibitors:

Protopic is not recommended for the treatment of mild Atopic Eczema or as first line treatment. Its licence indicates it as an option for second line treatment of moderate to severe Atopic Eczema in adults and children aged 2 years and older that has not been controlled by topical corticosteroids

Elidel is recommended as an option for second line treatment of moderate to severe Atopic Eczema on the face and neck in children aged 2 to 16 years which has not been controlled by topical corticosteroids or where there is serious risk of important adverse effects from further topical corticosteroid use, particularly irreversible skin atrophy.

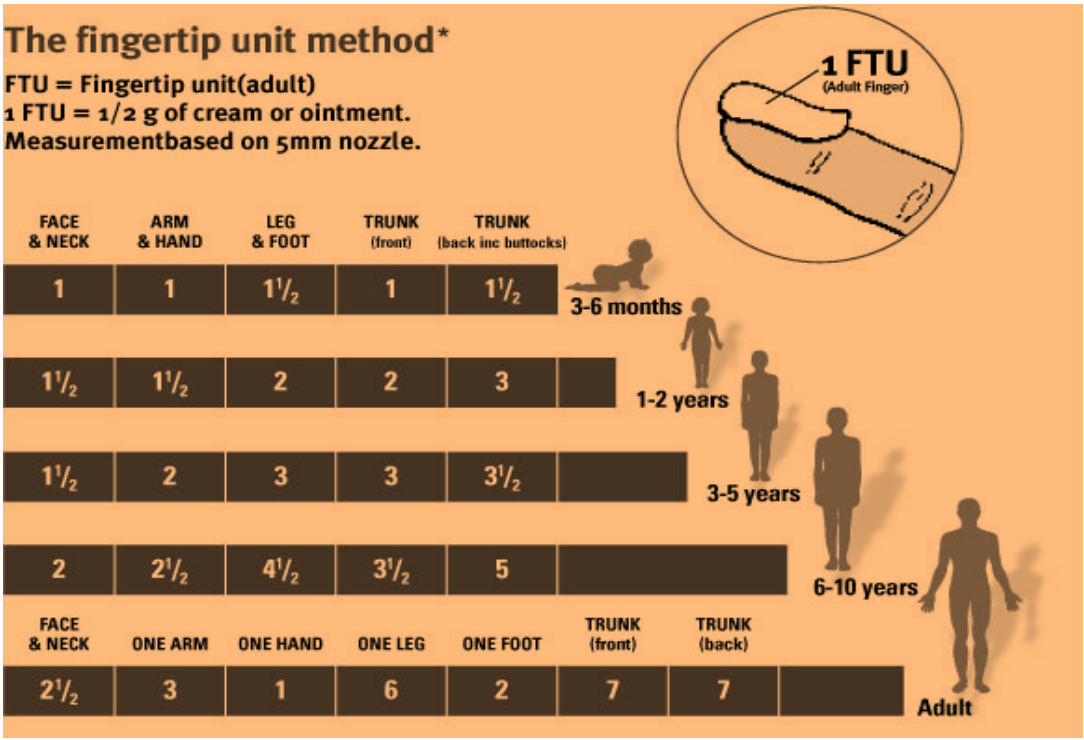
Do not use without specialist advice

Both Protopic and Elidel should not be used under occlusion (bandages and dressings), they should also not be used if the Atopic Eczema is infected. They should not be used long-term.

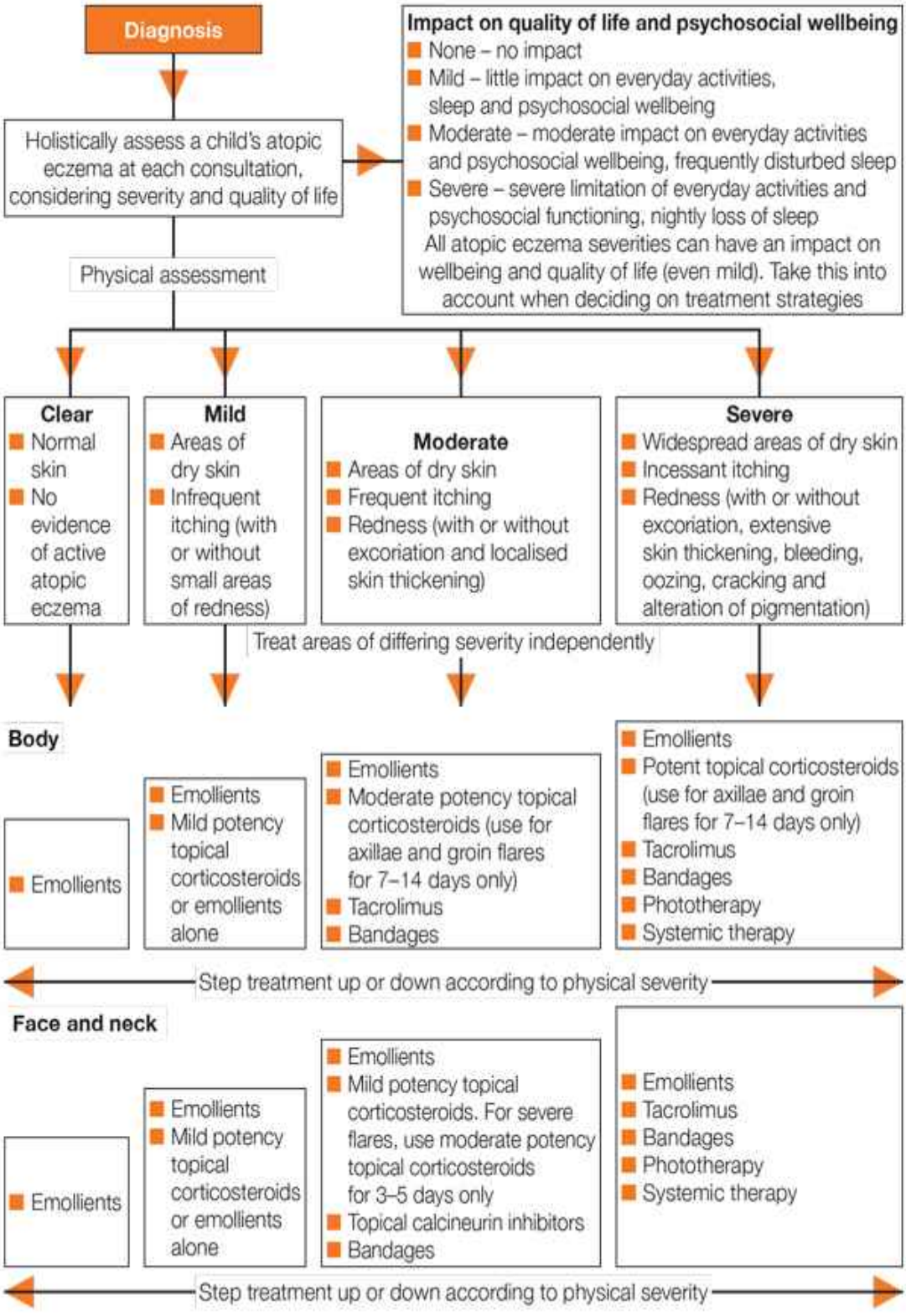
Infection:

Bacterial infections occur when the skin barrier is broken and bacterial organism is introduced, most commonly staphylococcus aureus. Diagnosis can be difficult; infections are suggested by dry, crusted skin which is weeping and reddened, infection should be considered when there is a sudden worsening of the Atopic Eczema. Topical or systemic oral antibiotics and a more rigorous skin therapy regime, including the use of bath emollients with antimicrobials, will usually cure the infection and improve the skin.

Steroid Finger Tip Units:



Diagnosis and Management of Atopic Eczema:



Topical immunosuppressants

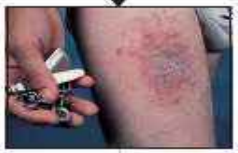
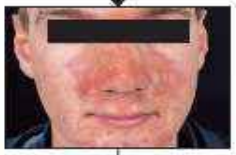
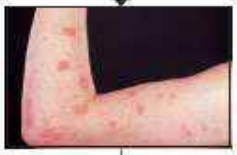
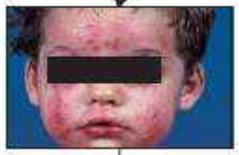
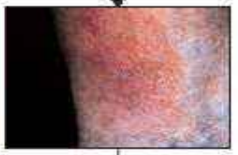
Tacrolimus ointment (Protopic): For moderate to severe atopic dermatitis not responding to conventional therapy (0.03% is equivalent to a weak corticosteroid, 0.1% to moderate potency); may irritate.

Pimecrolimus cream 1% (Elidel): for mild or moderate atopic dermatitis and is promoted for short term use (actively inflamed lesions), and long term intermittent use to prevent progression of 'flares'.

Protopic and Elidel may be particularly helpful for resistant cases of facial eczema (or risk of steroid complications), including children (NICE, 2004).

Management Plan for Eczema

Alert: The rate of bacterial resistance to fucidic acid is increasing to unacceptable levels and so use of Fucidin should be restricted. Fucidin alone must be avoided in cases of infantile eczema, and if secondary infection is strongly suspected then consider topical corticosteroid in combination with flucloxacillin or erythromycin after swabs. Never use Fucidin-H or Fucibet beyond 2 weeks. Weepy and inflamed eczema of the cheeks in young babies is rarely infected and will usually respond to topical cortisone preparations only. Do not resort to mupirocin ointment. Impetigo should be treated with an antiseptic such as chlorhexidine and oral antibiotics.

Hands and feet eczema - chronic	Hands and feet eczema - acute pompholyx	Contact dermatitis	Seborrhoeic dermatitis	Discoid eczema	Atopic eczema	Stasis (varicose)
						
Exclude psoriasis fungus; palms and soles often prominently involved Dry, scaly or fissured areas	Itchy or painful blisters on palms and fingers, toes and soles	Itchy, scaly skin Sites of contact with allergens or irritants Often occupational	Dull red, scaly patches on greasy areas e.g. scalp, face, chest, cheek. Nails, elbows, family history (psoriasis)?	Round or oval patches of red, scaly or weeping skin	Itchy, red and dry skin often in childhood	Elderly patients Varicose veins Oedema
Potent or very potent topical corticosteroid and emollients; polythene occlusion (e.g. Clingfilm or PVC gloves night time); avoid trigger factors/ irritants (e.g. white spirit)	Large blisters may be punctured with sterile needle; potassium permanganate (1:10,000) soaks 10 mins b.d.; potent topical corticosteroid (e.g. Dermovate cream b.d.); oral corticosteroids may be required (e.g. prednisolone 30 mg daily 2 weeks)	Treat acute episodes with potent topical corticosteroid; avoidance measures: pattern of rash suggests allergies e.g. around hairline and eyes with hair dye, creases of body with clothing, ears and wrists with nickel, face and eyes with cosmetics etc.	Tar or ketoconazole shampoo or cream; salicylic acid ointment or corticosteroid scalp preparation; imidazole/ hydrocortisone combination; tar/hydrocortisone combination Lotriderm cream (few days only for face)	Moderate to potent topical corticosteroid, (e.g. Dermovate); sometimes infected - use topical corticosteroid / anti-infective combination (e.g. Fucibet, Dermovate-NN) or addsystemic antibiotic 2 weeks	Topical corticosteroid and emollients (Appendix A); mild for the face and flexures. Elsewhere in adults - moderate to potent; children - mild to moderate; avoid aggravating factors. Suspect Staph. aureus infection early especially in flexures or excoriated skin and add a suitable topical (e.g. Viaform HC, Betnovate C> 2 yrs) or systemic antibiotic (eg flucloxacillin) for 2 weeks only	Moderate to potent topical corticosteroid; titrate topical corticosteroid to lowest effective dose; emollients
Longterm plan: chronic administration at lowest dose to control symptoms	14 days initially and reassess; secondary bacterial infection should be treated with antibiotic (e.g. flucloxacillin)	Review after 1 week and reduce to moderately potent topical corticosteroids for 3-4 weeks; regular application of emollients	Should respond within a few days although lesions usually recur; severe seborrhoeic dermatitis may indicate HIV infection	Lesions settle quickly but new ones usually recur (often a chronic problem)	Persistent lichenified areas require more potent treatment over a longer period (consider tar); viscopaste bandaging for limbs; emollient steroid wetwraps (children)	Compression stockings if circulation is adequate; maintenance therapy with daily mild to moderate steroid, or weekly potent steroid
Poor response Possibility of contact dermatitis	Exclude scabies Regular severe episodes (?patch testing)	For patch testing if recurrent	Failure to respond	Failure to control	Failure of therapy; suspected contact allergy; suspected secondary infection with herpes simplex (start oral acyclovir)	Consider referral if Doppler scanning confirms ischaemia. For patch testing where condition persists

Refer to Hospital

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