Everything you need to know about managing childhood eczema

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Introduction

Atopic eczema (atopic dermatitis) is a common dry, itchy skin condition which usually develops in early childhood, around 70–90% of cases occur before 5 years of age, with a high incidence of onset in the first year of life (NICE CKS 2021) and with as many as one-fifth of children in developed countries now suffering from the condition (Flohr and Mann, 2014). Eczema can have a huge impact on the infants, children, young people and their families' quality of life due to the persistent itching, pain, sleep disturbance and need to apply treatments to maintain control.

Diagnosis

Eczema diagnosis and severity should be based on a detailed history, the clinical presentation, and diagnostic criteria (Box1). The history should include the following and be supported with the Patient Oriented Eczema Measure (POEM) / RECAP (my Eczema Tracker) tool available on the app store, age specific Dermatology Quality-of-life tools (see resources) and visual analogue scales (0 to 10) capturing the child's and/or parents' or carers' assessment of severity, itch and sleep loss over the previous 7 days and nights for monitoring the severity of the eczema, quality of life and response to treatment (NICE 2021):

my Eczema Tracker

Download on the App Store

Assessment Tools

- Patient Oriented Eczema Measure (POEM): http://nottingham.ac.uk/research/groups/cebd/resources/poem.aspx
- University of Cardiff Department of Dermatology Quality-of-life tools: http://www.dermatology.org.uk
- https://www.nottingham.ac.uk/research/groups/cebd/resources/index.aspx

History

- ***Onset:*** When did the eczema first start?
- ***Duration:*** How long has the eczema been present?
- ***Site:*** What areas of the body are affected? What are the worst areas?
- ***Pruritus (itch):*** How bad is the itching, pain or soreness? How does it affect their life? What do they use or do to try to cope with it?
- ***Family history:*** Is there, or has there been, anyone else in the family with a skin disease, eczema, asthma or hay fever?
- ***Hobbies and leisure time:*** What are their hobbies and do they affect the eczema?
- ***Triggers:*** Have they noticed anything make the eczema flare? These can be irritant or allergic.
- ***Clothing:*** Are there any fabrics which flare/irritate the eczema?
- ***Jewellery:*** What type of watches and jewellery do they wear? Many infants and children have bracelets or dummy chains.
- Impact on quality of life: How does eczema affect school, activities, friendships, family and relationships?
- ***Skin care:*** What everyday products (e.g. shampoo, soaps, wipes, make-up, perfumes, after shave etc) do they use? What skin-care products have they used in the past and what are they currently using?
- ***Medication:*** What medicines do they take regularly? What treatments have they used in the past and what are they currently using (these include prescribed, over-the-counter and products purchased from the internet, market stalls etc). Did these improve the eczema?
- ***How do they use their treatments:*** Which areas of the body do they apply the treatments? How often do they use them? How much are they using?
- ***Allergies:*** Do they have any known allergies to medicines or products that come into contact with or are applied to the skin?
- ***Diet:*** Do any foods make the eczema worse? What sort of reaction occurs? Have they excluded any foods?
- ***Growth and development:*** should be monitored as manipulation of diet and severe eczema may impact on the child's growth and development

Box 1: Atopic eczema should be diagnosed when a child has an itchy skin condition plus 3 or more of the following (NICE 2021):

- visible flexural dermatitis involving the skin creases, such as the bends of the elbows or behind the knees (or visible dermatitis on the cheeks and/or extensor areas in children aged 18 months or under)
- personal history of flexural dermatitis (or dermatitis on the cheeks and/or extensor areas in children aged 18 months or under)
- personal history of dry skin in the last 12 months
- personal history of asthma or allergic rhinitis (or history of atopic disease in a first-degree relative of children aged under 4 years)
- onset of signs and symptoms under the age of 2 years (this criterion should not be used in children aged under 4 years).

Healthcare professionals should be aware that in Asian, black Caribbean and black African children, atopic eczema can affect the extensor surfaces rather than the flexures, and discoid (circular) or follicular (around hair follicles) patterns may be more common.

Clinical Presentations

The clinical presentation of eczema varies depending on the type of eczema, site affected and skin type. Flexural eczema is commonly associated with childhood eczema however they may have a mixed clinical presentation of flexural, discoid (often miss diagnosed as ring worm) and extensor surface eczema. When assessing the skin ensure all areas are examined and documented using a body chart. Clinically eczema can be classified into:

- **Acute: the skin is erythematous (red) inflamed, oedematous, dry and flaky. There may be vesicles (small fluid filled blisters), which may coalesce to form large bullae (blisters), which ooze and crust.**
- **Sub-acute: shows features of acute and chronic eczema.**
- **Chronic: the skin is lichenified (thickened) with accentuated skin markings from repeated scratching, picking and rubbing. It is often darker than the surrounding skin and fissures (splits and cracks) may be present.**

In chidren with skin of colour, atopic eczema can affect the extensor surfaces rather than the flexures, and discoid (circular) or follicular (around hair follicles) patterns may be more common with lesions, which in white skin appear red or brown, and appear black or purple in pigmented skin. Mild degrees of redness (erythema) may be masked completely and post inflammatory hypo-pigmentation (reduced) and hyper-pigmentation (increased) may persist after the eczema has settled (Lawton 2015).

Skin Infections

All types of eczema can become infected and are often related to persistent scratching and damage to the skin and contamination of skin care products such as pots of emollients where hands have gone in the pots. It's important to identify the cause/type of infection and initiate the correct treatment, taking samples to confirm the infection may be required based on national guidance, with recent NICE guidance relating to secondary bacterial infection of eczema to not routinely take a skin swab for microbiological testing at the initial presentation (NICE 2021a).

- **Bacterial infections**

Symptoms and signs of bacterial secondary infection can include weeping, pustules, crusts, no treatment response, rapidly worsening eczema, fever and malaise. Not all eczema flares are caused by a bacterial infection, even if there are crusts and weeping

Eczema is often colonised with bacteria but may not be clinically infected and it's important to manage the underlying eczema and flares with emollients and topical corticosteroids, whether antibiotics are given or not (NICE 2021a).Other bacterial infections include folliculitis, impetigo and cellulitis.

- **Viral infections**

The herpes simplex virus (cold sore virus) can spread very rapidly in people with atopic eczema (eczema herpeticum). Although it is rare, it is important to recognise because it can be a serious potentially fatal viral illness, requiring hospitalisation and treatment with systemic or intravenous antivirals: aciclovir. In the early stages vesicle (small blisters filled with clear fluid) surrounded by a bright red halo on the surface of the skin will appear. These vesicles leave punched out erosions on the skin surface which spread very quickly, especially across the face. The patient will feel generally unwell with the skin feeling sore, and painful rather than itchy. If eczema herpeticum is suspected, the patient should be seen by a dermatologist and ophthalmologist (if near eyes) on the same day so treatment can be given promptly (Box 2). Other viral infections include molluscum contagiosum and viral warts (Lawton 2014).

- **Fungal and yeast infections**

Fungal and yeast infections occasionally cause secondary infection in people with eczema. Yeast infections such as candida (thrush) can secondarily infect eczema in warm moist sites such as the nappy area. Fungal infections (tinea) or ring worm (dermatophyte) can develop and often discoid eczema is misdiagnosed as ring worm. If a fungal infection is suspected, skin scrapings, hair and nail samples should be taken for mycology to identify the fungi as applying topical steroids to fungal infections can cause tinea incognito which refers to tinea that has been misdiagnosed and treated inappropriately with topical steroids - the itch may settle a little with topical steroids giving a false sense of security, but the rash progresses. Clinically there tends to be less scale and more pustules (PCDS 2021).

Resources

- British Association of Dermatologists: https://www.bad.org.uk
- British Dermatological Nursing Group: https://bdng.org.uk
- Primary Care Dermatology Society: https://www.pcds.org.uk
- Centre of Evidence Based Dermatology: https://www.nottingham.ac.uk/research/groups/cebd/resources/index.aspx
- DermNetNZ: https://dermnetnz.org
- Cochrane Skin Group: https://skin.cochrane.org
- UK Dermatology Clinical Trials Network: http://www.ukdctn.org
- Eczema Care On Line: http://www.eczemacareonline.org.uk/
- Eczema Written Action Plan (EWAP): http://www.bristol.ac.uk/ewap
- The Dragon in My Skin School Resource: https://www.bcu.ac.uk/health-sciences/research/centre-for-social-care-health-and-related-research/research-projects/eczema-mindlines/the-dragon-in-my-skin

Box 3: Stepped Treatment Options based on severity (NICE 2021)	
Clear: normal skin, no evidence of active atopic eczema	**None: no impact on quality of life**
Mild atopic eczema Skin and physical severity: areas of dry skin, infrequent itching (with or without small areas of redness) Impact on quality of life and psychosocial wellbeing: little impact on everyday activities, sleep and psychosocial wellbeing • Emollients • Mild potency topical corticosteroids	
Moderate atopic eczema Skin and physical severity: areas of dry skin, frequent itching, redness (with or without excoriation and localised skin thickening) Impact on quality of life and psychosocial wellbeing: moderate impact on everyday activities and psychosocial wellbeing, frequently disturbed sleep • Emollients • Moderate potency topical corticosteroids • Topical calcineurin inhibitors • Bandages (initiated by a specialist)	
Severe atopic eczema Skin and physical severity: widespread areas of dry skin, incessant itching, redness (with or without excoriation, extensive skin thickening, bleeding, oozing, cracking and alteration of pigmentation) Impact on quality of life and psychosocial wellbeing: severe limitation of everyday activities and psychosocial functioning, nightly loss of sleep • Emollients • Potent topical corticosteroids • Topical calcineurin inhibitors • Bandages • Phototherapy • Systemic therapy	

Management

Eczema management focuses on the identification and avoidance of irritants/triggers; avoiding scratching, which can further exacerbate eczema symptoms and the regular use of emollients (keep control creams) to retain the skin's barrier function; treating flare-ups using topical corticosteroids (TCS) (Flare control creams) tailored to the severity of the eczema and the child's quality of life, including everyday activities and sleep, and psychosocial wellbeing, using a stepped approach (Box3) (NICE 2021). For those with moderate and severe eczema, management may also involve use of topical calcineurin inhibitors (NICE 2004), bandages, systemic therapy (immunosuppressants) and phototherapy (light therapy) (NICE 2021).

Two treatments used well:

A GUIDE FOR ECZEMA SELF-CARE

Eczema Care Online

- There are two main treatments for eczema.
- Both are needed because they help keep eczema under control in different ways

Learn about more ways to manage eczema at: www.EczemaCareOnline.org.uk

EMOLLIENTS

Moisturising creams

Why? **Reduce flare-ups** by locking water into the skin and keeping things out that may irritate the skin.

Type? **You can use lotions, creams, gels or ointments**. All types are equally effective, but you might prefer one type to another.
Choose the right one for you: **www.bristol.ac.uk/eczema**

Where? Can be used **all over** the body.

When? Use on the skin **every day.** Moisturising creams are used during an eczema flare up and when the skin is clear from eczema.

Are they safe? **Yes.** Sometimes people find they sting when you first put them on, but this should settle after a short time.

TOPICAL CORTICOSTEROIDS

Flare control treatments

Why? **Treat flare-ups** where the skin is more sore or more itchy than usual.

Type? **You can use creams or ointments**. Mild eczema is usually treated with a mild flare control cream. Moderate or severe eczema or eczema that is not getting better may need a stronger flare control cream.

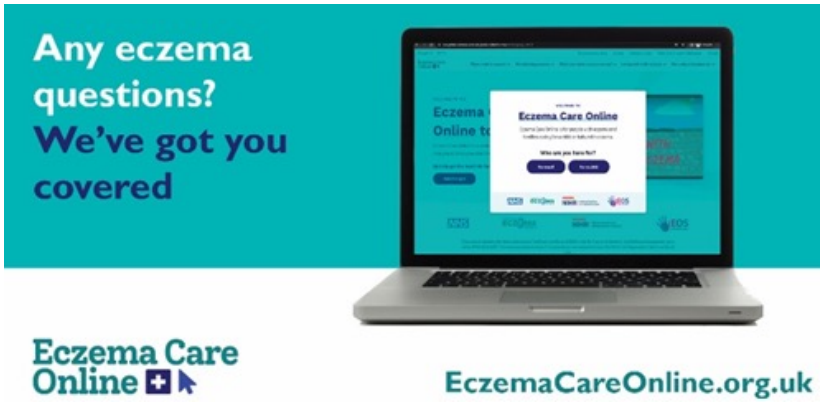
Where? During a flare-up, apply a thin layer to cover the eczema flare-up area. You may need different types for different parts of the body, for example, on the face.

When? Start using once a day **as soon as you spot a flare-up** to get control quickly. After the flare-up is under control, continue using for another two days. If you are using these for more than 4 weeks, discuss this with your doctor.

Are they safe? **Yes.** Flare control creams are safe when following instructions above. Left untreated, eczema flare-ups can lead to more serious problems.

https://www.eczemacareonline.org.uk/en/printables

Much has been written about eczema and management and rather than re write it, the next section signposts you to Eczema Care Online has been designed by people with eczema, parents and carers of children with eczema, and a team of health experts using the most up-to-date research evidence and is funded by the National Institute for Health Research (NIHR), which is funded by the UK Government Department of Health and Social Care. So please look at the link which will provide advice and guidance for two treatments used well: emollients (keep control creams) and topical Corticosteroids (flare control creams)(sometimes they are TCIs (Topical Calcineurin Inhibitors) to gain control and keep control of eczema:



Eczema Care On Line: http://www.eczemacareonline.org.uk/

This can be further supported with an Eczema Written Action Plan (EWAP) see resources and signposting to the patient groups below. If the principles of eczema management do not improve things then referral will be indicated (Box 2).

Box 2: Referral Criteria Atopic Eczema in Children (NICE 2021)

Refer immediately (same day) for specialist dermatological advice if you suspect eczema herpeticum.

Refer urgently (within 2 weeks) for specialist dermatological advice if:
- the atopic eczema is severe and has not responded to topical therapy after 1 week
- treatment of bacterially infected atopic eczema has failed.

Refer for specialist dermatological advice if:
- the diagnosis is uncertain
- the atopic eczema is not controlled based on a subjective assessment by the child or parent/carer
- atopic eczema on the face has not responded to appropriate treatment
- you suspect contact allergic dermatitis
- the atopic eczema is causing significant social or psychological problems
- the atopic eczema is associated with severe and recurrent infections
- the child or parent/carer might benefit from specialist advice on treatment application.

Refer for psychological advice children whose atopic eczema has responded to management but for whom the impact on quality of life and psychosocial wellbeing has not improved.

Refer children with moderate or severe atopic eczema and suspected food allergy for specialist investigation and management.

Refer children with atopic eczema who fail to grow at the expected growth trajectory, as reflected by the UK growth charts, for specialist advice relating to growth.

References
- Flohr C, Mann J (2014) New approaches to the prevention of childhood atopicdermatitis. Allergy 69: 56–61
- Lawton, S (2017) Your Eczema Consultation. Exchange.164: 26-32
- Lawton, S (2015) Eczema: An overview. Nursing in Practice. 86: 32-35
- NICE (2021) Atopic eczema in under 12s: diagnosis and management
- Clinical guideline [CG57]: https://www.nice.org.uk/guidance/cg57
- NICE CKS (2021) Eczema – atopic. https://cks.nice.org.uk/topics/eczema-atopic/
- NICE (2021a) Secondary bacterial infection of eczema and other common skin conditions: antimicrobial prescribing NICE guideline [NG190]: https://www.nice.org.uk/guidance/ng190
- PCDS(2021) Tinea corporis (body), cruris (groin) and incognito (steroid exacerbated): https://www.pcds.org.uk/clinical-guidance/tinea-corporis-body-cruris-groin-and-incognito-steroid-exacerbated

Patient Groups
- Nottingham Support Group for Carers of Children with Eczema: http://www.nottinghameczema.org.uk/index.aspx
- Eczema Outreach Support: https://www.eos.org.uk
- National Eczema Society: https://eczema.org

Guidelines
- NICE (2021) Atopic eczema in under 12s: diagnosis and management
- Clinical guideline [CG57]: https://www.nice.org.uk/guidance/cg57
- NICE (2021) Secondary bacterial infection of eczema and other common skin conditions: antimicrobial prescribing NICE guideline [NG190]: https://www.nice.org.uk/guidance/ng190
- NICE (2004) Tacrolimus and pimecrolimus for atopic eczema Technology appraisal guidance [TA82]: https://www.nice.org.uk/guidance/ta82