How can we look after children with eczema better?

CAPC webinar
Tuesday 12 July 12.00-13.00

Matthew Ridd, GP & Professor of Primary Health Care, University of Bristol

@riddmj

Jon Banks, Senior Research Fellow, NIHR ARC West

www.bristol.ac.uk/capc

Conflicts of interest

MR

- Clinician (GP)
- Researcher
- Father of 2½ children with eczema (1 with food allergy)

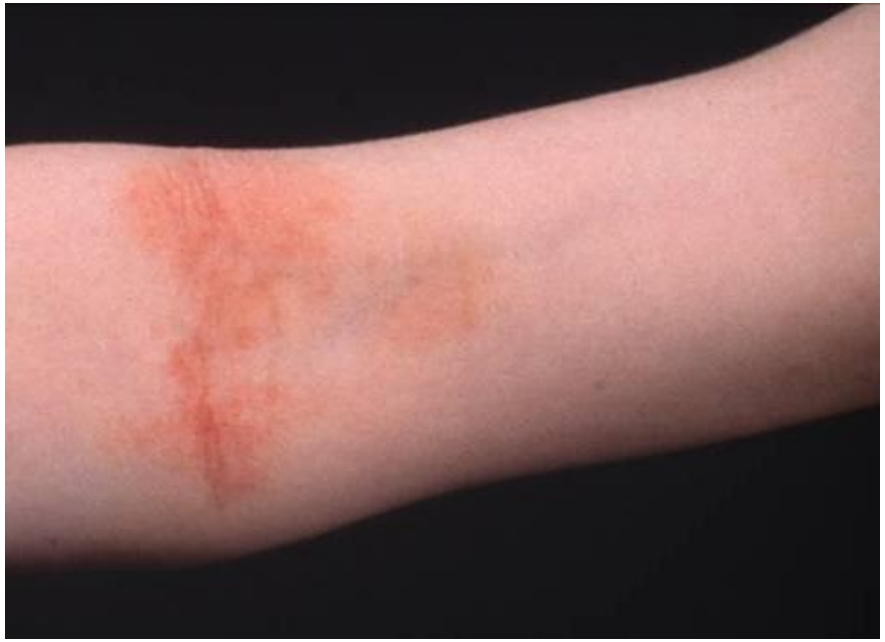
JB

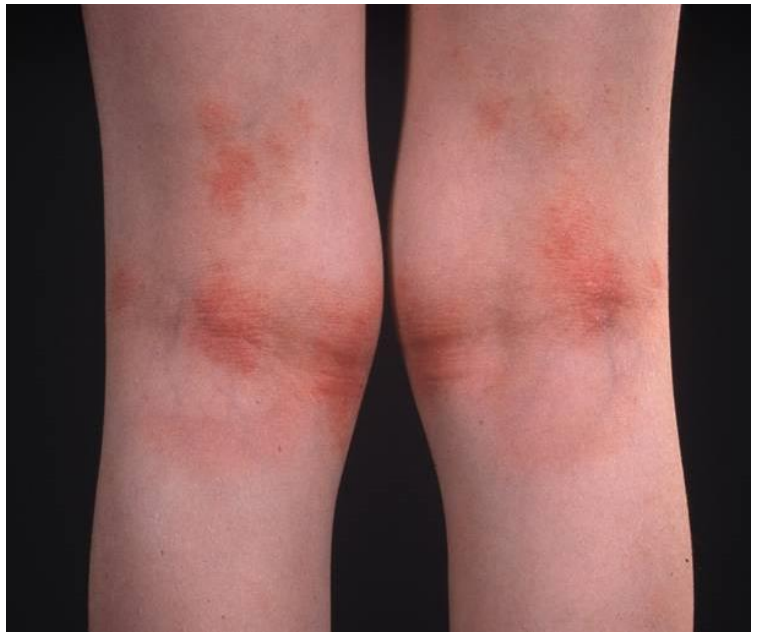
- Qualitative researcher

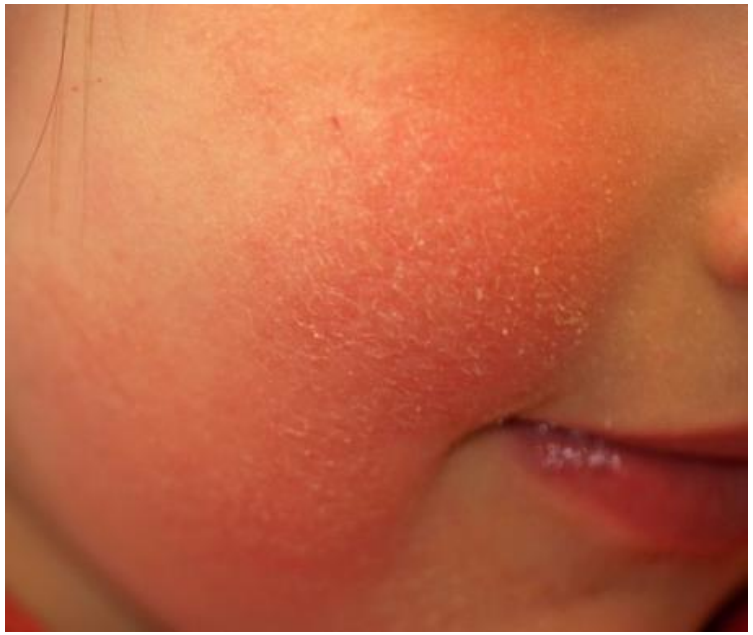
Funded by NIHR

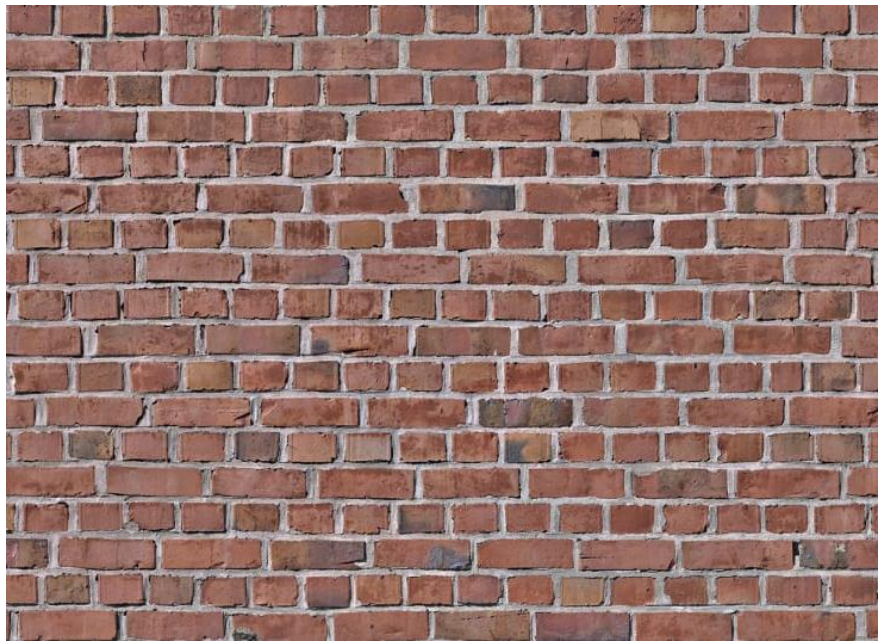
Overview

- Why do we need research into the care of children with eczema in primary care?
- What research should be done and how?
- What does the research say about how best to look after children with eczema (and their carers)?
- How can we support people to look after their child's eczema?
- What research is in the pipeline and how can you get involved?



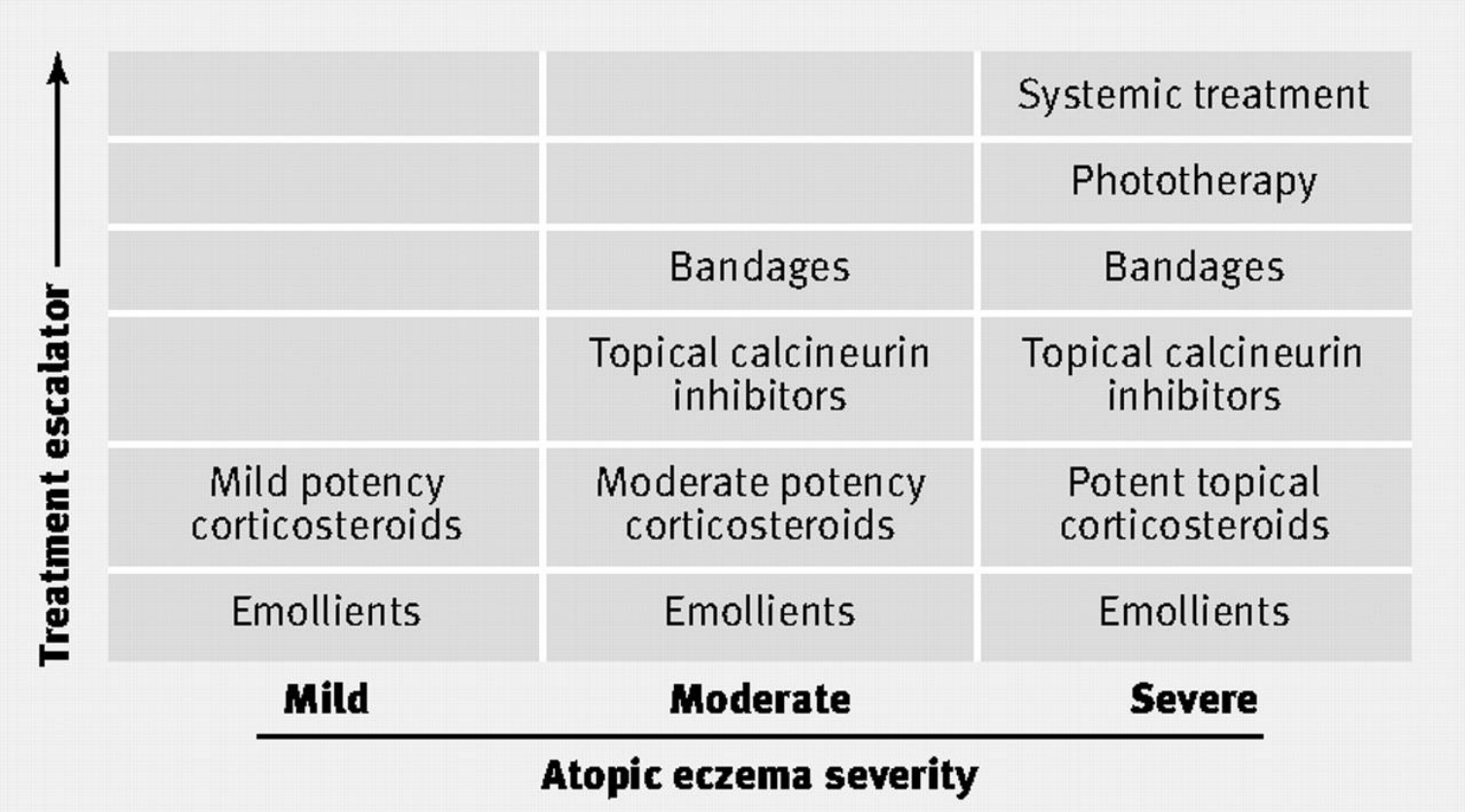






What is eczema?

How is it treated and by who?



Ridd & Purdy. BMJ 2009; 339: b2997
Le Roux et al BJGP 2020; 70 (699): e723

GP consultations

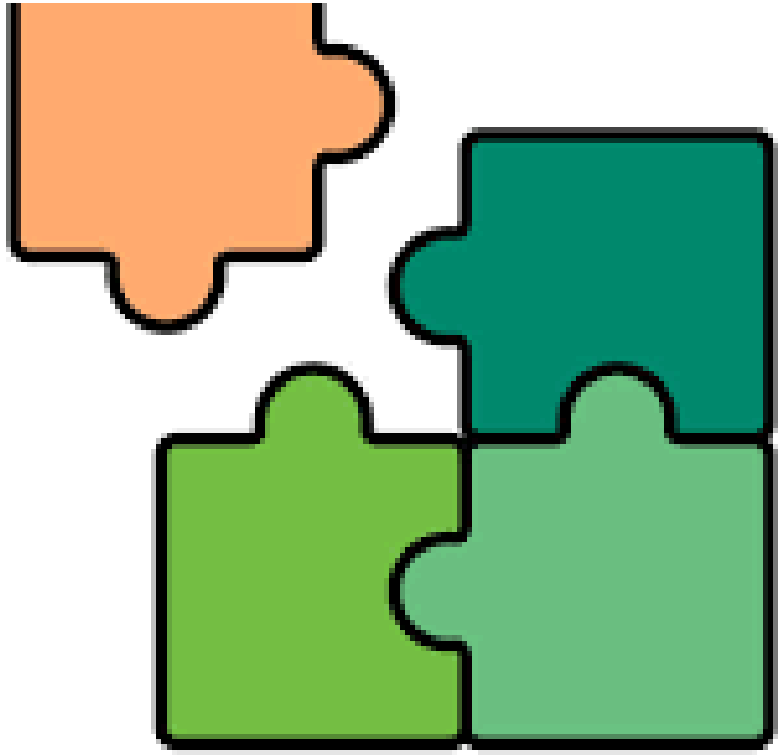
14%

for skin

Eczema severity

90%

mild-moderate



Primary care dermatology training and research

- Poor undergraduate and postgraduate training
- Limited research into “every day” skin problems
- Good research needs people with different skills

Eczema: The GP – Parent/patient relationship

(APACHE study)

- GPs confident diagnosing eczema
- Uncertainty prescribing emollients and topical corticosteroids
- GPs perception of parents as ‘fearful’ of corticosteroids
- Lack of dermatological training in primary care

Le Roux et al. 'GPs’ experiences of diagnosing and managing childhood eczema: a qualitative study in primary care’. *British Journal of General Practice.* 2018; 68 (667)

Eczema: The GP – Parent/patient relationship

Perspectives in eczema consultations	
Patients / Parents	**GPs**
Cause	Management
Impact – psychosocial	The skin
‘Natural’ OTC solutions	Prescription management

- Dissonance between GP and parent/patient
- Parent/patient – don’t feel involved in decision making

Powell et al. BMJ Open 2018; 8: e019633.

Myths and misinformation

- “There's so much … you don't know which bits to believe’
- “Hope you find your ‘eureka’ moment soon”

Santer et al. BMJ Open 2015; 5: e006339

Halls et al. BMJ Open 2018; 8: e022861.

Which research questions?

EPIDEMIOLOGY AND HEALTH SERVICES RESEARCH

BJD
British Journal of Dermatology

The Eczema Priority Setting Partnership: a collaboration between patients, carers, clinicians and researchers to identify and prioritize important research questions for the treatment of eczema

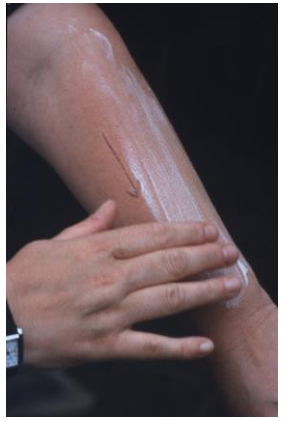
J.M. Batchelor,[1] M.J. Ridd,[2] T. Clarke,[1] A. Ahmed,[3] M. Cox,[4] S. Crowe,[5] M. Howard,[3] S. Lawton,[6] M. McPhee,[1] A. Rani,[3] J.C. Ravenscroft,[6] A. Roberts[3] and K.S. Thomas[1]

- Which emollient is the most effective and safe?
- What is the best and safest way of using topical corticosteroids?
- What role might food allergy tests play in treating eczema?
- How can we reduce skin infections?

Which emollients for eczema?

Emollients and moisturisers for eczema (Review)

van Zuuren EJ, Fedorowicz Z, Christensen R, Lavrijsen APM, Arents BWM



Cochrane Library

Cochrane Database of Systematic Reviews

A sticky decision

Choosing emollients for eczema in children

Dry, itchy skin is an unpleasant feature of eczema or atopic dermatitis. 'Leave on' emollients or moisturisers are commonly prescribed to treat dryness, alongside topical corticosteroids used to treat red, itchy inflammation caused by eczema. There are four main emollient types, but little evidence is available to recommend one type of emollient over another. This graphic describes factors that may help advise children and their carers when choosing an emollients.

Trade offs

There may be trade offs between effectiveness and acceptability, depending on body site, whether the eczema is acute or chronic, and season. The best choice will be one(s) that children and carers are willing to use regularly

Choice of emollients

There are four main formulation types which patients could consider:

Thinner → Lotion → Cream → Gel → Ointment → Thicker

Lotion: The lightest emollients, lotions have the highest ratio of water to oil

Cream: Creams are slightly thicker than lotions, but are still easily absorbed into the skin

Gel: Gels are thicker again, but not as greasy as ointments, and can still be dispensed using a pump

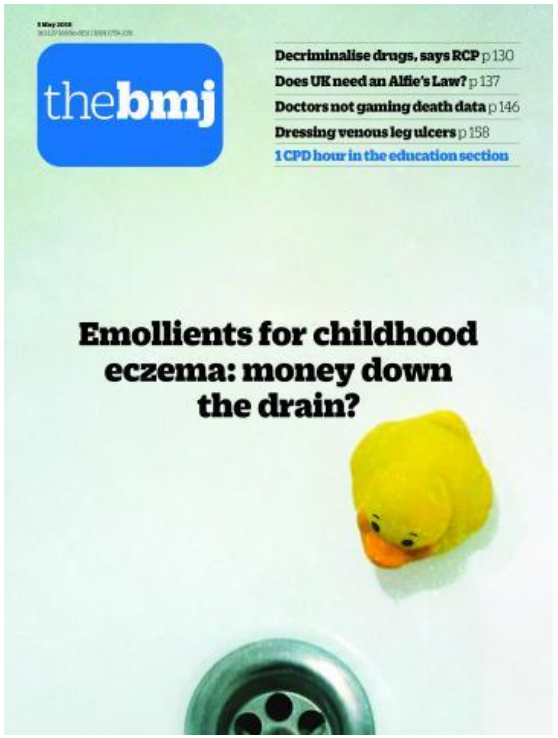
Ointment: Ointments are usually more difficult to use but may be needed for more severely affected patients

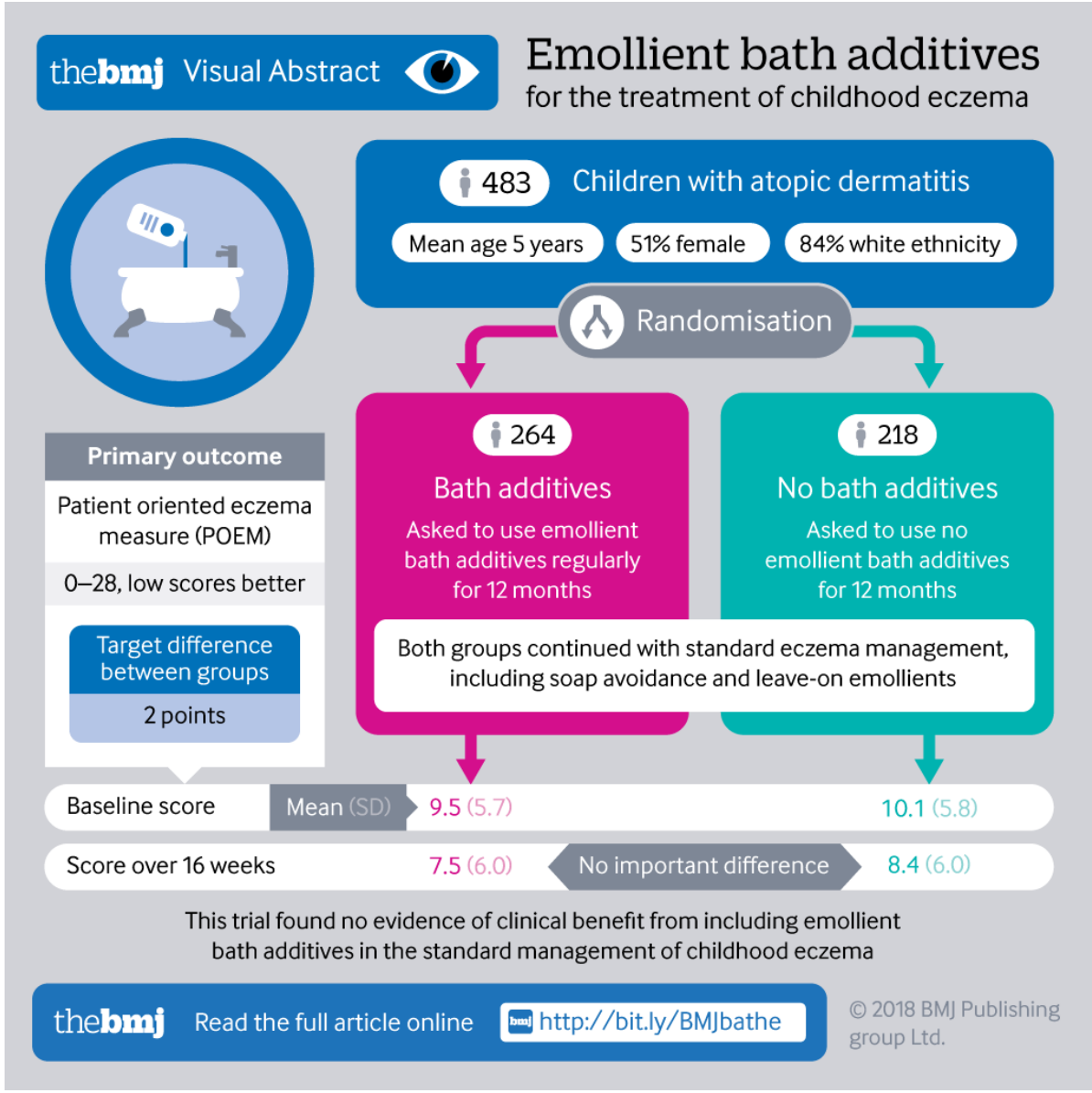
Commonly used container types: Tubs, Pumps, Bottles

Pumps may be preferred because they are convenient to use and may be subject to less bacterial contamination than open tubs

Van Zuuren et al. Cochrane Database of Systematic Reviews 2017; 2: CD012119 Ridd et al. BMJ 2019; 367: l5882

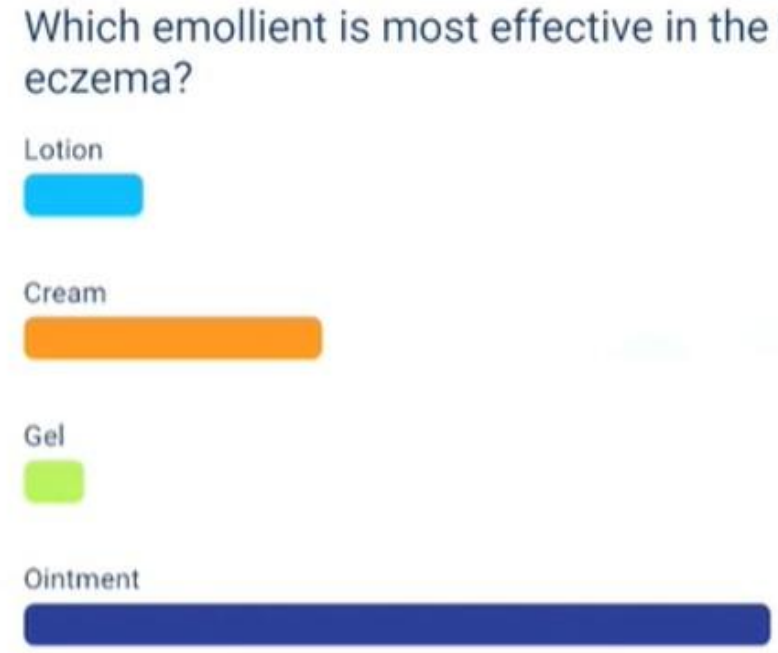
BATHE





Santer, Ridd *et al* The BMJ 2018; 361: k1332

How do you decide which moisturiser to use?



Online s

- 1/3rd tr
- Trade-c accepta
- Reduce reduce

Prescribing formularies in England (2021)

- 72 formularies
- 126 different emollients
- Contradiction between (and within!) formularies

Which are the best emollients to prescribe for treating the symptoms of atopic eczema in children – lotion, cream, gel or ointment?

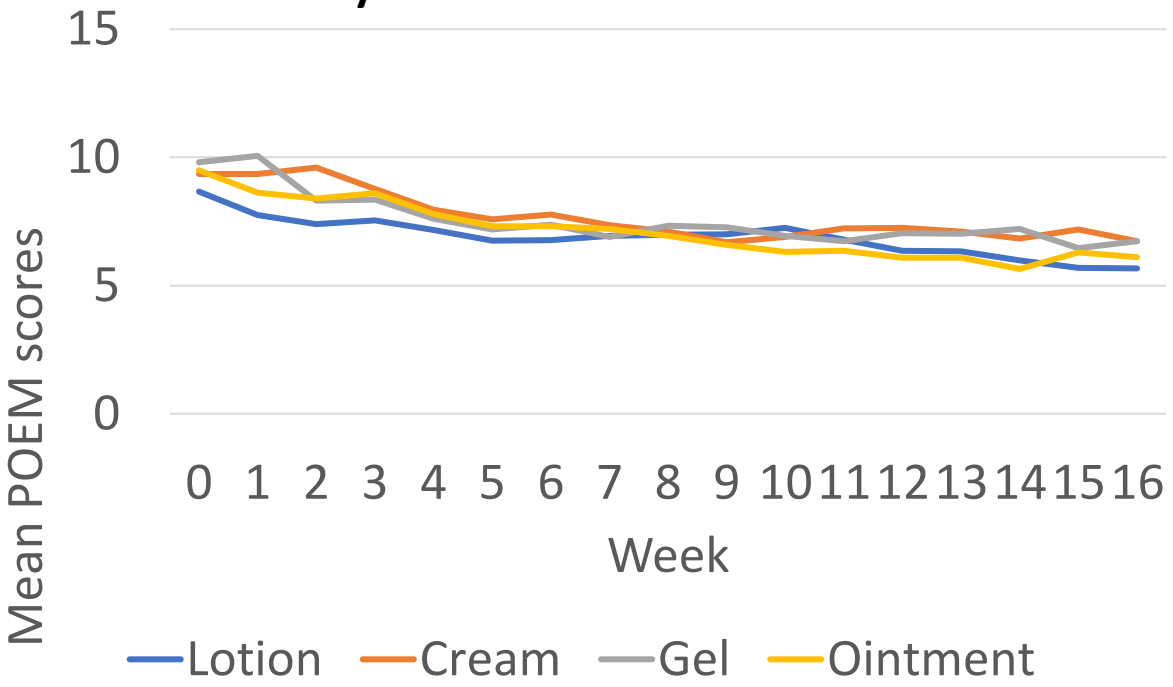
FUNDED BY NIHR | National Institute for Health and Care Research

www.bristol.ac.uk/bee-study

550 children with eczema
6 months to <12 years (median 4 years)
Mild or worse (mean POEM 9.3, EASI 3.5)

- 137 lotions (with glycerol)
- 140 creams (no humectant or lanolin)
- 135 gels (no povidine)
- 138 ointments (no additives)

Primary outcome: POEM over 16 weeks



No difference on any of the other analyses

- Skin appearance
- Quality of life
- Eczema severity

No difference in use of study emollient, other emollient or topical corticosteroids

37%

one or more adverse event

Similar across types (less stinging with ointments)

Parents/children's experiences of using the four different types of emollients

- Effectiveness
- Acceptability

No clear preference

- Experience varied within each emollient type
- Effectiveness and acceptability important BUT
- Effectiveness the primary driver of preference

"It went on really nicely and she was quite excited about having this new cream, It just didn't solve, yeah, if anything it made it so worse. I think if it had just kept it the same, I would have probably carried on using it but I felt it was making it worse and so couldn't then carry on."

"Actually, there is improvement, not necessarily in his skin but I think like my son was saying about it's easier to apply, I think that's where the improvement is. It's easier to apply, it's not as sticky and uncomfortable as the other one."

- Acceptability varied across emollient types
  - ‘Thinner’ types (gel/lotion) easier to apply but perception that they didn’t last and needed more regular applications
  - ‘Thicker’ types (cream/ointment) harder to apply but perceived as offering more ‘protection’

- The best type of emollient is the one that works for the parent/children
- Dialogue between GP and parent/patient

“The lotion that he’s got now soaks in a lot better. Obviously it’s a lot thinner so I’ll put some on, just a little bit, rub it in and almost make sure it’s soaked in and then I tend to put some more on whereas with the thicker one you could put one lot on, you could kind of see it all and know it was going to stay on.”

Sutton et al. 'How parents and children evaluate emollients for childhood eczema’. *British Journal of General Practice.* 2022; 72 (719)

Moisturiser decision aid
(www.bristol.ac.uk/eczema)

University of BRISTOL

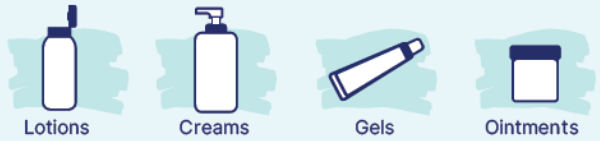
NIHR | National Institute for Health and Care Research

NHS

AN EVIDENCE-BASED DECISION AID

Which type of moisturiser is best for my child's eczema?

The four main types of moisturisers are: lotions, creams, gels and ointments. No type is more effective at treating the dry skin of eczema but how they feel, where they are used or how quickly they sink in, can affect how well we use them. Thinking about what might be important to you and your child, use this aid to help you decide which type(s) of moisturiser to try.



How does it feel?	Thin/light	Thick/heavy
How quickly does it sink in?	Quick	Slow
How often should it be applied?	More	Less
How likely is it to mark clothing?	Less	More

Some people like to use a thicker/heavier type at night before they go to bed, and a thinner/lighter type during the day.

You might want to use different types for different weather/temperatures.

Some people like to use a lighter type for their hands and face, and a heavier type for the rest of their body.

Still unsure? See the next page for more information and advice but opinions vary most for ointments and creams, and overall satisfaction is highest with lotions and gels. So, if you are unsure, starting with a lotion and/or gel may be best.

What are moisturisers?

Moisturisers, or emollients as they are medically known, are for people with eczema and other dry skin conditions. They work by adding and trapping moisture in the skin, which helps to keep it supple and less itchy. There are many different moisturisers, but the four main types are:

- Lotions
- Creams
- Gels
- Ointments

They come in different size and shaped containers: larger ones to keep at home and smaller ones for taking out and about.

How easy is it to put moisturisers on?

Lotions, creams and gels are thin enough to apply from a bottle, pump or tube directly onto the skin. Ointments are thicker and only come in tubs. They must be 'scooped out' using a clean spoon (fingers in pots can introduce germs). Ointments may need softening in the hands before applying to the skin.

How quickly do moisturisers sink in?

Lotions are absorbed quickly and may need to be applied more often. Creams and gels are absorbed more slowly than lotions. Ointments take longer to absorb into the skin but may not need to be applied as often. How often you use it depends on your child's skin. Standard advice is twice daily but more often may be needed for more severe eczema.

Where and how should moisturisers be used?

All types of moisturisers can be used on all parts of the body, and not just areas affected by eczema. Lotions may be better for hairy areas. Wash your hands before applying. Smooth (don't rub) them on using downward strokes in the direction of the hair growth.

Can moisturisers be used instead of soap?

Soap can irritate the skin. Most types of moisturiser can be used instead of soap, in the bath and to wash hands. Ointments need mixing with warm water first.

Safety tip! Rinse the bath thoroughly and use a towel to stand on to avoid any slips in the bath/shower or on tiled floors.

What problems can happen?

All moisturiser types can cause problems. Burning or stinging can occur when the skin is inflamed or if the skin is sensitive to the moisturiser – this is less common with ointments. Unless there is a severe reaction, try and stick with it until the skin gets used to it (e.g. for 2 weeks).

How likely are moisturisers to mark clothes or bedding?

All types of moisturiser can mark clothes or bedding. This is less likely with lotions and more likely with ointments.

FIRE RISK WARNING: Moisturisers get into clothing and bedding and make them burn more easily. They do not completely wash out so keep away from naked flames.

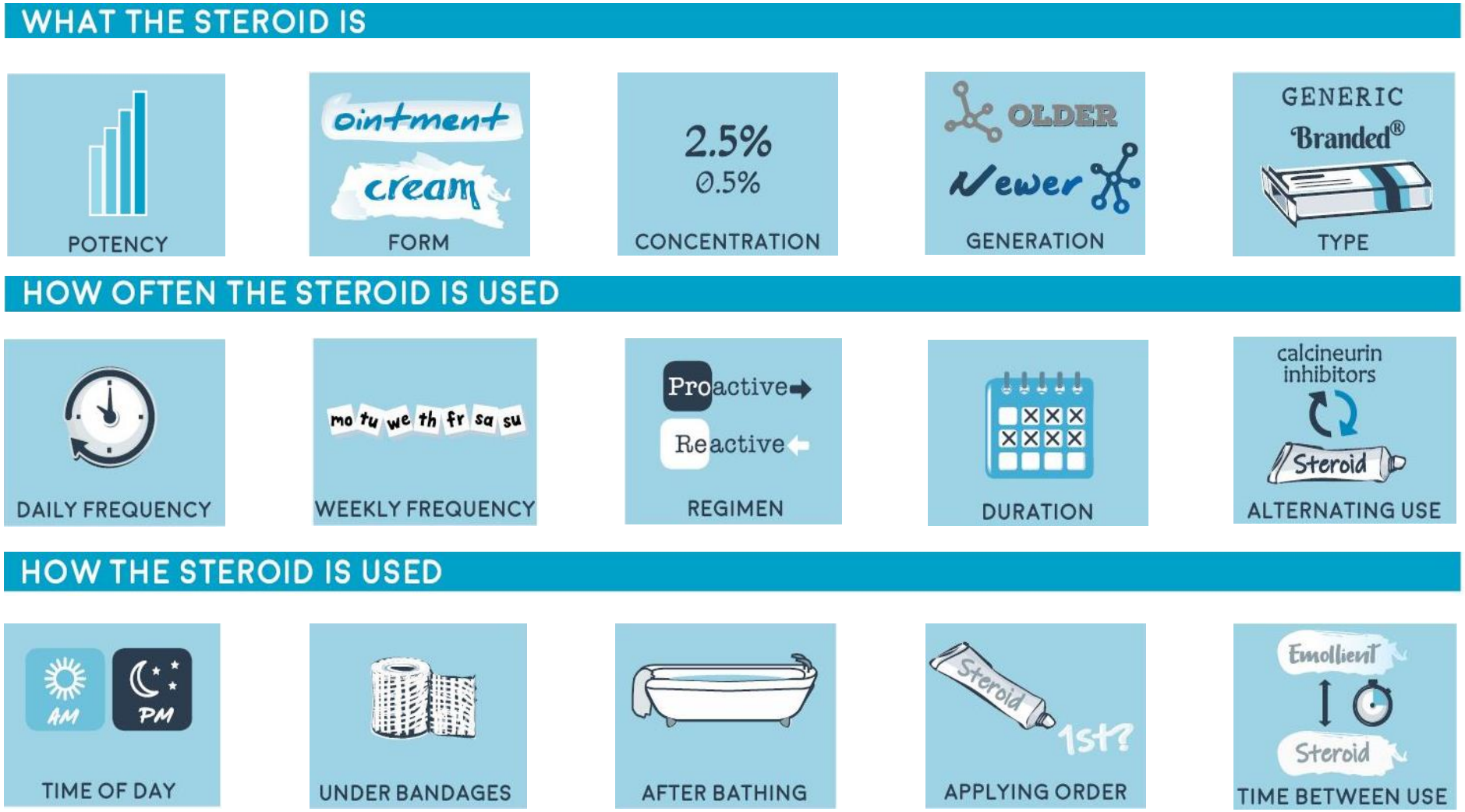
What about other treatments?

Moisturisers should be used with other treatments. For all but the mildest eczema this will usually include flare control creams (topical corticosteroids) to treat the inflammation that causes the itch and eczema rash.

For more helpful eczema resources visit: www.bristol.ac.uk/eczema

Version 1 (13 May 22)

Safe and effective use of topical corticosteroids ("Corticosteroid phobia")



Cochrane Skin

Strategies for using topical corticosteroids (TCS) in children and adults with eczema

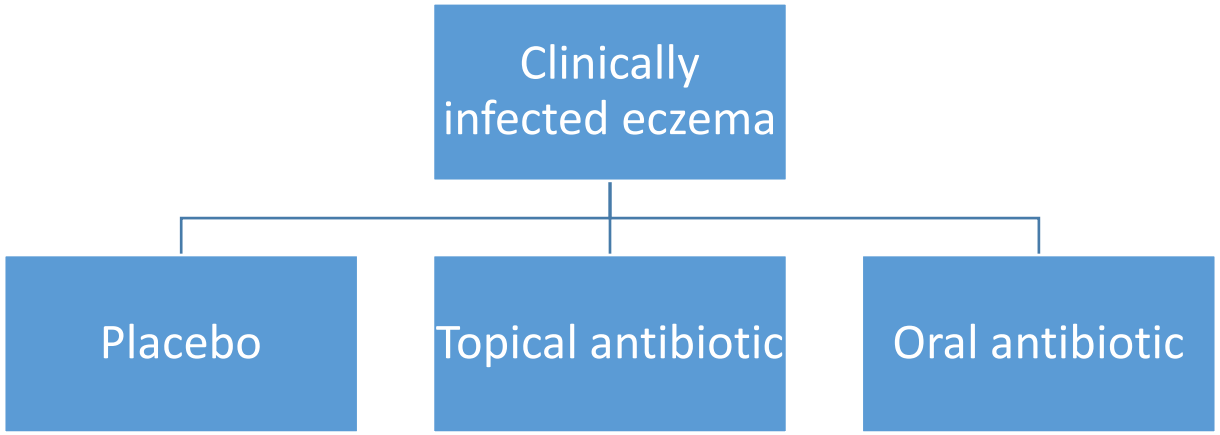
- Use **once daily** (no added benefit from twice a day)
- For flare ***treatment:*** mild eczema = mild TCS; moderate-severe eczema = moderate or potent TCS are probably better than mild TCS.
- For flare ***prevention*** (moderate to severe eczema): "weekend" therapy) is better than no TCS/reactive use
- Across all comparisons 26/3411 cases of skin thinning reported (<1%)

104 studies with 8443 participants comparing any strategy for using TCS to ***treat*** or ***prevent*** eczema flare-ups compared to another. Mostly trials in children; typically 1-6 weeks in duration to ***treat*** flare-ups and 16-20 weeks to ***prevent*** flare-ups.

NIHR | National Institute for Health Research

Antimicrobials for eczema

CREAM
Children with Eczema Antibiotic Management Study



Cochrane Library
Cochrane Database of Systematic Reviews

Interventions to reduce Staphylococcus aureus in the management of eczema (Review)

George SMC, Karanovic S, Harrison DA, Rani A, Birnie AJ, Bath-Hextall FJ, Ravenscroft JC, Williams HC

How are food allergies and eczema related?

Two main types of allergy

Immediate

Delayed

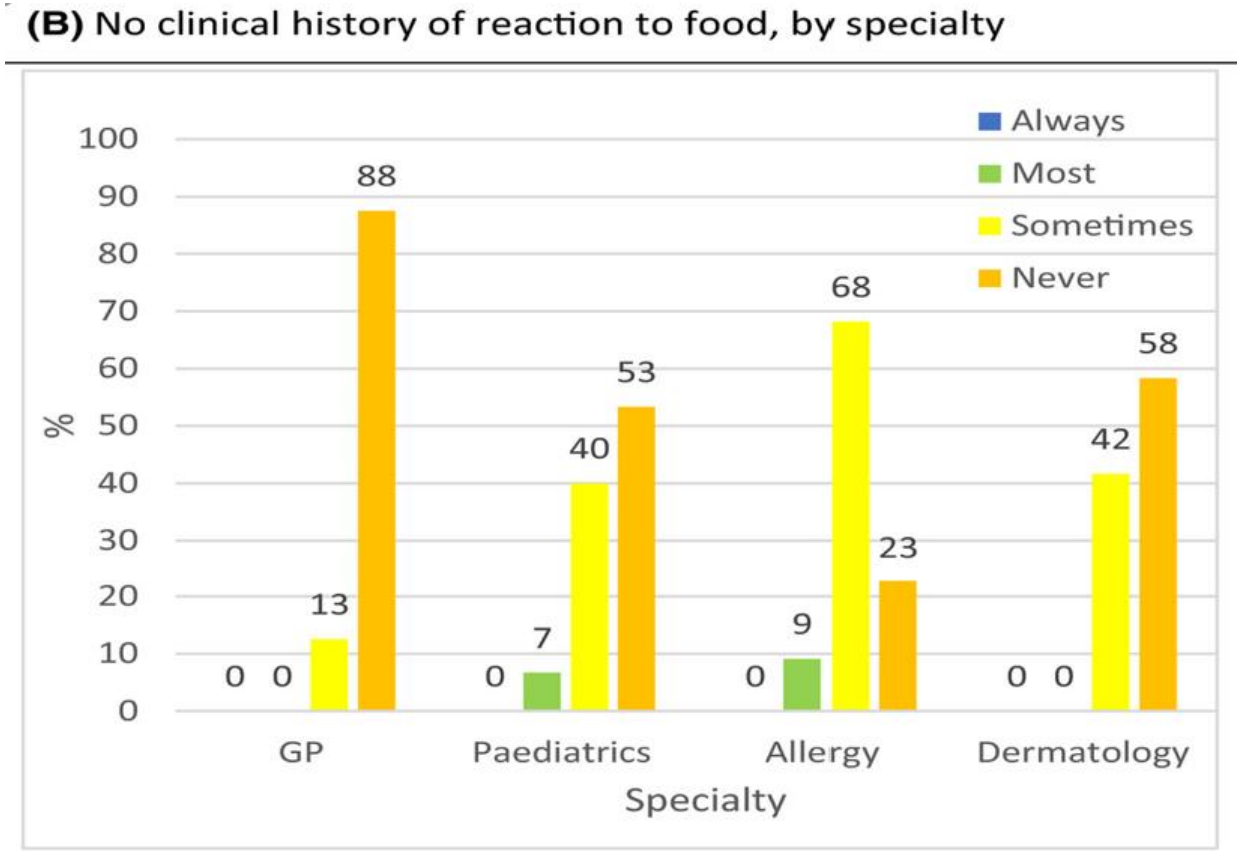
Immediate food allergies more common in children with eczema

- Early onset
- Severe eczema

Allergy tests are imperfect and used mainly for immediate-type allergy

Dietary exclusions for eczema

- Restrictions common (40-75%)
  - Risks: nutritional and loss of tolerance
- Test-guided dietary advice in children with eczema
  - Variation in practice
  - No good evidence



Chan & Ridd Clin Exp Dermatol 2019; 44: e235
Gilbertson *et al* Clin Exp Allergy 2021; 51: 735
Roberts *et al* Clin Exp Allergy. 2022; 52: 442

From TEST to TIGER

www.bristol.ac.uk/eczema-allergy-study @eczema_allergy

TEST
Trial of Eczema allergy Screening Tests

- Feasibility trial (2020)
- Can we do a trial of test-guided food allergy testing?

TIGER
Trial of food allergy (IgE) tests for eczema relief

- Definitive trial (2022-2025)
- Does test-guided dietary advice improve eczema control?
- 493 children 3 months-2 years



WAPs in eczema as asthma?

- WAP = Written Action Plan
  - Patient/carer held instructions to support self-management
- WAPs used for the treatment/management of asthma
- Could WAPs be developed and used for eczema
  - The APACHE study
  - Interviews with parents and GPs
    - What should go in a eczema WAP (eWAP)
  - Focus groups with parents, primary care clinicians, pharmacists and secondary care clinicians
    - Build consensus about WAP content and implementation

Powell et al. 'Developing a written action plan for children with eczema'. *British Journal of General Practice.* 2018; 68 (667)

What in an eWAP? Findings from interviews and focus group data

- What should go in an eczema WAP
  - Individualised action steps for maintenance and flares
  - When to seek medical advice
- Basic general information
  - Eczema causes
  - Rationale for emollients and steroids
  - Triggers and irritants
  - Recognising flares and infection
- Record of treatment preferences
- Signposting to further information

This eczema plan belongs to: _____ Date of birth: _____

Allergies: _____

IMPORTANT! If skin is crusty, weepy or blisters, speak to a healthcare professional at your surgery the same day

Moisturise all over EVERY DAY even when my skin is not red/itchy — STEP 1

My moisturiser:

Use all over and often (usually twice daily)

Avoid soap and bubble bath

My non-soap product (for washing): _____

Bathe for a maximum of 10 mins

How to apply your moisturiser: www.bris.ac.uk/ewap/videos

Red/itchy skin

Clear skin for 48 hours

If skin is red or itchy, continue to use my moisturiser plus a flare control cream/ointment applied to the affected areas only — STEP 2

Flare/control cream/ointment for my face: _____

Once/twice daily for _____ days

One fingertip treats an area the size of 2 adult hands

Flare/control cream/ointment for my body: _____

Once/twice daily for _____ days

Apply at least 15 mins before or after moisturiser using the fingertip unit method www.bris.ac.uk/ewap/videos

No better within 7-14 days

If skin is still not getting better speak to a healthcare professional at my surgery — STEP 3

Prepared by: _____ Date: _____ Role: _____ Review date: _____

[Eczema essentials]

Eczema is a long-term condition that comes in cycles – getting worse and better. Good skin care with two treatments (moisturiser and flare cream/ointment) used well can control most children's eczema.

Links to check out

http://eczema.org/
http://www.nottinghameczema.org.uk/
http://www.nhs.uk/conditions/Eczema-(atopic)
http://eczemaoutreachscotland.org.uk/

Top Tips

- Moisturise every day, even when the skin is clear
- Apply moisturiser using downward strokes – do not rub in
- Do an extra rinse when washing clothes
- Wear soft, comfortable, loose clothing
- Keep fingernails short to prevent damage to skin
- Remember to re-order your creams

Things that can make the skin worse

- Soaps and bubble baths
- Perfumed products
- Detergents
- Wool clothing
- Extremes of temperature (e.g. hot bath water)
- Sand, soil, modelling clay, paints
- Stress

There are different types of moisturisers - if you don't like yours, ask your GP for a different one.

Try to break the "itch-scratch" cycle by tapping or blowing on the itch area; using a cold pack; or wearing cotton gloves at night.

Moisturising the skin keeps moisture in and protects against outside irritants. Find a moisturiser that suits you and your child and use it every day

- It's ok to try different moisturisers, talk to your GP/nurse if you don't like one you have been given.
- Expect to use large amounts – up to a large pump/tub (500ml/g) a week.
- If your moisturiser comes in a tub, use a spoon to scoop the moisturiser out. Getting it out with your hands can contaminate the pot and lead to skin infections.
- Moisturisers can also be used to wash with but take care, they can make the bath/shower slippy
- PAT your skin dry after bathing and apply your moisturiser straight afterwards.
- Applying moisturisers can be messy, but they wash off.
- **FIRE HAZARD** – Keep greasy ointments away from flames.

Flare control creams or ointments such as corticosteroids or calcineurin inhibitors treat red, itchy skin

- Corticosteroids come in different strengths: mild (e.g. hydrocortisone 1%), moderate (e.g. eumovate) and potent (e.g. betnovate/elocon).
- Calcineurin inhibitors (e.g. protopic) are also sometimes recommended.
- Stronger creams and ointments are safe to use if applied in the right way. Follow your plan for which treatment to use where and for how long.

Recognise a flare: A 'flare' is a worsening of the eczema. Skin may become red, sore, (more) itchy, crack or bleed.
Recognise infected eczema: If skin suddenly worsens, weeps or crusts it could be infected and your child may need antibiotics – seek urgent advice. Blisters or cold sores need antiviral treatment – see a doctor the same day.
Food allergy: While it is more common for children with eczema to have a food allergy, it is not usually the cause of eczema.

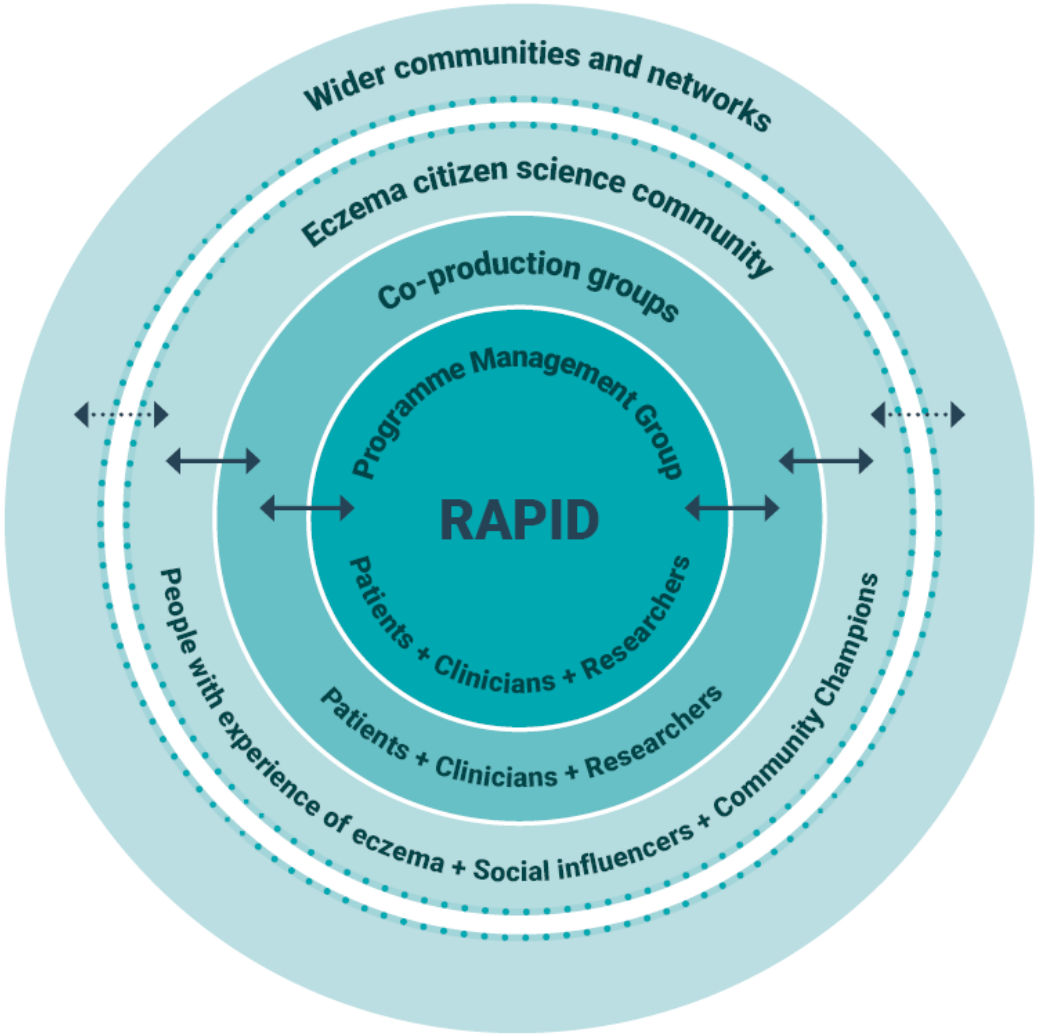
EczemaCareOnline.org.uk

Eczema Care Online

> **It's nice to have somewhere to go when you're feeling under confident. Eczema Care Online gives you the knowledge and confidence you need to make sure you have the best treatment for your child**

- **Free to use**
- **Evidence based**
- **Independent**
- **Improvements** in eczema (children or young people) over **24 and 52 weeks** compared to usual care

RAPID eczema trials



Eczema Research Community

QUESTION: How can questions about the self-management of eczema be rapidly and efficiently addressed to better support people with eczema in managing their disease?

THE PROBLEM WITH TRADITIONAL CLINICAL TRIALS:

- Can be very expensive (~£1m per trial)
- Health inequalities and diversity not well addressed
- Have limited patient and carer involvement
- Carbon footprint

THE SOLUTION:

- Citizen science to prioritise, design, answer and share **findings from online** trials – especially for underserved groups

www.nottingham.ac.uk/dermatology

National Institute for Health and Care Research (NIHR) under its Programme Grants for Applied Research Programme (NIHR 203279).

Can we prevent eczema?

Barrier Enhancement for Eczema Prevention (BEEP)

Cochrane Library

Cochrane Database of Systematic Reviews

Skin care interventions in infants for preventing eczema and food allergy (Review)

Summary

- Be wary of what the media, internet, friends/relatives recommend – especially if it promises a cure
- Two treatments used well
  - Emollient(s) you (and your child) are happy to use
  - Confident, safe use of topical corticosteroids
- Use free, independent, evidence-based resources to help (you'll probably know more than your GP)
  - Eczema Written Action Plan
  - Moisturiser Decision Aid
  - Eczema care online
- No benefit from bath additives, antimicrobials or (probably) dietary restrictions (for most)
- Join in if you can! As a participant or through patient/public involvement

Thank you

- www.bristol.ac.uk/eczema
- EczemaCareOnline.org.uk

- skinandallergy-research@bristol.ac.uk
- Twitter: @riddmj