

Using the care pathway

The Royal College of Paediatrics and Child Health (RCPCH) care pathway for eczema is presented in two parts: an algorithm with the stages of ideal care and a set of competences required to diagnose, treat and optimally manage children with eczema. The algorithm has numbers which correspond to the competences outlined within the body of the document. These competences have not been assigned to specific health professionals or settings in order to encourage flexibility in service delivery. Each pathway has a set of core knowledge documents of which health professionals should be aware. These documents are the key clinical guidance that inform the pathways.

We recommend that this pathway is implemented locally by a multidisciplinary team with a focus on creating networks between staff in primary and community health care, social care, education and hospital based practice to improve services for children with allergic conditions. All specialists should have paediatric training in line with the principles outlined in the Department of Health Children's National Service Framework - particularly standard 3 which states that staff training should reflect the common core of skills, knowledge and competences that apply to staff who work with children and young people.

For the purposes of the RCPCH care pathways children is an inclusive term that refers to children and young people between the ages of 0-18 years. It is important to recognise that, while the RCPCH eczema pathway is linear, entry can occur at any part in the pathway.

Further information regarding the RCPCH allergy care pathways can be downloaded at:
www.rcpch.ac.uk/allergy.



Entry points

Acute

SEVERE BACTERIAL INFECTION: widespread infected eczema with fever and pustules / erythrodermic eczema
 ECZEMA HERPETICUM: blisters or punched out lesions, systemic symptoms (fever)
 SEVERE FALTERING GROWTH (FAILURE TO THRIVE): marked cessation of weight gain

Non acute

clinical severity/quality of life

CLEAR-MILD: Frequent itching, redness dryness
 MODERATE: Frequent itching, sleep disturbance, redness, excoriation, localised thickening
 SEVERE: Incessant itching, sleep disturbance, widespread, excoriation, extensive skin thickening, bleeding, oozing, cracking, alteration in pigmentation [24]

Hospital (same day assessment) (1)

- i. Recognise that the child has acute severe eczema with infection
- ii. Recognise eczema herpeticum, erythrodermic eczema, severe bacterial infection
- iii. Investigations-swab for virology (PCR) and bacteriology, blood count, biochemistry (e.g CRP, albumin)
- iv. Initiation of treatment (same day)
- v. Specialist dermatology assessment (ophthalmology for periocular lesions)

Initial recognition

Self care (2)

- i. Recognition that the child has eczema (e.g a red itchy rash and dry skin)
- ii. Seek appropriate health professional advice

Health professional care (e.g. GP, nurse, pharmacist) (3)

- i. Recognise that the child has eczema
- ii. Recognise the role of irritants, allergens and other triggers on eczema
- ii. Further management and/or onward referral (e.g. dermatologist, allergy specialist, paediatrician/GP, dietitian, nurse)

Management

Self care (4)

- i. Recognition that the child has eczema
- ii. Regular and correct administration of appropriate emollients even when the skin is clear
- iii. Avoidance of irritants (e.g. soap, bubblebaths) and trigger(s)
- iv. Seek appropriate professional advice, including patient support groups
- v. Follow personal management plan, with stepped approach to treatment

Standard Management

- i. Dermatological and allergy focused clinical history and examination, including dietary history (5)
- ii. Assess itch, sleep disturbance and impact on quality of life, including psychosocial assessment (5)
- iii. Consider the role of triggers such as infection, allergens (e.g. food, inhalants) and irritants (e.g. detergents, soaps) (6)
- iv. Serial assessments of nutrition, growth and development (height, weight, ± infant head circumference) (6)
- v. Advise on regular and correct administration of appropriate emollients (6)
- vi. Initiate topical corticosteroids within the stepped approach to management as outlined by NICE (6)
- vii. Seek and manage comorbidities (e.g. asthma, allergic rhinitis, food allergy) (6)
- viii. Practical demonstrations of topical therapies and medicated dressings (6)
- ix. Personalised management plan (written and verbal) with a discussion of the risks and benefits of treatment, including recognition and managements of flares and infection (6)
- x. Onward referral, if appropriate (including communication with other agencies) (6)
- xi. Signposting to appropriate patient support groups and information sources (6)
- xii. Consider hospitalisation for inpatient management (7)

consider

Food Allergy Pathway and/or Asthma/Rhinitis Pathway

consider

Anaphylaxis Pathway

Complex management (MDT setting) (8)

- i. Review diagnosis, adherence and management of comorbidities, including infection (9)
- ii. Repeat practical demonstrations, ensuring understanding (9)
- iii. Age appropriate allergy assessment and management (food, inhalant and contact allergens) (9)
- iv. Further specific investigations, where indicated (e.g. SPT, sIgE, patch testing) (10)
- v. Specialist therapies: topical immunomodulators (e.g. potent topical corticosteroids, calcineurin inhibitors), medicated dressings, phototherapy, systemic therapies, behavioural therapies (10)
- vi. Consider hospitalisation for inpatient management (11)
- vii. Communication with other agencies, including consideration of safeguarding issues (12)

Ongoing Management

- i. Revision of personal management plan, with stepped approach to recognition, treatment and management of flares (13)
- ii. Review practical demonstrations of topical therapies and medicated dressings (13)
- iii. Recognition of changing clinical patterns of allergic sensitisations and the treatment of allergic clinical co-morbidities (13)
- iv. Monitor growth, development, nutrition and diet (13)
- v. Recognition of complications of long term use of medications (13)
- vi. Minimising impact on quality of life, including impact on school performance and attendance (14)
- vii. Access to expert psychosocial support, if appropriate (14)
- viii. School and early years settings (SEYS) liaison (14)
- ix. Management of transitional care (14)
- x. Working towards supported independence (14)

Notes:

1. The colours on the pathway and competence table correspond to the modified Scottish Intercollegiate Guidelines Network SIGN grade: **GRADE A** **GRADE B** **GRADE C** **GRADE D** **CLINICAL PRACTICE GUIDELINE** **GOOD PRACTICE POINT**
2. The numbers on the pathway correspond to the competences required to provide care - these are on the following pages
3. Links to the references can be found within the competence statements

Definition and scope

Atopic eczema (atopic dermatitis) is a persistent inflammatory itchy skin condition that develops in early childhood in the majority of cases. It is typically an episodic disease of exacerbation (flares, which may occur as frequently as two or three per month) and remissions, except for severe cases where it may be continuous.

Diagnostic criteria for eczema are well defined (15-18). Atopic eczema should be diagnosed when a child has an itchy skin condition plus three or more of the following:

- 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 also 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 (19).

Observational studies have shown that the majority of cases of atopic eczema are mild in severity (19).

Table 1 NICE holistic assessment (19)

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

Core knowledge document

The core knowledge document for this pathway is the NICE guideline for atopic eczema in children (19).

Competences

Ref	Pathway stage	Competence
1	Hospital (same day assessment)	<p>Have</p> <ul style="list-style-type: none"> access to appropriate laboratory based diagnostic facilities <p>Be able to</p> <ul style="list-style-type: none"> recognise, investigate and treat acute severe eczema, including eczema with bacterial infection and eczema herpeticum (19-22) take an allergy focused clinical history (19, 23, 24) initiate and interpret investigations for virology (polymerase chain reaction - PCR), bacteriology, blood count and biochemistry (e.g. C-reactive protein - CRP, albumin) initiate and interpret allergy investigations (e.g. SPT, sIgE) where clinically indicated (25, 26) manage children according to clinical history (19) and test results provide early specialist dermatologist assessment recognise and treat herpetic infection of the eye and provide expert ophthalmological advice recognise faltering growth and refer onwards for assessment of growth parameters (e.g. paediatrician and registered dietitian)
2	Initial recognition - self care	<p>Be able to</p> <ul style="list-style-type: none"> recognise that the child has eczema (e.g. a red itchy rash and dry skin) seek advice from a health professional
3	Initial recognition - health professional care	<p>Know</p> <ul style="list-style-type: none"> the NICE guideline for atopic eczema in children (19) the symptoms and signs of eczema and its differential diagnosis (e.g. UK Diagnostic Criteria for Atopic Eczema Manual (27)) the role of irritants, allergens and other triggers in the pathogenesis of eczema (19, 21) the role of food allergy in a subset of infants and young children with moderate to severe eczema (19, 23) that children with atopic eczema who adhere to a cow's milk-free diet for longer than 8 weeks should be referred for specialist dietary advice (19) that children with moderate to severe eczema should be referred for further evaluation and management <p>Be able to</p> <ul style="list-style-type: none"> recognise that the child has eczema (e.g. a red itchy rash and dry skin) (19) initiate treatment and/or refer for further evaluation (19) (e.g. issues relating to quality of life, timeliness of achieving control, patient/parent/carer dissatisfaction) offer a 6-8 week trial of an extensively hydrolysed protein formula or amino acid formula in place of cow's milk formula (28) for bottle-fed infants aged under 6 months with moderate or severe atopic eczema that has not been controlled by optimal treatment with emollients and mild topical corticosteroids (19) recognise that specific patients may require further elimination and/or avoidance diets (23, 24, 29) and refer onwards (e.g. allergy specialist and paediatric dietitian)

Ref	Pathway stage	Competence
4	Standard Management – self care	<p>Know</p> <ul style="list-style-type: none"> the NICE guideline for atopic eczema in children (19) the symptoms and signs of eczema and infection (19, 21) that food allergy is more likely in young children with severe eczema that certain factors aggravate eczema symptoms, including infections, allergens (e.g. food, inhalants: house dust mite, pollens and irritants: soap, bubble baths, detergents, shampoos, synthetic/wool clothing, fragrances) when to seek advice from a health professional (e.g. suspected food allergy, inadequate response to treatment) <p>Be able to</p> <ul style="list-style-type: none"> recognise the symptoms and signs of eczema (19) understand treatments, their licensed indications, their benefits and how to minimise potential side effects (19) use emollients and other treatments appropriately (19) follow a personal management plan (19) follow allergy specific advice
5	Standard Management – dermatological and allergy focused clinical history, assess impact on quality of life	<p>Know</p> <ul style="list-style-type: none"> the NICE guideline for Atopic eczema in children (19) the current evidence base for treating children with eczema e.g. NHS evidence – skin disorders (30) the structure and function of the skin, especially with respect to impaired barrier function (21) the role of irritants, contact allergens and environmental/other trigger(s) in the pathogenesis and management of eczema (19, 21) the role of psychosocial factors in eczema (19-21, 31) <p>Be able to</p> <ul style="list-style-type: none"> take a dermatology and allergy focused history and examination (19), including dietary history (23, 25) assess nutritional adequacy of diet diagnose atopic eczema and its presentation in different age and ethnic groups assess eczema severity and impact on quality of life (19, 32) for patients/parents/carers (e.g. sleep disturbance, skin itching, time taken to apply emollients/creams), including psychosocial impact use objective measures to determine the severity of atopic eczema, quality of life and response to treatment (19, 33) recognise eczema which is infected (19, 22) recognise important atopic co-morbidities (34, 35) (e.g. food allergy, asthma, allergic rhinitis, allergic contact eczema) and interpret the findings recognise that food allergy may present in a variety of ways in infants and young children with eczema ranging from immediate allergic reactions to more chronic presentations such as eczema or gastrointestinal (GI) symptoms (19, 23)

Ref	Pathway stage	Competence
6	Standard Management – irritant and trigger avoidance advice, serial assessments of nutrition, growth, advise and demonstrate emollients, initiate stepped approach to management, management of co-morbidities, practical demonstrations, personalised management plan and onward referral, including communication with other agencies	<p>Know</p> <ul style="list-style-type: none"> ▪ the role of irritants and trigger(s) in the pathogenesis of eczema (19, 21) ▪ the indications for onward specialist referral (19), if appropriate ▪ when to refer to a paediatric trained dietitian for nutritional assessment and dietary management (e.g. inadequate dietary intake, food allergy, faltering growth) ▪ to consider the Food Allergy Pathway and Asthma/Rhinitis Pathway <p>Be able to</p> <ul style="list-style-type: none"> ▪ measure and interpret serial assessments of nutrition and growth (e.g. height, weight and ± infant head circumference) ▪ advise on the avoidance of irritants (e.g. soap, bubble baths, shampoos, fragrances, detergents, synthetic/wool clothing) ▪ identify inhaled and food trigger(s) from the clinical history (19) and provide appropriate avoidance advice ▪ advise on regular and correct administration of emollients (19, 25, 36) ▪ initiate treatment with topical corticosteroid with appropriate potency (19, 21, 25, 36, 37) ▪ provide a stepped approach to eczema management using the NICE guideline for atopic eczema in children (19) ▪ educate the parent in the recognition and management of flares and infection (19, 21, 36) ▪ demonstrate to the patient/parent/carer the correct application of topical treatments and medicated dressings (19, 36) ▪ discuss the risks and benefits of treatment and their licensed indications ▪ recognise and treat food allergy (24, 29), asthma and allergic rhinitis ▪ recognise and treat allergic contact eczema or refer onwards for patch testing and further management ▪ provide a written and verbal personal management plan developed in partnership with patients/parents/carers (38) ▪ provide advice about appropriate support groups e.g. <u>National Eczema Society</u> (39) and consumer information sources e.g. <u>Food Standards Agency</u> (40) ▪ provide appropriately detailed written communication with other professionals (e.g. GP, health visitor(s), teachers) and, where necessary, social services ▪ share appropriate information to support other health care professionals ▪ refer for further management (19) (e.g. patch testing for contact eczema)
7	Standard Management – consider hospitalisation	<p>Be able to</p> <ul style="list-style-type: none"> ▪ recognise when outpatient treatment is failing ▪ refer for rapid assessment ▪ admit for inpatient management for severe eczema and co-morbid disease (e.g. failure to respond to potent topical corticosteroids/antibiotics, faltering growth-severe failure to thrive)

Ref	Pathway stage	Competence
8	Complex Management – multidisciplinary team	This is best provided by a multidisciplinary with expertise in paediatrics including: dermatologists, allergy specialists , paediatricians, specialist nurse(s), dietitians, pharmacists and psychologists, with appropriate liaison with other levels of care, including school nurses and community nurse practitioners.
9	Complex Management – review of diagnosis, adherence and management of co-morbidities, practical demonstrations, age appropriate allergy assessment	<p>Know</p> <ul style="list-style-type: none"> ▪ that complex management is delivered in addition to standard management ▪ the common co-morbidities that coexist with eczema (23, 34, 35) ▪ the differential diagnosis of eczema <p>Be able to</p> <ul style="list-style-type: none"> ▪ take an age appropriate allergy assessment and management clinical history (19, 23, 24) ▪ review and reconfirm diagnosis ▪ assess treatment adherence ▪ recognise and treat infected eczema ▪ assess and manage co-morbidities appropriately (e.g. infection or refer to Food Allergy Pathway, Asthma/Rhinitis Pathway) ▪ assess and manage atopic trigger(s) (19, 21), including advice on dietary management and allergen avoidance ▪ demonstrate the correct topical applications of treatment (19) ▪ demonstrate the correct application of bandages, medicated dressings and/or wet wraps (19)

Ref	Pathway stage	Competence
10	Complex Management -further investigations, specialised therapies	<p>Know</p> <ul style="list-style-type: none"> the risk:benefit of treatments with immunomodulators (within their licensed use) (19, 21) and/or systemic therapies (19, 21, 41) the sensitivity and specificity of measuring total and specific IgE (sIgE) and skin prick testing (SPT) in the diagnosis of food and inhalant allergy in children with eczema that SPT and serum specific IgE test have a poor predictive value for non IgE mediated allergies the role of patch testing for contact allergens in children with eczema, particularly face and hand eczema that atopy patch tests for food allergens are possible but not easily available in the UK and their role in the diagnosis of food allergy remains unclear (26) that there is currently no evidence for the use of homeopathy or probiotics in the management of eczema (19, 42) the risks currently outweigh the benefits in the use of oral steroids and Chinese herbal remedies for children with eczema (19) <p>Be able to</p> <ul style="list-style-type: none"> undertake and interpret allergy investigations (e.g. SPT, sIgE) where clinically indicated (26) order patch testing for contact allergens by an appropriately trained specialist (e.g. dermatologist) manage children according to clinical history and test results (19, 21, 24, 26) initiate treatment with topical corticosteroids with appropriate potency (19, 21) advise on the stepped approach to management as per the NICE guideline for atopic eczema in children (19) advise and administer specialist therapies e.g. topical immunomodulators (19, 21, 37, 43), systemic therapies (41), medicated dressings (19, 25), phototherapy (21, 25) recommend the use of a topical calcineurin inhibitor (TCI) of appropriate potency (21) and know their licensed indications (19) tailor specialist therapies according to indications for use, efficacy and risk:benefit ratio communicate with other agencies identify safeguarding issues in relation to eczema
11	Complex Management - consider hospitalisation	<p>Be able to</p> <ul style="list-style-type: none"> recognise when outpatient treatment is failing refer for rapid assessment admit for inpatient management for severe eczema and co-morbid disease (e.g. failure to respond to potent topical corticosteroids/antibiotics, faltering growth-severe failure to thrive)
12	Complex Management - communication with other agencies	<p>Know</p> <ul style="list-style-type: none"> the importance of effective communication with the entire network of agencies and individuals involved in the child's care including primary care, community paediatrics, schools and early years settings (SEYS)

Ref	Pathway stage	Competence
13	Ongoing Management regular review- revision of personalised management plan, practical demonstrations, recognise emerging co-morbidities, monitor growth, development, nutrition and diet, long term medication complications	<p>Know</p> <ul style="list-style-type: none"> ▪ the natural history of allergic disease and the “atopic march” (34, 35) ▪ the risk:benefit and safety of long term medication use for eczema ▪ the implications of specific nutritional interventions <p>Be able to</p> <ul style="list-style-type: none"> ▪ regularly review and revise the personal management plan as necessary ▪ review patient/parent/carer understanding of the topical applications of therapies (36, 43) ▪ advise on and minimise the complications of long term medication use ▪ recognise changing patterns of allergic co-morbidities and sensitisation ▪ monitor growth, development, nutrition, food allergy and appropriateness of dietary restrictions, with dietetic input as necessary
14	Ongoing Management – minimising impact on quality of life, access to psychosocial support, transitional care	<p>Know</p> <ul style="list-style-type: none"> ▪ how eczema may impact on different aspects of daily life of the patient and family (e.g. sleep, school, practical care difficulties, finance) (19, 21) ▪ what resources are available locally and nationally to support patients and their families (31) ▪ that education of patients/parents/carers improves outcomes (19-21, 36, 43, 44) ▪ the value of nurse led clinics (44, 45) <p>Be able to</p> <ul style="list-style-type: none"> ▪ review impact of eczema on quality of life, school performance and attendance (19) ▪ review the impact on quality of life as the young person moves from school to the workplace ▪ empower and teach patients/parents/carers to manage eczema effectively (36) ▪ assess patient/parent/carer coping skills ▪ explore and manage child/young person’s expectations and concerns about conditions and relevant interventions to support independent self-management ▪ access expert psychosocial support (20, 31) ▪ manage transition to adult service

References

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3. Eczema Care Pathway: Initial Recognition – Health Professional Care.
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5. Eczema Care Pathway: Standard Management – Dermatological and Allergy Focused Clinical History, Assess Impact on Quality of Life.
6. Eczema Care Pathway: Standard Management – Irritant and Trigger Avoidance Advice, Serial Assessments of Nutrition, Growth, Advise and Demonstrate Emollients, Initiate Stepped Approach to Management, Management of Co-Morbidities, Practical Demonstrations, Personalised Management Plan and Onward Referral, Including Communication with Other Agencies.
7. Eczema Care Pathway: Standard Management – Consider Hospitalisation.
8. Eczema Care Pathway: Standard Management – Mdt.
9. Eczema Care Pathway: Complex Management – Review of Diagnosis, Adherence and Management of Co-Morbidities, Practical Demonstrations, Age Appropriate Allergy Assessment.
10. Eczema Care Pathway: Complex Management – Further Investigations, Specialised Therapies.
11. Eczema Care Pathway: Complex Management – Consider Hospitalisation.
12. Eczema Care Pathway: Complex Management – Communication with Other Agencies.
13. Eczema Care Pathway: Ongoing Management – Revision of Personalised Management Plan, Practical Demonstrations, Recognise Emerging Co-Morbidities, Monitor Growth, Development, Nutrition and Diet, Long Term Medication Complications.
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