

Assessment and management of allergies in children with eczema

<p>Title of Guideline (must include the word "Guideline" (not protocol, policy, procedure etc)</p>	<p>Guideline for assessment and management of allergies in children with eczema</p>														
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<p>Directorate & Speciality</p>	<p>Dermatology, Family Health</p>														
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<p>Date on which guideline must be reviewed (this should be one to three years)</p>	<p>Sept 2016</p>														
<p>Explicit definition of patient group to which it applies (e.g. inclusion and exclusion criteria, diagnosis)</p>	<p>Children with eczema</p>														
<p>Abstract</p>	<p>This guideline describes how to assess and manage allergies in children with eczema</p>														
<p>Key Words</p>	<p>Eczema, allergies</p>														
<p>Statement of the evidence base of the Evidence base: (1-5)</p> <table border="1" data-bbox="240 1200 858 1503"> <tr> <td>1a</td> <td>meta analysis of randomised controlled trials</td> </tr> <tr> <td>1b</td> <td>at least one randomised controlled trial</td> </tr> <tr> <td>2a</td> <td>at least one well-designed controlled study without randomisation</td> </tr> <tr> <td>2b</td> <td>at least one other type of well-designed quasi-experimental study</td> </tr> <tr> <td>3</td> <td>well –designed non-experimental descriptive studies (ie comparative / correlation and case studies)</td> </tr> <tr> <td>4</td> <td>expert committee reports or opinions and / or clinical experiences of respected authorities</td> </tr> <tr> <td>5</td> <td>recommended best practise based on the clinical experience of the guideline developer</td> </tr> </table>	1a	meta analysis of randomised controlled trials	1b	at least one randomised controlled trial	2a	at least one well-designed controlled study without randomisation	2b	at least one other type of well-designed quasi-experimental study	3	well –designed non-experimental descriptive studies (ie comparative / correlation and case studies)	4	expert committee reports or opinions and / or clinical experiences of respected authorities	5	recommended best practise based on the clinical experience of the guideline developer	<p>4 a) NICE guidelines on 'Management of atopic eczema in children age 0-12 years'. b) NICE guidelines on 'Food allergy in children and young people'. c) RCPCH 'Allergy Care pathway for children – food allergy'. d) British association of Dermatologists 'Guidelines for the management of contact dermatitis: an update'. 5 Recommended best practice based on clinical experience of the current clinical dermatology and paediatric allergy multidisciplinary teams</p>
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<p>Consultation Process</p>	<p>Sandra Lawton, dermatology nurse consultant. Lisa Waddell, community paediatric dietitian Hywel Williams and Ruth Murphy, dermatologists Paediatric allergy, dermatology, paediatrics, dietetics</p>														
<p>Target audience</p>	<p>Paediatricians, dermatologists, immunologists and dietitians who see children with eczema</p>														
<p>This guideline has been registered with the trust. However, clinical guidelines are guidelines only. The interpretation and application of clinical guidelines will remain the responsibility of the individual clinician. If in doubt contact a senior colleague or expert. Caution is advised when using guidelines after the review date.</p>															

Scope of the Guideline

This guideline applies to children with atopic eczema who have been referred to secondary care for management of eczema or suspected allergies. It does not apply to children without eczema who have suspected allergies. Please refer also to local and national guidelines on eczema, food allergy and anaphylaxis^{1,2,3,4,5,6}

Introduction/Background

Atopic eczema is a chronic, inflammatory, itchy skin condition that usually develops in early childhood. Atopic eczema often has a genetic component that leads to impairment of the skin barrier. This makes the skin susceptible to trigger factors including irritants, allergens, infection, climate, environmental factors and stress which make the eczema worse.

Allergic trigger factors may be

- Food allergens
- Airborne allergens
- Contact allergens

Allergic responses in children with eczema can involve other systems eg. Lungs, GI tract, nose, eyes.

The prevalence of food allergy in young children with atopic eczema in secondary care is 37-56%.²

Clinical Assessment

Children with atopic eczema should have an **allergy focused clinical history** taken at presentation and at each subsequent visit if eczema is not under control.

A diagnosis of **food allergy** should be considered in children with moderate to severe atopic eczema, especially if associated with any of the following:

- Onset of eczema in aged under 6 months
- Previous reaction to ingested food with immediate symptoms such as urticaria or vomiting
- Contact urticaria to food allergens eg peanut /fresh hen's egg /cow's milk
- Gut symptoms or faltering growth
- History of worsening of eczema within 48 hours following ingestion of certain foods
- Family history of food allergy

The commonest allergen is hen's egg, followed by cow's milk. Cow's milk allergy should be strongly suspected in infants with associated gut symptoms or faltering growth.

A diagnosis of **allergy to airborne allergens** such as grass/ tree and flower pollens /silver birch/ house dust mite /animal dander should be considered in children with:

- Seasonal flares of atopic eczema or flares after playing outside or near animals
- Associated asthma or allergic rhinitis
- Eczema on the face, particularly around the eyes, especially if more than 3 years old.

A diagnosis of **contact allergy** should be considered in children with:

- Eczema in *localised* areas where skin contact with an allergen is plausible eg. Under a belt /nappy area /under medical tapes /hands /face /feet.
- Eczema no longer responding to treatment
- History of reactions to topical products, which may be immediate (contact urticaria) or delayed (contact dermatitis)
- History of urticaria on contact with food eg around the mouth or on the skin.

Investigations/Diagnosis

Parents should be reassured that most children with mild atopic eczema and no history to suggest allergy do not need any tests. Children should not undergo allergy tests carried out on the internet or high street as there is no evidence of their value.

Food allergy (see Appendix 1 – Algorithm)

Food allergy in atopic eczema can be IgE mediated, non- Ig E mediated, or mixed.

1. Children with eczema and suspected food allergy (on the basis of the allergy focused history) should have skin prick test and/or specific IgE to suspected allergens. An exception may be made in infants with GI symptoms of suspected cow's milk allergy where a milk free diet may be tried without investigations if eczema is very mild.¹
2. Children with severe, generalised eczema with onset under 12 months not controlled by optimum topical treatment should have specific IgE to egg and cow's milk measured even in the absence of immediate reactions, especially if associated with faltering growth or GI symptoms. This is necessary to determine whether we are dealing with IgE or non-IgE mediated allergy to provide a baseline, and to determine future risk/timing of re-introduction.
3. Other food allergens such as wheat and soya could be considered in addition to milk and egg, however this has huge nutritional implications and challenges families, so should not be undertaken lightly.

Allergy to Airborne allergens

Airborne allergens can cause a flare of eczema, and/or other symptoms eg wheezing, sneezing, runny eyes

1. Children with suspected allergy to airborne allergens should have specific IgE or skin prick tests to aero-allergens as dictated by clinical history, including House dust mite / animal dander /tree and grass pollens /moulds /silver birch.

Contact allergy

Children with suspected contact allergy should be divided into those with

1. Contact urticaria due to IgE mediated allergy – check IgE /prick test
2. Contact urticaria due to histamine release eg strawberry /tomato – no action needed if food can be ingested with no problems
3. Suspected contact dermatitis ie eczematous delayed reaction – refer to paediatric dermatologist for consideration of patch testing to:
 - a. British Standard Series patch tests in all cases
 - b. Facial Series patch tests in facial eczema
 - c. Specific possible allergens identified from history

Management

Parents should be given an accurate explanation of the interpretation of skin prick, IgE tests and patch tests in conjunction with the clinical history. Patient information leaflets are available at www.allergyuk.org

Food allergy

1. Children with raised specific IgE and uncontrolled eczema or history of immediate reactions should be managed according to the food allergy guidelines^{1,3,4,5}
2. Children with multiple allergies and/or severe reactions including anaphylaxis, should be referred to a paediatrician with a special interest in allergy, or a paediatric allergy nurse specialist.
3. Children with *negative* IgE or skin prick tests in whom there is a strong history of eczema flaring with certain foods may have non-IgE mediated food allergy, including to cow's milk.
 - a. Cow's milk
 - i. Infants <6 months with moderate or severe eczema *not controlled* by optimal treatment with emollients and topical steroids should be offered a 4-8 week trial of an extensively hydrolysed protein formula or amino-acid formula¹, followed by reintroduction to confirm symptoms are related to the allergen. If milk exclusion is to be

- continued, referral to a paediatric dietitian should be made to support weaning on an exclusion diet and ensure nutritional adequacy
- ii. Infants aged 6-12 months should be offered an 4-8 week trial of a milk exclusion diet in addition to hydrolysed formula and referred to a paediatric dietitian.
 - b. Other suspected foods. The food should be excluded from the diet for a 4-8 week trial, followed by re-introduction to confirm eczema is related to the allergen. Referral to a dietitian will be required prior to exclusion of major food groups,.
4. During dietary changes, treatment of eczema should continue, but it is helpful if treatment is unchanged during the food exclusion and re-introduction, to allow assessment of the dietary changes.
 5. A clear plan for re-assessment of dietary changes should be made, to ensure dietary restrictions are removed if there is no improvement.
 6. The majority of children with egg and milk allergy will grow out of it. Method and timing of re-introduction should be assessed on an individual basis.

Allergy to airborne allergens

1. Children with positive IgE or skin prick tests to House dust mites should be given an information leaflet on how to reduce House dust mite exposure. They should be advised that it is not possible to eliminate House dust mites from the home, and that it is not clear how much benefit reduction measures will bring.
2. Children with positive IgE and SPT to animals may be tolerant to their own animal, and there is a lack of evidence of benefit from removing pets. The psychological harm which can be caused by removing a family pet, means this should only be considered if the child has clinical signs of allergy to the pet.
3. Children with multiple allergies to airborne allergens or severe asthma should be referred to a paediatrician with an interest in allergy.

Contact allergy

1. Patch test readings should be carried out by a dermatologist with expertise in interpretation of patch tests in children.
2. Management is by avoidance of allergen where possible.
3. Information leaflets on each relevant allergen should be given to parents.

Indications for referral to other specialists

1. Paediatric dermatologist
 - a. Uncontrolled atopic eczema despite optimum treatment
 - b. Suspected contact allergy
2. Paediatric dietitian
 - a. To advise on implementation of exclusion diet for any major food group ie milk, wheat, soya
 - b. To give on-going advice on nutritional adequacy of exclusion diet
 - c. To support with food re-introduction once the consultant has decided upon re-introduction time and location.
3. Paediatrician with an interest on allergy and paediatric nurse allergy specialist
 - a. Associated asthma or faltering growth
 - b. Multiple allergies
 - c. Severe allergy or anaphylaxis
4. Other specialist with paediatric interest eg. ENT/Ophthalmology/Gastroenterology for associated allergic disorders of specific systems

Outcomes/Prognosis

Childhood eczema is a complex multi-factorial disease with a genetic component. Avoidance of allergens may make a significant difference to the eczema, particularly in the following situations:

1. Removal of food allergens in young children
2. Removal of contact allergens identified on patch testing.

References

1. 'Guidance on the management of lactose intolerance and cow's milk protein allergy and the prescription of specialised infant formula'. Nottingham area prescribing committee 2011
2. 'Management of atopic eczema in children age 0-12 years' NICE guidelines Dec 2007
3. 'Management of food allergy in children and young people' NICE guidelines Feb 2011
4. 'Allergy care pathway for children – Food allergy' RCPCH 2011
5. 'Anaphylaxis guidelines' QMC intranet
6. British Association of Dermatology Guidelines for the management of contact dermatitis: an update. British Journal of dermatology 2009

Appendix

