Whittington Health NHS

Food Allergy in Childhood: Diagnosis and Management

Subject:	Food Allergy in Childhood: Diagnosis and Management
Policy Number	N/A
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Policy Executive Owner:	Clinical Director, CYP ICSU
Designation of Author:	Dr Neeta Patel Consultant Paediatrician
Name of Assurance Committee:	As above
Date Issued:	February 2019
Review Date:	3 years hence
Target Audience:	Paediatric clinicians
Key Words:	food allergy, children

Version Control Sheet

Version	Date	Author	Status	Comment
1.0	Jan- April 2015	Dr N Patel	New	New guideline approved at January 2015 CGC
2.0	Feb 2019	Dr N Patel	LIVE	Content reviewed with minor change.

1. Criteria for use

This guideline should be followed by paediatricians, dermatologists, paediatric dieticians, and Emergency department staff to ensure early recognition and timely referral to the paediatric allergy service of infants and children with suspected food allergy.

2. Introduction

- Food allergy is common, affecting 6-8% of pre-school children
- There are 2 main types of food allergy: IgE (immediate) and non-IgE (delayed) mediated.

3. Clinical Features

A.**IgE mediated food allergy:**

Onset typically within **0-2 hours** of ingestion of a food.

Signs/symptoms:

- **Skin**: wheals, angiooedema, urticarial rash.
- **Gut**: oral pruritis, vomiting, diarrhoea, abdominal cramps

- **Respiratory**: hoarse voice, stridor, wheeze, signs and symptoms of acute asthma
- **Cardiovascular**: hypotension, collapse (pallor, drowsiness in infants)

} **ANY 1 OF THESE CARDIOVASCULAR OR RESPIRATORY SYMPTOMS =ANAPHYLAXIS**

Note: 10% of children with anaphylaxis do not have skin changes- may present with wheeze only.

Note: A further reaction may occur ***up to 6 hours*** after apparent resolution (**biphasic reaction**)

It is essential to establish whether an IgE mediated food allergy is an anaphylactic reaction (i,e cardlorespiratory involvement) or not.

Definition of anaphylaxis:

Anaphylaxis is defined as a **severe, life-threatening, generalised or systemic hypersensitivity reaction.** It is characterised by rapidly developing, life-threatening problems involving: the airway (pharyngeal or laryngeal oedema) and/or breathing (bronchospasm with tachypnoea) and/or circulation (hypotension and/or tachycardia). In most cases, there are associated skin and mucosal changes

B.Non IgE mediated food allergy:

- **Most commonly due to cows milk**/ (note: standard infant formula contains cows milk)
- Generally presents in infancy with gastro-oesophageal reflux, eczema, constipation or diarrhoea, poor growth.

Onset: **hours/days** after ingestion of a food. Generally when a considerable amount of the food has been eaten

SIgns/Symptoms:

- **Skin**: eczema, pruritis, erythema

•**GIT**: gastro- oesophageal reflux, chronic constipation OR diarrhoea, bloody stool (CM proctocolitis), blood +mucousy stool (enterocolitis), failure to thrive, abdominal pain

4. History

- ***What*** were the exact food/foods eaten?
- ***How much was*** eaten? (reaction to trace amount or to inhalation only suggests a more severe allergy)
- ***How soon*** after eating did the symptoms develop? (differentiates between IgE and non-IgE mediated allergy)
- What were the ***symptoms***?
- Does a reaction happen ***every time*** this food is eaten?
- Is it a ***plausible*** allergen (i.e. Egg, soya, wheat, cows milk, fish, shellfish, sesame, peanut, tree nuts, kiwi)
- ***Was this anaphylaxis***? (see above)
- Does the child eat full helping of the other major allergenic food groups? (listed below).Important because one food allergy increases the likelihood of another

  E.g. 25% with egg allergy have peanut allergy, 30% with peanut allergy have sesame allergy

Common food allergens

9 food groups are responsible for >90% food allergy in children:

Egg, soya, wheat, cows milk, fish, shellfish, sesame, peanut, tree nuts

Relevant Past Medical History:

- **Eczema** (in early infancy, strongly associated with food allergy)
- **Allergic rhinitis** (needs treatment as may worsen asthma symptoms)
- **Asthma** (together with food allergy increases the risk of a severe food allergy reaction)

5. Examination

- Full paediatric system examination.
- Plot on growth chart

6. Conditions mimicking food allergy

- **Viral urticaria**- associated upper respiratory tract infection/fever. No clear association with ingestion of a new allergen. Rash lasts for over 12 hours
- **Non-allergic reaction** – citrus/berries/tomatoes. Causes localised facial erythema due to irritant effect from skin contact with these foods.
- **Food poisoning**
- **Chronic urticaria**- no temporal/consistent relation to a food. Often rashes occur daily/every few days and last weeks/months.
  Can divide into a) chronic spontaneous (no clear trigger) or b) chronic inducible (e.g pressure, cholinergic)
- **Food intolerance** – non-immune mediated-enzyme deficiencies (e.g. lactose intolerance).

7. Acute management of an acute food allergic reaction

Anaphylaxis	Non - anaphylaxis
A,B,C	
Follow APLS algorithm for management of anaphylaxis (link to anaphylaxis algorithm)	**Give antihistamine.** **Doses:** **Oral:** **under 1 year: 1mg chlorphenamine syrup** **1-2 years: 250mcg/kg cetirizine syrup 2-6 years: 5mg cetirizine syrup** **6-16years: 10mg cetrizine syrup/tablet** **i.m or slow i.v:** **under 6 months: 250mcg/kg chlorphenamine** **6 months- 6 years: 2.5mg chlorphenamine** **6-12 years: 5 mg chlorphenamine** **Over 12 years: 10mg chlorphenamine** **(note: provides symptomatic relief only. Does not prevent progression to anaphylaxis)**

Admit all children under 16 yrs to Ifor Ward **Observe children between 16-18 yrs for 6-12 hours before discharge.**	**Observe until symptoms start to subside**
Ensure algorithm (Appendix A) is followed	

8. Management of child with food allergy on discharge from hospital

A. Following an IgE mediated reaction:

1. Advice on avoiding responsible food
2. If fulfils criteria for epipen (see below) prescribe adrenaline injector
3. Provide a demonstration of the correct use of the adrenaline injector and when to use it
4. **Provide an Allergy management plan**- standard if does not need adrenaline injector (Appendix B) and anaphylaxis management plan if needs adrenaline injector (Appendix C)
5. Provide information about the risk of a biphasic reaction
6. Provide information about the need for referral to a specialist allergy service and the referral process(see page 5)

Indications for prescribing an Epipen:

Absolute

- **Previous anaphylaxis to a food**
- **Food allergy and co-existent asthma**
- **Any reaction to a trace amount of food**

Relative

- **Nut allergy**
- **Teenagers/young adults**
- **Living in or travelling to remote location**

B. Following a possible Non-IgE mediated reaction

1. If cows milk suspected (typically in an infant breast or bottle fed) e-mail allergy team on whh-tr.WhittPaedsAllergyTeam@nhs.net with **childs details, history and parents mobile contact details.**

2. Treat any eczema or GOR prior to discharge . The allergy team will review and if optimal treatment hs been unsuccessful, will consider dietary exclusion.

9. Indications for urgent referral to the paediatric allergy clinic

(e-mail whh-tr.WhittPaedsAllergyTeam.nhs.net)

- Infants (i.e. under 12 months) with **severe early onset eczema** with or without GI symptoms/ failure to thrive (>60% have associated food allergy, often a mix of IgE and non-IgE.)
- Anaphylaxis
- Any food allergic reaction in infant not fully weaned, (to avoid further reactions to allergenic foods not yet exposed to e.g. fish, egg, wheat, nuts etc)
- Child with food allergy with co-existing asthma if not already known to another allergy service (***please check with parent/carer before referring)***

10. Indications for routine referral through GP

- Single food allergy with **no** cardiorespiratory involvement and **no** co-existent asthma

➢ Compliance with this guideline (how and when the guideline will be monitored e.g. audit and which committee the results will be reported to) Please use the tool provided at the end of this template

Yearly audits reviewing management of children given diagnosis of food allergy in ED including:

- written documentation of planned follow up, and advice given
- admission to ward if fulfil criteria for anaphylaixs
- Prescription of adrenaline autoinjector if indicated

➢ Contacts (inside and outside the Trust including out-of-hours contacts)

- Dee Brown, paediatric allergy nurse (dee.Brown3@nhs.net)
- Miriam Tarkin , paediatric allergy dietician lead:(miriam.tarkin@nhs.net)
- Dr Neeta Patel, consultant paediatrician (neetapatel@nhs.net)
- **Out of hours:** contact the on call paediatric registrar for advice on bleep 3111

➢ References

Food Allergy in Children and Young People: Diagnosis and Assessment of Food Allergy in Children and Young People in Primary Care and Community Settings.[CG116] Published date: February 2011.

Anaphylaxis: assessment to confirm an anaphylactic episode and the decision to refer after emergency treatment for a suspected anaphylactic episode.[CG134] Published date: December 2011

RCPCH: Allergy Care pathway for children -food allergy. December 2011

AAAAI: Guidelines for the Diagnosis and Management of Food Allergy . JA Boyce, A Assa'ad, AW Burks, SM Jones, HA Sampson, RA Wood, M Plaut, SF Cooper, MJ Fenton and NAID-Sponsored Expert Panel Authors, JM Schwanniger and MJ Fenton. Journal of Allergy and Clinical Immunology (2010) 126: 6 S1-S58

To be completed and attached to any procedural document when submitted to the appropriate committee for consideration and approval

		Yes/No	Comments
1.	**Does the procedural document affect one group less or more favourably than another on the basis of:**		
	• Race	No	
	• Ethnic origins (including gypsies and travellers)	No	
	• Nationality	No	
	• Gender	No	
	• Culture	No	
	• Religion or belief	No	
	• Sexual orientation including lesbian, gay and bisexual people	No	
	• Age	No	
	• Disability - learning disabilities, physical disability, sensory impairment and mental health problems	No	
2.	**Is there any evidence that some groups are affected differently?**	No	
3.	**If you have identified potential discrimination, are any exceptions valid, legal and/or justifiable?**	No	
4.	**Is the impact of the procedural document likely to be negative?**	No	
5.	**If so can the impact be avoided?**	N/A	
6.	**What alternatives are there to achieving the procedural document without the impact?**	N/A	
7.	**Can we reduce the impact by taking different action?**	N/A	

If you have identified a potential discriminatory impact of this procedural document, please refer it to the Director of Human Resources, together with any suggestions as to the action required to avoid/reduce this impact.

For advice in respect of answering the above questions, please contact the Director of Human Resources.

Checklist for the Review and Approval of Procedural Document

To be completed and attached to any procedural document when submitted to the relevant committee for consideration and approval.

	Title of document being reviewed:	Yes/No	Comments
1.	**Title**		
	Is the title clear and unambiguous?	Yes	
	Is it clear whether the document is a guideline, policy, protocol or standard?	Yes	
2.	**Rationale**		
	Are reasons for development of the document stated?	Yes	increasing incidence of childhood food allergy.
3.	**Development Process**		
	Is it clear that the relevant people/groups have been involved in the development of the document?	Yes	Reviewed by lead allergy nurse and dietician
	Are people involved in the development?	Yes	
	Is there evidence of consultation with stakeholders and users?	Yes	
4.	**Content**		
	Is the objective of the document clear?	Yes	
	Is the target population clear and unambiguous?	Yes	
	Are the intended outcomes described?	Yes	
5.	**Evidence Base**		
	Are key references cited in full?	N/A	
	Are supporting documents referenced?	N/A	
6.	**Approval**		
	Does the document identify which committee/ group will approve it?	Yes	Clinical guidelines committee
7.	**Dissemination and Implementation**		
	Is there an outline/plan to identify how this will be done?	Yes	dissemination via e-mail and at paediatric consultant/jr dr meetings. Will be disseminated again at Jr dr induction in Feb 2015 Appendix A has already been reviewed and agreed by ED paediatric nursing lead and is in use.
8.	**Document Control**		

	Title of document being reviewed:	Yes/No	Comments
	Does the document identify where it will be held?	Yes	
9.	**Process to Monitor Compliance and Effectiveness**		
	Are there measurable standards or KPIs to support the monitoring of compliance with and effectiveness of the document?	Yes	
	Is there a plan to review or audit compliance with the document?	Yes	
10.	**Review Date**		
	Is the review date identified?	Yes	
	Is the frequency of review identified? If so is it acceptable?	Yes	
11.	**Overall Responsibility for the Document**		
	Is it clear who will be responsible for co-ordinating the dissemination, implementation and review of the document?	Yes	

The Committee Chair's signature below confirms that this procedural document was ratified by the responsible Committee			
Name		Date	
Name of Committee		Name & role of Committee Chair	
Signature			