An introduction to food allergies

The NHS website describes a food allergy "when the immune system - the body's defence against infection - mistakenly treats proteins found in food as a threat. As a result, a number of chemicals are released. It's these chemicals that cause the symptoms of an allergic reaction"[1].

Food allergies can be complex and can affect many different systems of the body[2].

National Institute for Health and Clinical Excellence (NICE) has developed a guideline[3] to help primary care and community staff take an allergy-focused history from the patient or family.

Symptoms can develop at any age, however some manifestations are frequently seen in infancy or early childhood[2].

Health visitors are likely to see many different manifestations of allergy, such as eczema, asthma, hay fever and gastrointestinal disturbances[1], and it is helpful to know enough about the conditions, to question whether allergy could be a cause of the symptoms.

It is also important to know when the symptoms can be managed in primary care or when referral to a specialist is needed. These are discussed in more detail below.

Food allergy

Reactions can include respiratory, gastrointestinal and dermatological symptoms and can include eczema, urticaria, wheezing and laryngeal oedema, colic, reflux, abdominal pain, diarrhoea and constipation, and perianal redness. See table 1 for more information.

There are two main types of food allergy frequently seen by health visitors:

- IgE-mediated reactions
- Non-IgE-mediated reactions

It is important for health visitors to understand the different types of food allergy as this can aid diagnosis:

- Immunoglobulin E (IgE)-mediated reactions are quick onset, within the first two hours from exposure, and require only small quantities of allergen to elicit a response.
- Non-IgE-mediated and T-cell-mediated reactions are slow onset, occurring from two to 72 hours after exposure, and require larger quantities of allergen.
- A mixed IgE and non-IgE picture can sometimes be seen.
- IgE-mediated allergy is well understood. Generally, symptoms will develop rapidly after exposure to the allergen, often within minutes but within 2 hours. This can be followed by a 'late-phase reaction' which can develop 3-24 hours after the initial reaction.

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Table 1. Signs and symptoms of possible food allergy*

IgE-mediated	Non-IgE-mediated
The skin	
Pruritus	Pruritus
Erythema	Erythema
Acute urticaria – localised or generalised	Atopic eczema
Acute angioedema – most commonly of the lips, face and around the eyes	
The gastrointestinal system	
Angioedema of the lips, tongue and palate	Gastro-oesophageal reflux disease
Oral pruritus	Loose or frequent stools
Nausea	Blood and/or mucus in stools
Colicky abdominal pain	Abdominal pain
Vomiting	Infantile colic
Diarrhoea	Food refusal or aversion
	Constipation
	Perianal redness
	Pallor and tiredness
	Faltering growth in conjunction with at least one or more gastrointestinal symptoms above (with or without significant atopic eczema)
The respiratory system (usually in combination with one or more of the above symptoms and signs)	
Upper respiratory tract symptoms (nasal itching, sneezing, rhinorrhoea or congestion [with or without conjunctivitis])	
Lower respiratory tract symptoms (cough, chest tightness, wheezing or shortness of breath)	
Other	
Signs or symptoms of anaphylaxis or other systemic allergic reactions	

*Adapted from NICE CG116 (2011)[3]

It is possible for most foods to cause an allergic reaction, however, there are some listed below which are the most common; cow's milk, eggs, peanuts, tree nuts, fish and shellfish, some fruit and vegetables[1].

Potential risk factors for food allergy; a pre-existing food allergy, other allergic conditions such as atopic eczema, a family history of food allergy or atopy[1].

Further information about Non-IgE-mediated food allergy:

- Non-IgE-mediated food allergy is much more complex and the symptoms may be subtle, which creates a real challenge when trying to form a diagnosis. Symptoms which can be caused by a non-IgE-mediated food allergy include atopic eczema, severe colic, constipation, diarrhoea and abdominal pain, gastro-oesophageal reflux, food aversion, blood or mucus in the stools and perianal redness.
- Occasionally non-IgE-mediated food allergy can be responsible for more serious conditions such as eosinophilic oesophagitis, proctocolitis and food protein-induced enterocolitis syndromes (FPIES).

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- There are no clear-cut diagnostic tests for non-IgE-mediated food allergy. This presents a huge challenge, as parents may have heard of allergy testing and cannot understand why these tests are not being offered. Careful explanation is important as parents may go on to find unhelpful and expensive allergy testing on the high street or internet[4].
- NICE have completed some very helpful clinical knowledge summaries on many aspects of food allergy, which are helpful resources to recognising, assessing, diagnosing and managing cow's milk allergy[5] and food allergy[4].

Good practice points for health visitors

- It is important for health visitors to advise parents of children with a suspected food allergy to seek advice from their GP. An allergy-focused clinical history is needed to work out what type of reaction the child is suffering from. This will involve a complete history of all symptoms, along with timings of symptoms, any other manifestations of allergy and any family history of allergy.
- It is helpful for health visitors to advise parents that if IgE-mediated symptoms are suspected, allergy testing can be done to confirm the diagnosis.
- If a child has suspected IgE-mediated symptoms, please advise parents that their child should be referred to an allergy clinic or a paediatrician with a special interest in allergy, where skin prick testing or specific IgE blood testing can be carried out.
- It is important that parents understand that an IgE-mediated allergy has the potential to cause severe allergic reactions, and a risk assessment is required to ensure their child is not at risk of anaphylaxis[3].
- Health visitors should ensure parents understand that the most common allergen affecting infants is cow's milk protein allergy. The Milk Allergy in Primary Care (MAP) guidelines have been developed to aid primary care professionals in making a diagnosis, correct onward referral and managing these patients - this was updated in 2019[6].
- For information on how cow's milk allergy should be managed please see NICE guidance[7].
- Health visitors can support families to manage any conditions which maybe associated with the allergy such as asthma or eczema.
- Health visitors have a role in liaising with professionals caring for a child with an allergy, to ensure there is understanding by parents, and any changes in the condition reported.
- Health visitors can ensure the child has a management plan in place in early years settings.
- Health visitors can ensure the child has a dietician to ensure nutritional requirements are met while managing the food allergy.

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