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PAEDIATRIC FOOD ALLERGY: SUCCESSFUL MANAGEMENT

The term 'food allergy' is often mistakenly used to describe any type of reaction to a food when it should only be used to describe reactions to food that involve the immune system. These include IgE mediated reactions (e.g. anaphylaxis) and non IgE mediated reactions (e.g. coeliac disease).

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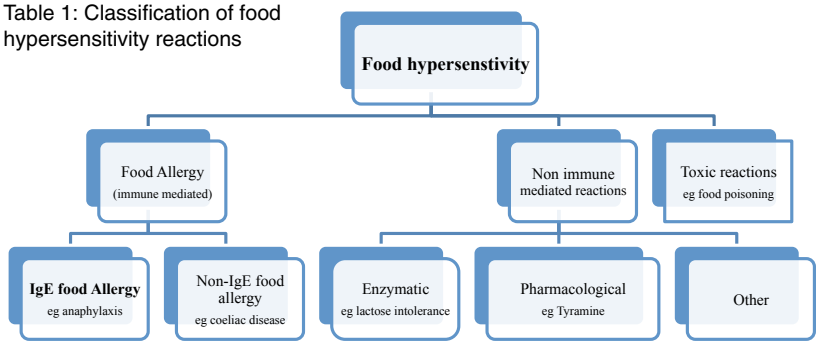
FOOD HYPERSENSITIVITY

The umbrella term 'food hypersensitivity' does in fact cover all types of reactions to foods, of which there are many (1). These include: pharmacological reactions to foods due to chemicals naturally present in the foods such as tyramine in aged cheeses; reactions to food additives such as sulphites; enzymatic reactions such as lactose intolerance and toxic reactions caused by toxins such as histamine in scombroid fish or bacterial toxins in food.

In this article, only IgE mediated food allergy will be discussed. However, there is much overlap in many of the strategies used in the successful management of most types of food hypersensitivity.

Table 1: Classification of food hypersensitivity reactions



WHAT IS FOOD ALLERGY?

IgE mediated food allergy is a type of food hypersensitivity reaction that affects four to seven percent of infants. Those infants with a family history of atopy such as asthma, eczema or rhinitis, are more likely to develop food allergies which often start during weaning. Much is known about the natural history of food allergy (2) and that the majority of children will outgrow most of their food allergies. Unfortunately, they often go on to develop other atopic conditions such as eczema, asthma and rhinitis. This allergic journey through life is known as the atopic march (3).

SYMPTOMS OF IGE MEDIATED FOOD ALLERGY

The symptoms of IgE mediated food allergy can manifest in single or multiple organ systems (see Table 2). Respiratory symptoms can include shortness of breath, airway obstruction, asthma and rhinitis. Gastrointestinal symptoms can include reflux, vomiting, diarrhoea, abdominal pains, bloating and constipation. Dermatological symptoms can include urticaria, angioedema and allergic eczema and circulatory symptoms include anaphylaxis. These reactions can vary from mild to life threatening and, in all cases, these reactions will always be reproducible.

Table 2: Symptoms of IgE mediated food allergy

Organ system	Symptoms
Respiratory	Shortness of breath, asthma, rhinitis
Gastrointestinal	Reflux, vomit, diarrhoea, abdominal pains, bloating, constipation,
Dermatological	Eczema, urticaria, angioedema
Circulatory	Anaphylaxis

ROLE OF THE DOCTORS

The role of the GP is to decide whether the patient needs to be referred to a specialist allergy clinic, or whether the child's allergy care can be managed at primary care level. Ideally, all patients with IgE mediated food allergy would be seen in specialist care settings. However, it is well documented that Allergy Services are poorly resourced (4), so this is neither practical nor realistic and inappropriate referrals to these centres dilute the care that does exist. To help address this shortfall in service provision, NICE guidelines were published in February 2011 (5) to help GPs make an assessment of children with suspected food allergy, so that the appropriate cases are referred to specialist allergy services. Indications for referral to a specialist NHS service, for example, would include faltering growth with gastrointestinal symptoms, acute systemic reactions or severe delayed reactions, significant eczema where multiple foods are suspected, or possible multiple food allergy.

In addition, Allergy Care Pathways for children with food allergy were also published in 2011 by the Royal College of Paediatrics and Child Health (RCPCH) (6) to help health professionals diagnose, treat and provide the optimal management of food allergy.

The clinician's role is to make a diagnosis and prescribe appropriate medications including inhalers, antihistamines and adrenaline if required. The diagnostic criteria includes taking a detailed clinical history, undertaking skin prick testing, specific IgE blood testing and possibly

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Table 3: Classification of egg-containing foods

Well cooked egg	Loosely cooked egg	Raw egg
Cakes	Meringues	Fresh mousse
Biscuits	Lemon curd	Fresh mayonnaise
Dried egg pasta	Quiche	Fresh ice cream
Egg in sausages & prepared meat dishes	Boiled egg	Sorbet
Well cooked fresh egg pasta	Scrambled egg	Royal icing (both fresh powdered icing sugar)
Egg glaze on pastry	Fried egg	Horseradish sauce
Sponge finger biscuits	Omelette	Tartar sauce
Quorn	Poached egg	Raw cake mix and other dishes awaiting cooking
Nougat, Milky Way, Mars Bar, Chewitts	Egg in batter	'Frico' edam cheese or other cheeses containing egg white lysozyme.
Egg in some gravy granules	Egg in breadcrumbs	Prawn crackers
Egg noodles	Hollandaise sauce	Fondant filling in Cadbury's Cream Eggs
Frozen manufactured Yorkshire puddings	Egg custard	
	Homemade 'sticky' pancakes & Yorkshire puddings	

oral food challenges. Availability of these tests will depend on the resources available. Arrangements should always be made by the clinician to reassess the patient in the knowledge that most children outgrow their food allergies or grow into other allergies.

The clinician should always refer the child to a paediatric dietitian who can offer advice on management of their diet and lifestyle. This will minimise the impact that food allergy can have on the whole family and optimise the successful management.

ROLE OF THE DIETITIAN

The dietitian is there to offer practical management advice and support. In instances where the diagnosis is unclear, or where there are unexplained reactions, the dietitian can assess the diet fully by encouraging the patient to keep a detailed food and symptom diary. Keeping a diary can appear tedious to parents but it is an essential diagnostic tool. Parents should be encouraged to keep labels of any manufactured foods eaten and take photographs of any visible reactions where possible to help with the diagnosis. Regular review appointments and support will be required until a clear diagnosis is made.

Once a clear diagnosis has been reached, the parents will need clear instruction on practical management issues, such as reading and understanding food labels and shopping and cooking for their child's diet. They must also understand the importance of how to communicate this information to others who are caring for their child whether it is by another member of the family, a childcare establishment, school setting, holiday club or party (7). The level of avoidance will need to be discussed in relation to whether the child in question reacts to traces of food allergens and guidance should be given on what to do about 'may contain traces of...' labelling.

Some foods can be tolerated if they are well processed. A common example is children who tolerate egg in cake which is well cooked but cannot tolerate boiled eggs or mayonnaise which are a loosely cooked or raw form of egg. If this is the case for a child under a dietitian's care, it is essential that this is discussed clearly so that the family is sure about which foods the allergic child needs to avoid (see Table 3). Food allergy often impacts socially, psychologically and sometimes nutritionally on the whole family (8). Over-restricting the diet is not an appropriate or fair management. Lifestyle issues such as eating away from home, holidays, social events and childcare settings should always be addressed fully.

Unfortunately, some children who have food allergies do develop abnormal behaviour around food. Some are scared of food because they associate it with an unpleasant experience. This is why normalising food and eating as much variety as possible is the key to successfully managing their diet.

Issues that some children with food allergies can have due to their mistrust of foods include:

- poor acceptance of textures or dislike of certain textures; dislikes of lumps or more than one texture served together;
- food refusal if foods are touching each other on a plate – if they are served in separate bowls or on compartmentalised plates this is often acceptable;
- refusal of foods usually eaten because something disliked is on the same plate;
- refusing to eat with others – some want to eat on their own or in their bedrooms;
- acceptance of foods only when what is being eaten can be identified; a dish containing mixed foods such as a Bolognese or stew is not acceptable.

A full nutrition and growth assessment of the allergic child is required – especially if any of the major food staples are being cut out of the diet. It is especially important to ask about other reasons for food avoidance due to religious or cultural reasons, food preferences or fussy eating. Growth should also be regularly assessed and plotted.

No matter how restricted the diet, it is always possible for the child to achieve their nutritional requirements and for them to eat a diet that tastes good if it is managed carefully. Clear information sheets should always be given and should include a list of the most useful resources, recipes and available products.

Tanya Wright's latest cookery book (priced £10.50 inc p&p) is an A5 spirally bound gloss cookbook with 66 colour plates of sweet and savoury everyday family recipes that are very easy to prepare. All recipes are free from milk (dairy and lactose), egg, soya, wheat and gluten (rye, barley and oats). Useful advice is included on lifestyle issues and feeding fussy eaters, with detailed information on replacement ingredients.

For more information and to order a copy please contact Tanya Wright, 106 High Street, Great Missenden, Bucks HP16 OBE or email her on easyallergycookbook@gmail.com

References
1 Johansson SG et al. Revised nomenclature for allergy for global use: October 2003. JACI. 2004;113:832-6
2 Thong BY, Hourihane JO. Monitoring of IgE-mediated food allergy in childhood. Acta Paediatr. 2004 Jun; 93(6):759-64
3 The International Study of Asthma and Allergies in Childhood (ISAAC) Steering Committee. Worldwide variation in prevalence of symptoms of asthma, allergic rhinoconjunctivitis and atopic eczema: ISAAC. Lancet 1998, 351:1225-1232
4 RCP June 2010. Allergy services still not meeting the unmet need: Joint report of RCP and RCPath Working Party (June 2010)
5 NICE clinical guideline 116. February 2011. Food allergy in children and young people: Diagnosis and assessment of food allergy in children and young people in primary care and community settings
6 RCPCH April 2011. Allergy Care Pathways for Children: Food Allergy
7 Session 1: Allergic disease: The challenges of managing food hypersensitivity. Venter C, Meyer R. Proc Nutr Soc. 2010 Feb;69(1):11-24. Epub 2009 Dec 15
8 Gillespie CA, Woodgate RL, Chalmers KI et al. (2007). Living with risk: mothering a child with food-induced anaphylaxis. Journal of Pediatric Nursing 22: 30-42

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References: 1. Mabin DC *et al.* Arch Dis Child 1995;73:208-10. 2. Arslanoglu S *et al.* J Nutr 2008;138:1091-5. 3. Willatts P *et al.* Lancet 1998;352:688-91. 4. Birch EE *et al.* Pediatr Res 1998;44:201-9. 5. Bouwstra H *et al.* Am J Clin Nutr 2003;78:313-8. 6. Koletzko B *et al.* J Perinat Med 2008;36:5-14. 7. Pickering LK *et al.* Pediatrics 1998;101:242-9. 8. Yau KT *et al.* Pediatr Gastroenterol Nutr 2003;36:37-43.

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Questions relating to: *Paediatric food allergy: successful management*
Type your answers below and then **print for your records.** Alternatively print and complete answers by hand.

Q.1	Describe two reactions to foods that 'food hypersensitivity' covers.
A	
Q.2	What are the four main organ systems that can be affected by symptoms of IgE mediated food allergy?
A	
Q.3	Why are some children more likely than others to develop food allergy?
A	
Q.4	With regards to NICE guidelines on IgE mediated food allergy, give three examples of indications for referral to specialist NHS services.
A	
Q.5	What are the three or four factors that contribute to the diagnostic criteria for IgE mediated food allergy?
A	
Q.6	Why should a clinician always refer a child with IgE mediated food allergy to a paediatric dietitian?
A	
Q.7	What practical management advice should a dietitian give to the parents of a child suffering with IgE mediated food allergy?
A	
Q.8	Give an example of how a food can be tolerated if it has been well processed.
A	
Q.9	What behavioural issues can children have due to their mistrust of certain foods? Give at least two examples.
A	

Please type extra notes here . . .