NICE BULLETIN

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Food allergy in children

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Nursing IN PRACTICE

Welcome

In 2011, NICE published two related clinical guidelines – on food allergy in children, and anaphylactic episodes in children, young people and adults

Nursing IN PRACTICE

Food allergy in children

In February 2011, NICE published a clinical guideline on food allergy in children. The guideline covers the assessment and diagnosis in a primary care setting of children and young people (up to their 19th birthday) with food allergy. Food intolerance is not covered in this guideline.

Food allergies are adverse immune responses to food allergens. Among the most common of allergic disorders, they are recognised as a major paediatric health problem in western countries. Reactions can be extremely severe, and hospital admissions in the UK for food allergies have increased by 500% since 1990[1]. There has also been a dramatic increase in prevalence in the last twenty years in Europe and North America, with 6-8% of children up to the age of 3 years old now having a food allergy[2].

The most common foods to which children and young people are allergic include:

- cow's milk;
- fish and shellfish;
- hen's eggs; peanuts,
- tree nuts and sesame;
- soy;
- wheat;
- kiwi fruit.

In its review of allergy services in 2006, the Department of Health concluded that there was considerable variation in current practice for allergy care with no agreed treatment pathways, referral criteria or service models. It was also understood that many people with allergy symptoms self-care or use alternative sources of information, sometimes using non-validated tests and treatments. The Department of Health commissioned NICE to develop a guideline to offer best practice in the care of children and young people in primary care with suspected food allergies.

Food allergy can be classified into IgE (immunoglobulin)-mediated and non-IgE-mediated allergy. IgE-mediated reactions are acute and frequently have a rapid onset. Non-IgE-mediated reactions are generally characterised by delayed and non-acute reactions.

Allergy testing should not be carried out without first taking an allergy-focused clinical history. The results of tests should be interpreted in the context of information from the allergy-focused clinical history.

Based on the results of the allergy-focused clinical history, if an IgE-mediated

SYMPTOMS OF FOOD ALLERGY

IgE-mediated	Non-IgE-mediated
The skin	
Pruritus	Pruritus
Erythema	Erythema
Acute urticaria – localised or generalized	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	

Note: this list is not exhaustive. The absence of these symptoms does not exclude food allergy.

allergy is suspected, the child or young person should be offered a skin prick test and/or blood tests for specific IgE antibodies to the suspected foods and likely co-allergens. Tests should only be undertaken by healthcare professionals with the appropriate competencies to select, perform and interpret them. Skin prick tests should only be undertaken where there are facilities to deal with an anaphylactic reaction.

Choose between a skin prick test and a specific IgE antibody blood test based on:

- the results of the allergy-focused clinical history and
- whether the test is suitable for, safe for and acceptable to the child or young person (or their parent or carer) and
- the available competencies of the healthcare professional to undertake the test and interpret the results.

Atopy patch testing or oral food challenges should not be used to diagnose IgE-mediated food allergy in primary care or community settings.

Based on the results of the allergy-focused clinical history, if a non-IgE mediated food allergy is suspected, a trial elimination of the suspected allergen (normally for between 2–6 weeks) is recommended, and should be reintroduced after the trial. Advice should be sought from a dietitian with appropriate competencies, about nutritional adequacies, timings of elimination and reintroduction, and follow-up.

RECOMMENDATIONS

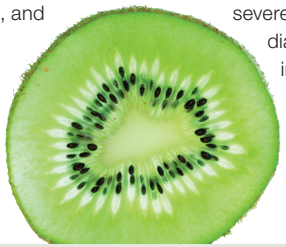
Food allergy in children can present itself in a range of different symptoms; the guideline recommends that it should be considered if the child has one or a combination of the following, including:

- Skin conditions such as eczema or acute urticaria (itchy rash)
- Gastrointestinal problems such as vomiting, nausea or constipation
- Respiratory complaints such as sneezing, or shortness of breath
- Anaphylaxis (severe, hyper-sensitive reaction) and other allergic reactions.

Food allergy should also be considered in children who do not adequately respond to treatment for atopic (allergic) eczema, gastro-oesophageal reflux disease (where stomach contents flow out of the stomach and into the oesophagus [gullet]), and chronic constipation.

If a food allergy is suspected, the GP or other healthcare professional should take an allergy-focused clinical history, tailored to the presenting symptoms and age of the patient. This should include a family history of allergies, an assessment of the symptoms, details of any foods that are avoided and reasons why, and feeding history as an infant. A physical examination (dependent on the allergy-focused clinical history) should pay particular attention to growth, and physical signs of malnutrition.

The guideline also recommends offering the patient appropriate information based on the type of allergy suspected, the risk of severe allergic reaction, and the diagnostic process. This may include excluding specific foods from the diet and reintroducing these foods



with reoccurrence of the allergic reaction confirming diagnosis. Diagnosis may also include skin prick and/or blood tests for IgE (immunoglobulin) antibodies because specific antibodies suggest particular allergic reactions.

Alternative methods of diagnosis readily available on the high street or via the internet such as the Vega test[3], kinesiology[4], and hair analysis are not recommended. They are unvalidated, and there is currently very little evidence to show they work.

This guideline has been produced to help provide consistency in the way that food allergy is diagnosed. Of those children who report an allergy, there are at present up to 20% who wrongly self-report diagnoses of various food allergies and do not eat certain foods because they think they are allergic to them, but have not had a confirmed diagnosis[5].

Referral to secondary care should be considered if the child has ongoing problems including faltering growth, vomiting, abdominal pain, loose or frequent stools, or constipation, in combination with other gastrointestinal symptoms.

Please see link for full guideline - http://guidance.nice.org.uk/CG116

ANAPHYLACTIC EPISODES IN CHILDREN, YOUNG PEOPLE AND ADULTS.

In December 2011, NICE published its clinical guideline on the initial assessment and referral following emergency treatment for a suspected anaphylactic episode in children (from 0 years old), young people and adults.

An anaphylactic episode (sometimes called an anaphylactic shock) may be an allergic response that is a severe, life-threatening, generalised or systemic hypersensitivity reaction. It may be characterised by life threatening airway, breathing and/or circulation problems. Common causes of anaphylactic reaction, especially in children, include foods such as:

- peanuts,
- nuts,
- eggs,
- shellfish,
- milk,
- fish,
- some seeds such as sesame.

Non-food causes include wasp or bee stings, natural latex (rubber), and penicillin. A significant proportion of anaphylaxis is classified as idiopathic, in which there are significant clinical effects but no identifiable stimulus.

There is no overall figure for the frequency of anaphylaxis from all causes in the UK. This may be because of inconsistencies in reporting anaphylaxis, and because it is often misdiagnosed. Available UK estimates suggest that approximately 1 in 1,300 of the population of England has experienced anaphylaxis at some point in their lives. In the past twenty years there has also been a sharp increase in the number of hospital admissions for anaphylaxis. Between 1990 and 2004 they increased from 0.5 admissions per 100,000 to 3.6 per 100,000 - an increase of 700%. There are now around 20 deaths each year in the UK from anaphylaxis, although this may be a substantial underestimate. In addition, there is considerable geographic variation in both

practice and service provision, specifically in assessment after the event to confirm an anaphylactic episode or on the decision to refer after emergency treatment[6].

RECOMMENDATIONS

- Record the circumstances immediately before the onset of the reaction to help to identify the possible trigger.
- Children younger than 16 years who have had emergency treatment for suspected anaphylaxis should be admitted to hospital under the care of a paediatric medical team.
- After emergency treatment for suspected anaphylaxis, offer people (or, as appropriate, their parent and/or carer) an appropriate adrenaline[7] injector as an interim measure before the specialist allergy service appointment.
- Each hospital trust providing emergency treatment for suspected anaphylaxis should have separate referral pathways for suspected anaphylaxis in adults (and young people) and children.

Please see link for full guideline - http://guidance.nice.org.uk/CG134

REFERENCES

1. Gupta R, Sheikh A, Strachan DP, Anderson HR (2007). Time Trends in Allergic Disorders in the UK.
2. NICE clinical guideline - Diagnosis and assessment of food allergy in children and young people in primary care and community settings.
3. An electrodermal test which involves measuring electromagnetic conductivity in the body.
4. Muscle testing.
5. Allergy 2009. Review article. Factors influencing the incidence and prevalence of food allergy. Cochrane et al, Allergy 2007. Review article. The prevalence, cost and basis of food allergy across Europe. Mills et al, JAMA 2010; 303(18):1848-1856. Diagnosing and Managing Common Food Allergies: A Systematic Review Schneider Chafen et al, Journal of Allergy Clinical Immunology 2008; 121:1331-1336. Epidemiologic risks for food allergy. Lack G.
6. NICE short clinical guideline scope, Anaphylaxis: assessment to confirm an anaphylactic episode and the decision to refer after emergency treatment for a suspected anaphylactic episode, available at: http://www.nice.org.uk/nicemedia/live/12346/52120/52120.pdf
7. Adrenaline (also known as epinephrine) acts quickly to constrict blood vessels, relax muscles in the lungs to improve breathing, stimulate the heartbeat and helps to stop swelling around the face and lips.