CYANS recommendations for the diagnosis and management of food allergy in children and young people

Issue date: 2013
1. Diagnosis of food allergy

Follow NICE clinical guideline 116 – Food allergy in children and young people, as outlined below (1)

1.1 Assessment and allergy-focused clinical history

1.1.1 Initial recognition
Consider food allergy in a child or young person who:

- has one or more of the signs and symptoms listed in table 1 (pay particular attention to persistent symptoms that involve different organ systems) or
- has had treatment for atopic eczema, gastro oesophageal reflux disease or chronic gastrointestinal symptoms (including chronic constipation) but their symptoms have not responded adequately.

Table 1. Signs and symptoms of possible food allergy

<table>
<thead>
<tr>
<th>IgE-mediated</th>
<th>Non-IgE-mediated</th>
</tr>
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<tbody>
<tr>
<td>Arise within minutes to 2 hours</td>
<td>Arise after several hours or days</td>
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<tr>
<td><em>The skin</em></td>
<td></td>
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<tr>
<td>Pruritus</td>
<td>Pruritus</td>
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<tr>
<td>Erythema</td>
<td>Erythema</td>
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<tr>
<td>Acute urticaria – localised or generalised</td>
<td>Atopic eczema</td>
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<tr>
<td>Acute angioedema – most commonly of the lips, face and around the eyes</td>
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<tr>
<td><em>The gastrointestinal system</em></td>
<td></td>
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<tr>
<td>Angioedema of the lips, tongue and palate</td>
<td>Gastro-oesophageal reflux disease</td>
</tr>
<tr>
<td>Oral pruritus</td>
<td>Loose or frequent stools</td>
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<tr>
<td>Nausea</td>
<td>Blood and/or mucus in stools</td>
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<tr>
<td>Colicky abdominal pain</td>
<td>Abdominal pain</td>
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<tr>
<td>Vomiting</td>
<td>Infantile colic</td>
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<tr>
<td>Diarrhoea</td>
<td>Food refusal or aversion</td>
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<td></td>
<td>Constipation</td>
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<td></td>
<td>Perianal redness</td>
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<td></td>
<td>Pallor and tiredness</td>
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<tr>
<td></td>
<td>Faltering growth in conjunction with at least one or more gastrointestinal symptoms above (with or without significant atopic eczema)</td>
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</table>

*The respiratory system*
(usually in combination with one or more of the above symptoms and signs)

Upper respiratory tract symptoms
(nasal itching, sneezing, rhinorrhea or congestion [with or without conjunctivitis])
Note: this list is not exhaustive. The absence of these symptoms does not exclude food allergy

### IgE-mediated

**Arise within minutes to 2 hours**

*The skin*

- Pruritus
- Erythema
- Acute urticaria – localised or generalised

*Acute angioedema – most commonly of the lips, face and around the eyes*

### Non-IgE-mediated

**Arise after several hours or days**

*The skin*

- Pruritus
- Erythema
- Atopic eczema

### The gastrointestinal system

- Angioedema of the lips, tongue and palate
- Gastro-oesophageal reflux disease

### Examination

- Do not offer allergy tests without first taking an allergy focused clinical history.
- A health care professional with the appropriate competencies (GP or other health care professional) should take a clinical history using the questions below.
- Based on the clinical history, physically examine the child or young person, in particular for:
  - growth and physical signs of malnutrition
  - signs indicating allergy related co-morbidities (atopic eczema, asthma and allergic rhinitis).

### 1.1.3 Allergy - focused clinical history

Ask about:
- any personal history of atopic disease (asthma, eczema or allergic rhinitis)
- any individual and family history of atopic disease (such as asthma, eczema or allergic rhinitis) or food allergy in parents or siblings
- details of any foods that are avoided and the reasons why
- presenting symptoms and other symptoms that may be associated with food allergy (see table 1), including:
  - the age at first onset
  - speed of onset
  - duration, severity and frequency
  - setting of reaction (for example, at school or home)
  - reproducibility of symptoms on repeated exposure
  - what food and how much exposure to it causes a reaction
- cultural and religious factors that affect the foods they eat
☐ who has raised the concern and suspects the food allergy
☐ what the suspected allergen is
☐ the child or young person’s feeding history, including the age at which they were weaned and whether they were breastfed or formula-fed (if the child is currently being breastfed, consider the mother’s diet)
☐ details of any previous treatment, including medication, for the presenting symptoms and the response to this
☐ any response to the elimination and reintroduction of foods.

1.2 When to consider referral
If any of the following apply, consider referral to secondary or specialist care:
☐ The child or young person has:
☐ faltering growth in combination with one or more of the gastrointestinal symptoms listed in table 1.
☐ had one or more acute systemic reactions or severe delayed reactions
☐ significant atopic eczema where multiple or cross-reactive food allergies are suspected by the parent or carer.
☐ possible multiple food allergies
☐ symptoms that do not respond to a single allergen elimination diet
☐ confirmed IgE-mediated food allergy and concurrent asthma

☐ Allergy test are negative but there is a strong clinical suspicion of IgE-mediated food allergy.

☐ There is persisting parental suspicion of food allergy (especially where symptoms are difficult or perplexing) despite a lack of supporting history.

1.3 Food allergy is suspected, provide initial Information
Offer age appropriate information that is relevant to the type of allergy (IgE-mediated, non-IgE-mediated or mixed). Include:
☐ The type of allergy suspected
☐ The risk of a severe allergic reaction
☐ Any impact on other health care issues such as vaccination
☐ The diagnostic process, which may include:
☐ an elimination diet followed by a possible planned re-challenge or initial food reintroduction procedure
☐ skin prick tests and specific IgE antibody testing and their safety and limitations
☐ referral to secondary or specialist care
☐ Support groups and how to contact them
1.4 Diagnostic tests

1.4.1 IgE-mediated allergy is suspected
- Offer a skin prick test and/or blood tests for specific IgE antibodies to the suspected foods and likely co-allergens.

- Base choice of test on:
  - the clinical history and
  - the suitability for, safety for, and acceptability to the child (or their parent and carer) and
  - the available competencies of the health care professional.

- Tests should only be undertaken by healthcare professionals with appropriate competencies.
- Only undertake skin prick tests where there are facilities to deal with an anaphylactic reaction.
- Interpreted the results of tests in the context of clinical history.
- Do not use atopy patch testing or oral food challenges to diagnose IgE-mediated food allergy in primary care or community settings.

(For interpretation of diagnostic test in suspected IgE mediated food allergy please see Appendix 1)

1.4.2 Non IgE-mediated allergy is suspected
- Try eliminating the suspected allergen for 2–6 weeks, then reintroduce. Consult a dietitian with appropriate competencies, about nutritional adequacies, timings and follow-up.
- Skin prick tests and specific IgE-antibodies are not predictive of non-IgE mediated allergy and should usually not be used.

1.4.3 Alternative diagnostic tools
Do not use the following alternative diagnostic tests in the diagnosis of food allergy:
- vega test
- applied kinesiology
- hair analysis.

Do not use serum specific IgG testing to diagnosis food allergy.
2. Management of food allergy

2.1 Allergen avoidance
The key to the management of food allergy is avoidance of the trigger allergen.

Children and their families should be offered specific advice on avoidance of the allergen concerned, taking into account socioeconomic, cultural and religious issues. This should include information on
- what foods / drinks to avoid that are likely to contain trigger allergens
- how to interpret food labels
- alternative foods to ensure a balanced diet
- the duration, safety and limitations of an elimination diet
- oral food challenge or reintroduction procedures, if appropriate, and their safety and limitations.

Avoidance of some allergens may be difficult and put children at risk of inadequate nutritional intake (1, 2). Children and young people are at particular risk and should receive nutritional support and monitoring by a registered dietician with appropriate competencies, if they:
- are allergic to staple foods; e.g. cow’s milk, wheat, soy
- have multiple food allergies.
- have a food allergy and additional dietary restrictions; e.g. vegetarian diet.

2.1.1 Allergen avoidance during breast feeding
- Food proteins from the maternal diet are detectable in breast milk (3) and in infants with eczema and food allergy, eczema may improve if food allergens concerned are removed from the maternal diet (4).
- Breast feeding mothers may be advised to exclude the food allergen to which their infant is sensitive, from their own diet (5, 6).
- In the case of cow’s milk avoidance the mother will require advice from a registered dietician and calcium supplementation.

2.2 Emergency medications
2.2.1 Provision of adrenaline auto injector.
When a child has been diagnosed with an IgE-mediated food allergy an individual risk assessment should be undertaken to identify those at high risk of anaphylaxis for whom self-injectable adrenaline should be prescribed (10).

Adrenaline auto injector prescription is recommended if
- History of previous anaphylaxis
- Previous food reaction involving respiratory or cardiovascular symptoms
History of generalized allergic reaction to foods and co-existent asthma requiring regular preventer therapy

Adrenaline auto injector prescription may be considered if
- Generalised reaction to trace amounts of food (e.g. airborne food allergen or contact only via skin)
- Reaction to peanut or tree nut without anaphylaxis.
- Remoteness of home from medical facilities
- Food allergic reaction in a teenager

Adrenaline auto injectors should be prescribed by brand name to ensure that the patient receives the device they have been trained on.

2.2.2 Other medications
- To alleviate symptoms of food allergic reactions an oral antihistamine should be prescribed for use after accidental ingestion of a food allergen and / or when symptoms of an allergic reaction arise.
- In children and young people with food allergy and co-existing asthma, who are deemed to be at risk of anaphylaxis, prescription of a single dose of prednisolone may be considered to reduce the risk of late asthmatic reactions.

2.3 Education of children and parents
- Allergen avoidance measures
- Prompt recognition of symptoms of anaphylaxis
- Training in the use of the self-injectable adrenaline device they have been prescribed.
- Reinforcement with revision at yearly intervals

Children and care-givers should be provided with contact details for patient support; e.g. Anaphylaxis Campaign, Asthma UK, National Eczema Society, Allergy UK.

2.4 Food allergy in schools
Nursery and school staff should receive training in allergen avoidance and in the recognition and treatment of food induced allergic reactions (6)

2.5 Personal allergy management plan
All children with food allergy should be provided with a personalized allergy management plan, to be used at home, nursery and school, as this has been shown to reduce the frequency and severity of further food reactions (EACCI paper 7, 8, 9).
(Please see Appendix 2 for examples of personalised allergy management plans.)

2.6 Resolution of food allergy
- Most children with food allergy to milk, egg, soy and wheat will eventually develop tolerance to these foods.
Far fewer children with allergies to peanut, tree nuts, sesame and fish will eventually tolerate these. The time course of food allergy resolution varies by individual and may occur as late as the teenage years (11). A higher initial level of food specific IgE is associated with a lower rate of resolution of clinical allergy over time. Children with food allergy should be re-evaluated at intervals to identify when tolerance has developed so that their diet does not remain unnecessarily restricted. Re-evaluation should include any history of accidental exposure and may require re-assessment of food specific IgE and/or skin prick tests. Falling specific IgE or reduction in the size of skin prick test wheal may be a marker for the onset of tolerance to the food. If history and investigations suggest that a food allergy may have resolved a risk assessment should be made to decide whether a food may be introduced at home or a hospital supervised challenge is required.

Specific considerations in managing the most common food allergies

3. Cow's Milk Allergy (CMA)

CMA is an allergy to proteins (not lactose, please see below) in cow's milk. It is the leading cause of food allergy in babies and children under 3 years. The prevalence is thought to be 2-5 % in infancy, dropping to less than 1% by 6 years (15)

3.1 Initial recognition of CMA
CMA may present with signs and symptoms of immediate IgE-mediated or delayed non IgE-mediated allergy or a mixed picture. (See table 1).

- **IgE-mediated CMA** could typically present in a breast fed infant with angioedema, urticaria and wheeze at first exposure to cow's milk.
- In a **mixed picture** this infant would also have long standing eczema or loose stools.
- In **non IgE-mediated CMA**, a degree of clinical suspicion is required since non-specific GI symptoms are common usually without clear temporal association to milk ingestion, e.g. an unsettled baby with slow weight gain and loose stools.
- Infants may present with symptoms of gastro oesophageal reflux disease (GORD). Failure to respond to medical management for GORD should raise the suspicion of CMA.

3.2 Diagnosis of CMA

- An allergy focused history is key to diagnosis and treatment.
- Allergy tests may be helpful in confirming the diagnosis and in future management decisions of IgE-mediated CMA.
Allergy tests are of no help in non-IgE mediated CMA and diagnosis relies on a 4 week trial of milk (cow’s milk protein) exclusion, followed by a reintroduction.

3.3 Cow’s milk / dairy free diet

3.3.1 Breast fed infants with CMA
Breast fed infants with CMA can react to small amounts of cow’s milk protein which pass into the breast milk from the mother’s diet. These reactions may be non-specific e.g. mild GI upset or unsettled baby or more specific e.g. eczema unresponsive to topical treatment (18) or an allergic colitis.

Treatment is initially a 2-3 week trial of complete maternal exclusion of cow’s milk. This requires dietetic advice and the mother will require calcium and vitamin D supplementation.
If successful, continue breastfeeding and maternal exclusion diet. If unsuccessful, CMA is unlikely to be the cause of symptoms. Consider referral to dietician, secondary or specialist care.

3.3.2 Weaning
Infants who have responded to milk exclusion should be weaned onto a milk free diet at the recommended age of around 6 months, but not before 17 weeks.

Initial simple advice can be given by the health visitor but more detailed advice from a registered dietitian with appropriate competencies should be arranged by 9 months of age. This is essential where other food allergies are suspected.

3.3.3 Choice of milk substitutes for infants
For infants under 1 year, milk is the major source of nutrition so a nutritionally complete, prescribable infant formula is essential.

First line formulae
The majority of infants with CMA tolerate an extensively hydrolysed formula (EHF) based on milk proteins. These formulae meet strict guidelines stating that they do not cause allergic reactions in 90% of infants with CMA (16).
EHF examples;
- Nutramigen Lipil 1 and 2,
- Aptamil Pepti 1 and 2

Second line formulae
10% of infants with CMA either do not respond to an EHF or initially respond and then relapse. These infants require a formula based on amino acids (AAF). Clinicians may also opt to use these products for infants with severe/anaphylactic reactions or young infants with nutritional issues related to an enteropathy.
AAF examples:

- Neocate LCP
- Nutramigen AA

**Soya formulae**
These are not recommended for infants under 6 months (16, AAP/DoH), since soya formula contains phytoestrogens. A proportion of infants with CMA will also react to soya.

**Other milks**
Infants under 1 year require an infant formula as their main milk source.
Other animal milks, oat, rice or nut milks are therefore unsuitable.

Lactose free formulae and “comfort” milks contain cow’s milk protein so an infant who has been on such feeds has not had a trial of a cow's milk free formula.

**Children over 1 year**
Older children still requiring milk exclusion should be assessed by a dietitian with appropriate competencies. Advice will include which milk substitutes are suitable and whether a calcium supplement is needed.

### 3.3.4 Reintroduction of milk

The majority of infants and children with CMA will eventually achieve tolerance and return to a normal milk containing diet.
50% achieve tolerance by 1 year, 75% by 3 years and 90% by 6 years (17); however IgE-mediated CMA may take into adolescence to resolve (18).

For **non IgE reactions** most infants will remain on a milk free diet for at least 6 months with a milk challenge around 1 year of age. These children can have milk reintroduced at home. (Please see Appendix 3 for information on home introduction of cow’s milk.)

For children who had **IgE-mediated reactions** including respiratory or cardiovascular symptoms or where there is a diagnosis of asthma should be challenged in a hospital setting. Repeat specific IgE and skin prick tests may be used to inform the timing of a challenge.

### 3.4 Lactose intolerance

Lactose is the carbohydrate present in mammalian milk, this includes human breast milk, cow, goat and sheep milk. Standard infant formula also contain lactose. Lactose is digested by the enzyme lactase found in the brush border of the villi in the small intestine. Lactose intolerance results when there is a
relative lack of this enzyme resulting in symptoms of excessive flatus, abdominal pain and bloating with watery, frothy diarrhoea.

**Lactose intolerance is not immune mediated and therefore not an allergy.**

Worldwide many people of non-Caucasian background have a degree of lactose intolerance after weaning. Traditionally they self select a diet low in lactose.

Secondary lactose intolerance is seen where the gut lining has been damaged, most commonly following gastroenteritis. It is generally short lived, lasting a few days to a few weeks and resolves without treatment. A lactose free diet is not necessary for transient lactose intolerance (15).

Infants and children with an enteropathy caused by CMA may have transient associated lactose intolerance.

### 4. Egg allergy

Egg allergy is common in infancy with a prevalence estimated at around 2% at 2yrs and 0.1% in adults. It presents most commonly after the first apparent ingestion of egg with rapid onset of urticaria and angio-oedema; severe reactions with significant respiratory symptoms are uncommon (5-10% in challenge studies). Ingestion of raw or lightly cooked egg may trigger more severe clinical reactions than well cooked egg (12).

The following refers predominantly to type-1 IgE mediated allergy to egg and is based on British Society for Allergy and Clinical Immunology guidelines for the management of egg allergy (6).

#### 4.1 Diagnosis

- Diagnosis is made by the combination of a typical history of rapid onset of urticaria and/or angio-oedema / vomiting / wheeze (usually within minutes) after ingestion of egg and evidence of sensitisation (SPT wheal ≥3mm or specific IgE>0.35).
- Specific IgE levels and skin prick testing both have poor predictive value as a screening tool and should only be carried out if there is a clinical suspicion of egg allergy.
- A SPT wheal to egg white of 5mm or greater has a high specificity for clinical allergy. It is not possible to identify a single cut-off value for egg specific IgE which is diagnostic for egg allergy at all ages.
- A food challenge may be necessary to confirm or refute a conflicting history or test results but in practice is not commonly required.
SPT wheal size and specific IgE level do not predict the clinical severity of egg reaction.

Algorithm for diagnosis of egg allergy (from (6))

4.2 Management
Egg avoidance is the cornerstone of management. Verbal and written advice on the avoidance of egg products should be provided. All children with egg allergy should be prescribed an appropriate oral antihistamine. A small minority will require adrenaline auto-injectors, for indications see 2.2 above.
(Please see Appendix 4 for information on egg avoidance)

4.3 Resolution of egg allergy
The natural history of egg allergy is for the majority to resolve spontaneously over time, often by school age, but egg allergy may take into adolescence to resolve (19). Eventual resolution is most likely in children with a history of milder reaction (cutaneous symptoms only), lower SPT wheal size and lower level of egg white specific IgE (13). Reduction of specific IgE and SPT wheal over time increase the likelihood of tolerance (14).

Resolution of egg allergy usually occurs in stages starting with tolerance to well cooked egg (e.g. cake), then lightly cooked egg (e.g. scrambled egg) and finally by raw egg. Children who tolerate cooked egg may still react to raw or undercooked egg (12). The speed with which egg allergy resolves can vary greatly between individuals and therefore the timing and appropriateness of reintroduction should be individually assessed. Reintroduction should not be attempted within 6 months of a significant reaction to egg.
Children with a history of severe egg reaction are more likely to have persistent allergy and should have avoidance and reintroduction guided by a specialist.

Low risk patients – those who have had mild reactions (only cutaneous symptoms) on significant exposure (e.g. a mouthful of scrambled egg) without concurrent asthma may have well cooked egg (e.g. sponge cake) introduced from the age of about 2-3yrs at home. If this is tolerated, reintroduction of lightly cooked egg may follow from about 3-4yrs.

The following patients are at higher risk and a hospital supervised challenge should be considered in these cases:
- Children with previous egg allergy symptoms that affected breathing (cough, wheeze or swelling of the throat e.g. choking), the gut (severe vomiting or diarrhoea) or the circulation (faintness, floppiness, shock)
- Children who had a less severe reaction after only trace exposure.
- Children on regular asthma preventative inhaler treatment and/or have poorly controlled asthma.
- Children with multiple/complex allergy.
- Children whose parents are unable to comprehend or adhere to protocol.

4.4 Vaccinations
All children with egg allergy should receive measles, mumps and rubella (MMR) vaccination and this can be given in the community with the standard precautions. Children who have experienced an allergic reaction to the MMR vaccine itself should be assessed by a paediatric allergy service before a second dose can be considered.

Most influenza vaccines contain measureable quantities of egg protein. Patients who have either confirmed anaphylaxis to egg or egg allergy with uncontrolled asthma (BTS SIGN step 4 or above) can be immunised with an egg-free influenza vaccine (if available). If no egg-free vaccine is available, patients should be referred to specialists for vaccination in hospital using an inactivated influenza vaccine with an ovalbumin content less than 0.12 μg/ml (equivalent to 0.06 μg for 0.5 ml dose). All other egg allergic individuals can be given egg-free vaccine or inactivated influenza vaccine with an ovalbumin content less than 0.12 μg/ml (equivalent to 0.06 μg for 0.5 ml dose) administered as recommended in primary care. (Department of Health advice).

The yellow fever and tick-borne encephalitis and some rabies vaccines also contain measureable egg protein and children requiring these should be referred to an allergy specialist.
References


10. Moneret-Vautrin DA, Kanny G, Morisset M, Flabbee J, Guenard L,


Appendix 1

Interpretation of diagnostic tests in suspected IgE mediated food allergy

Skin prick tests and measurement of serum specific IgE can both be used to demonstrate sensitisation to a specific food allergen; neither however is diagnostic of food allergy in the absence of a history of reaction. They are not useful as screening tools and should only be undertaken when there is a clinical suspicion of food allergy after taking a careful history (1, 2).

SPT wheal size of ≥3mm (BSACI5) or serum-specific IgE>0.35KU/L support a clinical diagnosis when taken with a good history of reaction to the food concerned.

SPT wheal size is correlated with the likelihood of clinical allergy and 95% positive predictive threshold (wheal size above which there is a >95% chance of clinical allergy) have been described for the common allergens (3-5). Wheal sizes however can be influenced by factors such as age, skin reactivity and reagents used and so 95% positive predictive values may not be generally applicable in different populations and clinical settings.

Specific IgE levels also correlate with likelihood of clinical allergy and 95% specificity thresholds have been described for the majority of major food allergens(3).

Although serum specific IgE levels and SPT wheal sizes generally correlate with the likelihood of clinical allergy, they do not correlate with or predict the severity of allergic reaction to a food (3, 6-10). If there is diagnostic uncertainty it may be useful to perform both skin prick and specific IgE blood testing (11-13).

In recent years it has become possible to measure specific IgE antibodies to individual allergen components within a food (e.g. Ara h 2 in peanut). These techniques may improve the diagnosis of clinical allergy in the future but there is currently insufficient evidence to recommend their use in UK primary care (11).

An oral food challenge is the most specific test for food allergy. A double blind, placebo controlled challenge is considered the gold standard diagnostic test for the diagnosis of food allergy but it is time consuming and expensive. Open or single blinded food challenges are generally used in clinical practice. All food challenges expose the patient to the risk of severe allergic reaction. A food challenge is indicated when there is a discrepancy between SPT or serum specific IgE results and the history or when a SPT or specific IgE result is positive but less than the 95% positive predictive threshold in a patient who has not yet introduced the food into the diet. In these situations food challenges should be performed in a hospital setting where facilities are available for emergency treatment of severe reaction (2). They are also useful.
in diagnosing the point at which a food allergy has been outgrown and the food can now be tolerated. The decision on whether such a challenge should be performed in hospital or can be done at home should be based on an individual risk assessment.

References


Appendix 2

Lothian schools allergy plan
http://egfl.net/ASL/ASLPlanning_folder/ASLhcp.html

Appendix 3 Information on home introduction of cow’s milk
Home Introduction of Cow’s Milk

Children where milk has caused symptoms such as eczema, urticaria, vomiting, diarrhoea and poor weight gain may be safely challenged at home.

Children with a history of more severe, usually immediate type allergic reactions should be challenged in a hospital day case setting. eg
- Children with a reaction to milk that affected breathing (cough, wheeze or swelling of the throat, choking
- Severe vomiting or diarrhoea
- Faintness, floppiness or shock
- Children who had a less severe reaction after only trace exposure
- Children on regular asthma preventative inhalers and/or poorly controlled asthma
- Children with multiple allergies
- Children whose parents are unable to understand or adhere to the plan.

Adapted from BSACI Guidelines for the Management of Egg Allergy.2010

By 1 year of age around 70% of babies may achieve tolerance and can return to a normal diet. This can be a gradual process with some children only achieving partial tolerance of milk that has been cooked.

In general consider challenge around 1 year of age or after 6 months on a milk exclusion diet.

Home Introduction of Cow’s Milk

Planning the Challenge
- Choose a time when your child is well, if your child has eczema choose a time when the skin is relatively good
- Do not give antihistamine medicines eg Piriton, Ucerax before or during challenge days
Choose a time during the week, when you can observe your child for a few hours. Note down any reactions, which may be different from the original symptoms.

If at any time you feel your child is reacting stop the challenge and discuss with your doctor or Dietitian.

**Challenge**

- Give each dose all at once, don't spread it out over the day.
- If you are anxious about the challenge rub a little of the food just above your child’s lip, if there is no reaction after 30 minutes continue with the challenge.
- If your child has any symptoms such as skin rash or lip swelling give anti histamine medicine eg Piriton
- If your child reacts at any stage continue with whatever was previously tolerated and discuss with your dietitian or doctor
- As each stage is tolerated that food can now be included in the diet

**Stage 1  Baked Milk**

Choose a biscuit that contains milk eg Malted Milk
Start with 1 teaspoon or a small bite of biscuit
Double the amount over the next few days until your child is eating a whole biscuit for 5 days. You can now include cakes and other baking that contains milk

**Stage 2 Boiled Milk**

Bring a small amount of cow’s milk to the boil and cool
Start with 1 teaspoon and double the quantity every day for 5 days.
Add to some formula or food if your child refuses the milk from a spoon
Alternatively use custard you have made by boiling milk with custard powder

**Stage 3 Yogurt / Fromage frais**

Start with 1 teaspoon and double every day until a whole pot is tolerated for 5 days
You can then introduce hard cheese like Cheddar and Gouda

**Stage 4 Uncooked milk (ordinary pasteurised milk)**

Start with a teaspoon added to food and double up every day, the challenge is complete when 150 ml of milk has been tolerated for 5 days.
All milk containing foods can now be eaten
Adapted from Home Introduction of Cow’s Milk advice sheets used by Dietetic Departments of RHSC, Edinburgh, RACH, Aberdeen and Food Challenges for Children, A Practical Guide. Leicester Children’s Hospital.

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Appendix 4 Information on egg avoidance

Information on egg avoidance (BSACI guidelines for the management of egg allergy 2010)

Eggs served in a recognisable form are easy to avoid, but they are also used in many different types of manufactured foods. An egg-free diet can therefore be difficult to maintain, unless most of the food consumed is cooked from fresh ingredients.