

## DERBYSHIRE JOINT AREA PRESCRIBING COMMITTEE (JAPC)

### GUIDANCE ON THE DIAGNOSIS AND MANAGEMENT OF COW'S MILK ALLERGY IN INFANTS AND CHILDREN IN PRIMARY CARE

**JAPC promote breastfeeding as the best form of nutrition for a good start in life for every child.**

This guidance is designed to support Primary Care Clinicians and Children's Public Health Nursing teams in the differential diagnosis and first line management of cow's milk allergy.

*N.B. Cow's milk protein allergy is now referred to as cow's milk allergy (CMA). The term cow's milk protein intolerance should not be used; the correct term is non-IgE mediated cow's milk allergy*

#### Summary

- Recognise and assess for signs and symptoms of potential cow's milk allergy ([Table 1, p5](#)). Complete an **allergy focused clinical history** ([see appendix 1](#) or use [Systmone allergy history template](#)) to support differential diagnosis of cow's milk allergy from more common functional gastrointestinal disorders (FGIDs); colic, gastro-oesophageal reflux, constipation. ↓
- If non-IgE CMA is suspected, a **2-4-week cow's milk elimination** should be trialled. In exclusively breastfed infants, mothers should be supported to strictly exclude cow's milk from their diet and initially avoid key sources of soya (provide [patient information leaflet \(PIL\), Appendix 4](#)). In mixed fed infants and exclusively formula fed infants, an **extensively hydrolysed infant formula** is the first line choice for most infants (see [Table 2, p7](#) & [formulary, Appendix 6](#)). Mothers of mixed fed infants should not exclude cow's milk from their diet. Those requiring formula who presented with multiple symptoms when exclusively breastfed, faltering growth and/ or multiple system involvement with troublesome eczema or anaphylaxis should be initiated onto an **amino acid formula**. Infants consuming solids should also follow a strict cow's milk (CM) free diet.
- **Hypoallergenic formula are unpalatable**, so advise on gradual introduction to promote acceptance (provide [copy of PIL - appendix 2](#)). For **formula containing probiotics**, discussion is needed regarding non-standard re-constitution guidance and should not be prescribed for premature and immunocompromised infants. Do not prescribe an amino acid formula for palatability reasons alone. Lactose free formula are not suitable as they are cow's milk protein based. ↓
- After 2-4 weeks of CM exclusion (depending on rate of symptom resolution), infants with suspected non-IgE mediated CMA should be **re-challenged with normal infant formula or cow's milk reintroduction** in mum's diet to confirm the diagnosis (provide copy of [PIL - see appendix 3](#)). Infants with suspected IgE mediated CMA should not be re-challenged and directly referred to allergy clinic or dietitian as appropriate.
- If symptoms return following cow's milk re-challenge, the infant should resume their hypoallergenic formula and add to the repeat prescribing template (see [Table 3, p 9 for appropriate quantities](#)) or mum to return to a strict cow's milk free diet, ensuring an adequate calcium, iodine and vitamin D intake. **Refer all confirmed cases of non-IgE mediated CMA to a paediatric dietitian** for dietary advice and to support ongoing management (see [appendix 5 for referral](#) form or Choose and Book system for primary care clinicians in Southern Derbyshire). ↓
- Infants with non-IgE CMA can start the **milk ladder** (cow's milk reintroduction) once established on a wide range of family meals, usually around 9-10 months of age. Most children will outgrow their allergy by 2-3 years of age. If they continue to show symptoms but are eating well, most infants over 1 year of age can **transition onto fortified plant-based milk alternatives** purchased by parents. Dietary assessment is necessary to ensure nutritional adequacy to support growth and development (see [appendix 7 diet check list](#) & [table 4, p10-11 for suitable plant-based milks](#)) and there should be a clear plan for weaning off hypoallergenic formula.

	<b><u>Non-IgE CMA</u></b>	<b><u>IgE CMA</u></b>
<b>Diagnosis</b>	<p>Trial exclusion diets must only be considered if allergy-focused clinical history (see <a href="#">appendix 1 or use systmone template</a>) &amp; examination strongly suggests CMA, especially in exclusively breastfed infants where measures to support continued breastfeeding must be taken.</p> <ul style="list-style-type: none"> <li>• If symptoms improve after 2-4 weeks on elimination of cow's milk using an extensively hydrolysed formula (EHF), CMA may be suspected. If no clear improvement in symptoms and the allergy focused history is strongly suggestive of CMA, then a trial of an amino acid formula may be needed</li> <li>• <b>In order to avoid over diagnosis, after 2-4 weeks on prescribed formula or maternal dairy exclusion, normal formula should be reintroduced, or mother to revert to normal diet to see if symptoms return, thus proving/disproving the CMA diagnosis</b> (See <a href="#">appendix 3</a>)</li> </ul> <p>There is risk of overdiagnosis of CMA if mild, transient or isolated symptoms are over-interpreted, or if milk exclusion diets are not followed up by diagnostic milk reintroductions. Ensure a follow up appointment is booked following initial consultation.</p>	<p>Infants with suspected IgE-mediated reactions to cow's milk should be advised to adopt a strict cow's milk free diet to manage symptoms. <b>Unlike non-IgE CMA, these infants should not be challenged with cow's milk in order to confirm their diagnosis.</b></p> <p>For information, IgE mediated/ immediate onset CMA can be diagnosed by a suggestive allergy focused history (see <a href="#">appendix 1 or use systmone template</a>) and the following:</p> <ul style="list-style-type: none"> <li>• Exclusion of cow's milk from diet leads to cessation of symptoms</li> <li>• Typical symptoms can be confirmed by skin prick test if appropriate (these can be arranged by referral to allergy clinic)</li> <li>• There is no need to take routine bloods (e.g. specific IgE to CM) to aid in diagnosis unless there is uncertainty about diagnosis or symptoms appear atypical.</li> </ul>
<b>Referral</b>	<p>All confirmed cases of non-IgE CMA (symptoms resolve following CM exclusion and recur on re-introduction) should be promptly referred to a paediatric dietitian using the <b>allergy specific referral form</b> completed by any member of the primary healthcare team (see <a href="#">appendix 5</a>), ensuring <b>the allergy focused clinical history form is attached or signposted to</b> (see <a href="#">appendix 1 or use systmone template</a>), to support breastfeeding mothers and the complementary feeding process.</p> <p>NB/ Southern Derbyshire primary care clinicians can refer via Choose and Book, using the referral form and ensuring the allergy focused clinical history is included.</p>	<p><b>All infants with suspected IgE CMA should be referred to the allergy clinic</b> at either Derbyshire Children Hospital (via choose and book) or Chesterfield Royal Hospital for</p> <ul style="list-style-type: none"> <li>• practical advice on allergy management</li> <li>• interpretation of the allergy tests,</li> <li>• nutritional advice,</li> <li>• future re-challenge advice</li> <li>• long-term prescription requirements.</li> </ul>
<b>Treatment</b>	<p>Once diagnosis of CMA is confirmed and the infant is settled on a hypoallergenic formula, it is recommended that primary care clinicians do not initiate changes of formula without consultation with the paediatric dietitian or paediatrician. Not all brands of formula are tolerated equally. Infants should be given a cow's milk protein-free diet until there are signs of developing tolerance.</p>	
<b>Rechallenging</b>	<p>Infants can gradually be reintroduced to CM products from around 9 months of age onwards, to explore development of tolerance using a milk ladder approach. Most children can be expected to outgrow non-IgE CMA by 2-3 years of age, although some children continue to have symptoms beyond this age.</p>	<p>Careful cows' milk protein reintroduction should occur under guidance of a paediatrician or allergy specialist dietitian. Early baked milk introduction may be advised.</p>

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## **Consultation**

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<b>Document update</b>	<b>Date</b>
Prices updated in table on page 6. Aptamil Pepti Syneo 400g added with notes	August 2023
Remove Alimentum powder- discontinued	April 2024
Development of non-IgE mediated cow's milk allergy specific guidelines	
Remove information regarding soya infant formula	November 2024
Add reference to SystemOne allergy history template	December 2024

## **Introduction**

This guideline has been developed following local concerns about heavy reliance on secondary care input, high expenditure, potential overdiagnosis of cow's milk allergy (CMA) and inequitable prescribing of infant formula due to lack of guidance and limited primary care expertise in this area. It provides information on symptoms of food allergy, how to confirm a diagnosis of CMA, who to refer to for longer term management and supports appropriate prescribing procedures.

## **Recognising signs and symptoms of food allergy**

Cow's Milk Allergy (CMA) is defined as a reproducible adverse reaction to cow's milk protein that is mediated by an immune mechanism. CMA occurs in approximately 2% of infants of which the majority is non-IgE mediated cow's milk allergy and occurs in the first year of life (Venter et al, 2008).

- **IgE- mediated reactions are acute and frequently have rapid onset (<2hours)**
- **Non-IgE mediated reactions tend to be delayed and non-acute.**

Allergy to cow's milk protein should be suspected in infants who present with one or more symptoms (IgE mediated reaction) or a group of symptoms (non-IgE mediated reactions) listed in the following table in association with introduction of cow's milk in their diet (NICE, 2011).

**Table 1 - Signs and symptoms of food allergy**

<b><u>IgE- mediated (within 2 hours of ingestion)</u></b>	<b><u>Non-IgE-mediated (2-48 hours post ingestion)</u></b>
<b><i>The Skin</i></b>	
Pruritus Erythema Acute urticaria (localised/ generalised) Acute angioedema (commonly lips, face & eyes) Acute flaring of atopic eczema	Pruritus Erythema Unexplained skin rashes Early onset and moderate to severe atopic eczema
<b><i>The Gastrointestinal system (GI)</i></b>	
Angioedema of lips, tongue & palate Oral pruritus Nausea Vomiting Colicky abdominal pain Diarrhoea	Gastro-oesophageal reflux disease Vomiting Loose or frequent stools Blood and/or mucus in stools Abdominal distension and pain Infantile colic Food refusal or aversion Soft stool constipation/ straining Perianal redness or nappy rash Pallor and tiredness Faltering growth
<b><i>The Respiratory System (usually in combination with one or more of the above symptoms and signs)</i></b>	
Upper respiratory tract symptoms – nasal itching, sneezing, rhinorrhoea or congestion (with/ without conjunctivitis)	Upper and lower 'Catarrhal' airway symptoms
Lower respiratory tract symptoms (cough, chest tightness, wheezing or shortness of breath)	
<b><i>Other</i></b>	
Signs or symptoms of anaphylaxis or other systemic allergic reactions	Systemic symptoms of Food Protein Induced Enterocolitis Syndrome (FPIES): floppy, cold extremities, lack of responsiveness

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

## Allergy focused clinical history

In accordance with iMAP guidelines, an allergy focused clinical history is the cornerstone to diagnosis of food allergy (Venter et al, 2017) and is listed as the first of the NICE Food Allergy Quality Standards, 2016. If food allergy from any cause is suspected, an **allergy focused clinical history should be taken, using the attached template (see Appendix 1) or systmone allergy focused clinical history template.** A physical examination should also be conducted by a GP or other competent medical personnel. Any health care practitioner with appropriate competencies can complete this form.

CMA should be suspected after careful history taking for symptoms listed in [Table 1 \(p5\)](#) and their association with the introduction of cow's milk into the diet. There should be increased suspicion in infants with a combination of upper and lower GI symptoms, multiple system involvement, family history of allergy/ atopy and persistent or treatment-resistant symptoms.

It is recommended that all infants and children are promptly diagnosed with CMA, so they can access dietetic services in time for support with ongoing breastfeeding and milk free complementary feeding. **The allergy focused history should form part of the referral to the dietitian.**

## Diagnosis of non-IgE mediated cow's milk allergy

Diagnosis of delayed, non-IgE mediated CMA can be made if symptoms resolve after 2-6 weeks on a cow's milk elimination diet (NICE, 2011; Venter et al, 2017), although we generally work to a period of 2-4 weeks. However, unless highly confident of the response to the elimination diet (parents often describe them as being a different child) or in infants who have had an extensive period of distressing symptoms prior to final resolution, a firm diagnosis can only be made if re-occurrence of symptoms has been demonstrated following cow's milk re-introduction ([see Appendix 3](#)). This re-introduction should not be done in children who are thought to have immediate, IgE mediated allergy. In those with more severe, complex symptoms and delayed diagnosis, resolution of symptoms can be accepted as diagnostic, with first re-exposure occurring during the later stages of food introduction and integration into family meals (usually around 9-12 months of age).

## Cow's milk elimination/ cow's milk protein free diet

### Breastfed infants

In a small number of **exclusively breastfed infants**, non-IgE or IgE mediated CMA can develop, as cow's milk proteins from the mother's diet can pass into breast milk. These infants tend to be some of the most allergic and are more likely to suffer from multiple food allergies. **Every effort should be made to support ongoing breastfeeding whilst following a strict cow's milk free diet.** For infants with moderate to severe eczema, a cow's milk and egg free diet is recommended. It is usually advised against using key sources of soya (soya milk, yogurt, cheese) as an alternative during the trial period in those suffering with non-IgE gut predominant symptoms, as there is a high risk of concomitant soya allergy and in a few cases strict soya exclusion may be necessary (Bhatia & Greer, 2008; Agostoni et al, 2006). Early support from a dietitian and/or infant feeding specialist may be beneficial to support breastfeeding mothers and should be considered.

In infants who are symptomatic when **mixed fed** (but not when exclusively breast fed), mothers should continue to breastfeed but should **not exclude cow's milk** or other allergens from their diet.

In line with national advice, all breastfeeding mothers and breastfed infants should be in receipt of 10 microgram **vitamin D** daily which can readily be purchased from supermarkets and pharmacies (See Derbyshire vitamin D [position statement](#)). Given that cow's milk is a major source of **calcium** and breastfeeding mothers require 1250mg of calcium a day, they are likely to need to take a calcium supplement to meet the recommended intake. Attention should also be paid to **iodine** intake; deficiency of which can cause irreversible effects to growth and development during infancy (Andersson et al, 2008). The WHO recommend that all countries where iodine fortification has not been adopted, encourage pregnant and

breastfeeding mothers to consume a supplement providing 150 microgram/ day (not been adopted by the DH). Cow's milk and products are a major source of iodine so risk of deficiency is greater in those following CM exclusion diets. Other good sources include fish and eggs.

Mothers may require self-care supplementation depending on vitamin supplements already being taken. Vitamin D and calcium combined supplements are readily and cheaply available, but do not contain iodine. **Breastfeeding support micronutrient supplements** usually contain 140-150 microgram iodine in addition to 600-700mg calcium and 10 microgram vitamin D and should be encouraged if afforded by families.

Breastfeeding mothers should be provided with a copy of the **PIL cow's milk free dietary information** ([Appendix 4](#)). Infants of **mothers wishing to move to mixed feeding** should be started on an extensively hydrolysed formula (EHF) if there were no previous faltering growth or multisystem/ multiple food allergy involvement, but if symptoms develop or deteriorate, an amino acid formula should be prescribed (Meyer et al, 2018). Early discussions around the need for an emergency supply of hypoallergenic formula should be considered in case of desire or need to stop breastfeeding before 1 year of age, as refusal of bottles and hypoallergenic formula are more likely from around 4 months of age.

### Formula fed infants

If breast milk is not available, formula fed infants with CMA should be treated with a hypoallergenic infant formula as per Table 2 in accordance with updated WAO DRACMA guidelines (Bognanni et al, 2024) (For a full list of products, see [CM formulary, Appendix 6](#)). There are two types of hypoallergenic formula and the initial formula of choice will depend upon the severity of presenting symptoms:

- **Extensively hydrolysed** infant formula is the first line choice for the majority of infants with IgE and non-IgE mediated cow's milk allergy
- **Amino acid** infant formula (AAF) is the preferred choice in severe cases of CMA associated with faltering growth, multisystem involvement e.g multiple gut symptoms plus moderate to severe eczema and/or respiratory symptoms, multiple food allergies, anaphylaxis and when they fail to respond to a 4-week trial on EHF. AAF can also be recommended for **previously exclusively breastfed babies**, if fail to respond to a 2-week trial on EHF.

**Table 2 Recommended first line hypoallergenic formula**

<u>Name</u>	<u>Tin size</u>	<u>Price per tin</u>	<u>Unique Aspects/ Cautions</u>
<b>Extensively hydrolysed formula (First line for most infants)</b>			
<b>Nutramigen LGG (Mead-Johnson)</b>  See reconstitution advice on page 8	<b>400g</b>	<b>£11.84</b>	<b>Casein hydrolysate, with probiotic (Lactocaseibacillus strain GG). Lactose free. LGG 1 marketed for infants &lt;6mths and LGG 2 for infants &gt;6mths, but there is no need to change at 6 mths of age. No need for LGG 3 (&gt;1yr age). Not suitable for premature or immunocompromised infants</b>
<b>SMA Althéra (Nestle)</b>	<b>400g</b>	<b>£11.04</b>	<b>Whey hydrolysate, contains lactose, so tends to be more palatable. Halal certified.</b>
<b>Amino acid formula (for severe cases; faltering growth, multi-system involvement including moderate to severe infantile eczema, anaphylaxis and unresponsiveness to EHF)</b>			
<b>SMA Alfamino (Nestle)</b>	<b>400g</b>	<b>£25.73</b>	<b>Amino acid based, no milk protein and no lactose. Free from coconut oil. Contains potato starch</b>
<b>Neocate Syneo (Nutricia)</b>  See reconstitution advice on page 8	<b>400g</b>	<b>£24.82</b>	<b>Amino acid based, no milk protein and no lactose. Contains coconut oil. Contains pre and probiotics (Bifidobacterium breve M16V) which may help those prone to constipation and reflux. Not suitable for premature or immunocompromised infants</b>

## Initiation of hypoallergenic infant formulas

- Initially prescribe 2 x 400g tin of hypoallergenic formula to ensure palatability (approx. 1 weeks supply).
- Advise carers of infants over 8 weeks of age to grade onto the formula in 1floz increments per bottle per day to promote acceptance ([provide PIL, Appendix 2](#)). Older infants (over 6 months age) are more likely to accept the more palatable, lactose containing whey-based EHF, but only give 2 x 400g tins initially.
- Warn parents that hypoallergenic formula may cause green stools and wind. They also tend to be thinner in consistency, so if the infant is prone to reflux, they may find this symptom does not improve. Formula should not be changed due to persistence of this symptom alone - refer to the children's public health team/ community paediatric dietitian for support with management of primary reflux.
- Note that EHF brands differ in their hypoallergenicity and infant responses vary, so they should not be used interchangeably without review. Recommended second line EHF is the alternate first line product (whey vs casein). Details of all second line EHF can be found in the formulary ([Appendix 6](#)). It is appropriate to try 2 different EHF brands for 2 weeks each to gain symptom resolution, after which an AAF should be trialled. **AAF should NOT be prescribed for infants who refuse to drink EHF (see [Appendix 2](#)).**
- Plan to review in 1-2 weeks to check compliance and clinical progress (e.g. by phone) and reinforce need to re-challenge with cow's milk after 2-4 weeks as below.

## Reconstitution of hypoallergenic infant formulas

UK policy on how to make up powdered infant milks safely states that at least 1 litre of fresh water from the cold tap should be boiled in a kettle and the boiled water should be left to cool for no more than 30 minutes. These two steps should ensure that the water used to reconstitute the feed is at a temperature above 70°C, which will kill most of the pathogenic micro-organisms that may be present in powdered formula milk ([Making infant milk safely — First Steps Nutrition Trust](#)). Hypoallergenic formula containing probiotics such as Nutramigen LGG and Neocate Syneo however, require formula to be reconstituted with water at a lower temperature than the safe reconstitution recommendations to avoid inactivating the probiotic bacteria and negating their potential benefits. Patients should be made aware of this and advised to follow manufacturer's instructions, but may wish to have a discussion on the risks/ benefits of this approach. Probiotic formula should not be recommended for premature and immunocompromised infants.

**If the child is also taking solids, they will need to adopt a strict cow's milk free diet.**

Provide the PIL for cow's milk free dietary information ([Appendix 4](#))

## Reintroduction to confirm diagnosis

- If the symptoms improve after 2-4 weeks on elimination of cow's milk, CMA may be suspected.
- **In order to avoid over diagnosis, after 2-4 weeks on prescribed formula or maternal dairy exclusion, normal formula is to be reintroduced, or mother to revert to a normal diet to see if symptoms return, thus proving/ disproving the CMA diagnosis ([provide PIL, Appendix 3](#)).**
- If the child's symptoms return on re-challenge, they should resume the hypoallergenic formula and/ or strict milk free diet as soon as this occurs, and **a referral made to a paediatric dietitian** for further practical advice and to ensure nutritional adequacy. It may be appropriate for children who have had a complicated path to diagnosis and ultimately require an AAF, to delay the re-challenge process until established onto solids assuming symptoms have satisfactorily resolved, to avoid potential further complications.
- If an infant still has symptoms after 4 weeks on an AAF (having previously also had 4 weeks on EHF if appropriate) or while still being breastfed with maternal dietary exclusion, they should be **referred to a paediatric dietitian or paediatrician** for assessment and consideration for alternative AAF, additional food allergies or different diagnoses.



## On-going prescriptions of hypoallergenic Infant formula

- If formula is well-tolerated and diagnosis confirmed, add the hypoallergenic formula to the repeat prescribing template, ensuring there is a review date established.
- To avoid over prescribing, see key prescribing points Table 3 for recommended number of tins/ month.
- Most infants requiring a hypoallergenic formula will continue to require the formula on a monthly repeat prescription until 12-15 months of age, depending on the adequacy of their dietary intake to support optimal growth and development. Families have the opportunity for dietetic review following their initial consultation, where continued requirement for hypoallergenic formula beyond 1 year of age will be assessed but in the absence of this, see the **nutrition check list guide** ([Appendix 7](#)) to support decision making and seek advice from a dietitian if needed.

**Table 3 - Key prescribing points**

- Initial prescription for 1 week's supply i.e. 2 x 400g tins, to ensure the product is tolerated.
- Parents should be made aware from the beginning of how long the exclusion diet is likely to be needed and that a re-challenge is necessary to confirm the diagnosis after 2-4 weeks.
- **Monthly prescriptions of hypoallergenic formula are expected to comprise of approx.:**
  - **< 6mths: 10 -12 x 400g or 5-6 x 800g tins (4000-4800g /mth)**
  - **6-12mths: 7- 10 x 400g or 3-5 x 800g tins (2800-4000g /mth)**
  - **>12mths: 5 - 6 x 400g or 3 x 800g tins (2000-2400g /mth)**
- **Repeat prescription of hypoallergenic formula should not commence until CMA has been confirmed by recurrence of symptoms on re-challenge** and cease once a child is able to tolerate cow's milk products in the diet. A formal cow's milk re-introduction ladder should be completed to ensure they can transition onto normal cow's milk/ formula.
- **A '12 month of age review' date should be stated at the time of initial repeat prescription.** Prescription of specialist formula beyond 1 year of age should be based on nutritional adequacy of the child's diet (plant-based milks other than soya are much lower in protein compared to cow's milk), assessed using the nutrition check list guide ([Appendix 7](#)). The aim will be to wean off hypoallergenic formula after 1 year of age wherever possible and once this has been established, quantities of prescribed formula will be halved in the next month, halved again the following month and then stopped. This process shouldn't be rushed, to ensure that their growth, development and nutritional status are not compromised.

**Breastfeeding is considered the best form of nutrition for a good start in life for every child**

## Referral to the paediatric dietitian

Referral to a paediatric dietitian is essential once a diagnosis of cow's milk allergy has been confirmed to:

- ensure nutritional adequacy and maximise growth potential
- optimise quality of life and provide practical advice and support, particularly during complementary feeding and integration into family meals
- discuss early introduction of key allergens such as egg and peanut as part of food allergy prevention measures and ensure against unnecessary long-term exclusion of foods
- review appropriateness of prescribed products and use of alternative milk substitutes
- advise on re-introduction of cow's milk
- assess for emerging co-morbidities in referred patients, including atopic conditions and other food allergies

**Please refer using referral form ([Appendix 5](#)) for Southern Derbyshire or the generic North Derbyshire and Burton hospital dietetic referral forms. Ensure you attach an allergy focused clinical history ([Appendix 1](#))**

## **Cow's milk reintroduction to determine tolerance (milk ladder)**

Note this is different from the diagnostic home challenge at 2-4 weeks to confirm suspected non-IgE CMA.

- Children can be reintroduced to cow's milk products to see if they have outgrown their CMA from approximately 9 months of age, as long as they are now eating a wide range of family foods. Some infants can therefore be expected to have outgrown CMA by around 1 year of age.
- Most infants with non-IgE CMA will be rechallenged at home and advice will be provided by the paediatric dietitian. Cow's milk protein is gradually introduced as per the locally produced or iMAP milk ladder (See PIL, [Appendix 4](#))
- Note that with exclusively breast-fed children, it is often difficult to be sure which form of CMA they suffer from until they ingest cow's milk directly, so it is recommended to start with very small quantities of baked milk (crumb/ grain of rice size) initially and titrate upwards more slowly until sure they do not show signs of IgE mediated CMA.
- If they continue to show symptoms of CMA during the cow's milk challenge, most infants over the age of 1 year will be weaned onto a suitably enriched plant-based milk alternative that can be purchased by parents (see Table 4). Monitor prescriptions but do not stop until they have successfully switched to an alternative preparation, as this may take some time. A graded approach (10-30ml increments per bottle/ beaker every 2-3 days) is likely to be most successful. Consequently, quantities of prescribed formula will be halved in the next month, halved again the following month and then stopped.
- There should be a clear plan for weaning and discontinuation of hypoallergenic formula. The main reasons for needing to remain on hypoallergenic formula for longer are due to concerns about faltering growth, multiple food allergies resulting in restrictive diet and children with feeding difficulties.
- The majority of children can be expected to outgrow their CMA around 2-3 years of age, although some children continue to react to cow's milk beyond this.

**Table 4 Suitable enriched plant-based milk alternatives**

<p><b>Cow's milk is a rich source of protein (3g/100ml), energy, calcium, A and B vitamins, zinc &amp; iodine. Try to choose plant-based milks with added calcium (120mg/100ml), iodine, vitamins B2 (riboflavin) and B12 (cyanocobalamin).</b></p> <p><b>For more information, see review published July 2024: <a href="#">Plant milks: what's best for your health and the environment? - Which?</a></b></p>	
<b>Plant-based milks</b>	<b>Nutrition profile</b>
Soya	<p>Soya based milk alternatives are a good first choice alternative to full cream cow's milk, being naturally higher in protein than other plant-based milks if tolerated (higher risk of reacting to soya in children with gut predominant symptoms of CMA).</p> <p>Alpro soya growing up milk maybe the best option for young children with poor appetites as the energy content is higher than the others, but it contains a range of added sugars (maltodextrin, raw cane sugar and fructose). Note all other Alpro products are not fortified with iodine.</p> <p>For children who are eating well but who do not need a higher-energy milk, ASDA and Tesco's own and Growers Harvest unsweetened soya milks are good, more affordable alternatives. Other soya milk brands are not fortified with all 4 nutrients</p>

Oat	<p>Oat milks are much lower in protein than cows' milk and soya milk, so make sure to include plenty of other sources of protein in the diet. Oat milks are naturally higher in sugars but tend not to have added sugars, with the added energy predominantly coming from fats such as rapeseed oil.</p> <p>Oatly Whole/ Barista oat drinks, Moma whole/ barista oat drink or Alpro oat growing up milk are the best options for young children as they have a higher protein (approx. 1g/100ml), fat and energy content than others. Note that Alpro oat growing up milk has added pea protein.</p> <p>ASDA chilled oat milk, Tesco chilled oat milk, Oatly Semi drinks are suitable alternatives lower in energy for children who are eating well but who do not need a higher-energy milk. Minor Figures every day oats and Sainsbury's oat milk are fortified with all 4 key nutrients but have a lower protein content than others (&lt;0.5g/100ml). Other oat milk brands are not fortified with all 4 nutrients.</p>
Coconut	<p>Most coconut milks are low in energy and protein. Koko Kids is designed for young children and is fortified with a wide range of nutrients and has a good protein content due to the addition of faba bean (1.9g/100ml). Koko Super is also a good, lower energy option fortified with many nutrients and enriched with faba bean.</p> <p>Some coconut milks contain significant amounts of rice, so avoid these</p>
Nuts	<p>Nut milks tend to be very low in energy and protein, so wouldn't be recommended as a milk alternative for young children.</p> <p>Tesco and Asda almond drinks however tend to contain more protein than most nut milks (0.7-0.8g/100g) and they also contain all 4 of the key nutrients but are low in energy</p>
Pea and potato	<p>Pea milks are higher in energy, fat and protein, meaning that they could be a good alternative milk for young children if soya isn't tolerated, although there is a greater risk of reacting to pea if allergic to soya. Protein from peas is not as bioavailable however as from soya.</p> <p>Unfortunately, there is currently no brand fortified with all four of the key nutrients; Mighty pea (no vit B2) and Sproud (no iodine)</p> <p>Dug potato milk contains pea protein. It has a good energy, protein and fat content, but doesn't contain iodine and isn't readily available from stores.</p>
Rice	<p>Rice milk is not recommended for children under 4.5 years of age due to the risk of containing inorganic arsenic. They are also extremely low in protein without the addition of other protein sources.</p>
Cereals	<p>SMA Little Steps PlantyGrow is designed for young children and contains a blend of wheat, barley, rye, oats and corn. It has added pea protein and maltodextrin to support a higher energy and protein content. Also contains soya lecithin. An expensive option.</p>
Organic milks	<p>Usually marketed as natural and healthy with few ingredients. Plant based milks labelled as organic cannot be fortified. This means they are devoid of calcium and other key nutrients, which is a significant risk for children's growth and development. Examples of brands - Plenish, Good Hemp, Rude Health</p>

## **Lactose intolerance (rare in children under 3 years of age)**

Cow's milk allergy should not be confused with lactose intolerance, which is a non-immunological reaction caused by an enzyme deficiency i.e. lactase deficiency, resulting in an intolerance to the sugar lactose. **Lactose free foods and formulas still contain cow's milk protein and so are not suitable for the management of cow's milk allergy.**

**Lactose intolerance is rare in children under 3 years of age, unless onset of symptoms coincides with an episode of gastroenteritis.** Typical symptoms of secondary lactose intolerance include acute onset of loose, watery stools, abdominal bloating and pain, increased flatus and nappy rash. If other symptoms are present such as rashes, eczema, vomiting, mucousy/ bloody stools, constipation or the child is not growing well, they are more likely to have cow's milk allergy, even if some of the symptoms resolve following lactose exclusion. Lactose free formula should no longer be prescribed.

Refer to the JAPC guidance on use and prescribing of non-hypoallergenic specialist infant products for further information on the management of secondary lactose intolerance, including a patient information leaflet.

### **Referral to specialist services**

In accordance with NICE guidance relating to all forms of food allergy in children, referral to secondary care should occur for on-going diagnostic assessment and management in infants who have:

- had a systemic allergic reaction (acute or delayed)
- clinical/ parental suspicion of multiple IgE mediated reactions/ cross-reactions
- strong clinical suspicion of IgE mediated food allergy but allergy test results are negative
- IgE reactions to foods with a high risk of anaphylaxis e.g. tree nuts, peanuts, shellfish, kiwi, sesame
- confirmed IgE mediated food allergy alongside concurrent asthma
- faltering growth or severe acute gastrointestinal reactions despite a cow's milk exclusion trial

If the infant does not have any of the above allergic manifestations associated with severe IgE mediated or complex food allergy, it is hoped that GPs will feel confident to diagnose and manage CMA with local expert paediatric dietetic support, without referral to secondary care paediatricians. A referral to secondary care paediatricians is usually required for children with suspected IgE mediated reactions.

### **Resources for clinician and patients**

In addition to resources provided in the Appendices, further information can be found below:

- iMAP resources from The GP infant feeding network (UK) <https://gpifn.org.uk/imap/>
- [Patient Factsheet for infants suspected of having delayed \(non-IgE\) type CMA](#)- To explain the diagnosis and the need to confirm it with a planned reintroduction at home.
- [Patient Factsheet for infants with symptoms of a possible mild to moderate non-IgE mediated allergy whilst being exclusively or partly breastfed](#)- To support breast feeding mothers
- British Dietetic Association fact sheet on milk allergy - [Milk allergy: Food Fact Sheet](#)
- The First Steps Nutrition Trust independent charity for information on specialist milks - [Type of infant milk \(infantmilkinfo.org\)](#) and general healthy eating advice for mums and their infants [First Steps Nutrition Trust](#)
- DCHS Infant Feeding Specialists single point of access 01246 515100.
- DHCFT Infant Feeding Team (for Derby City families) TEXT a message to the Chathealth service on 07507 327754. Clinicians can task the team on system one under 'Infant Feeding Advisors'

## **References**

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- Bognanni A et al, 2024. World Allergy Organization (WAO) Diagnosis and Rationale for Action against Cow's Milk Allergy (DRACMA) guideline update – XII – Recommendations on milk formula supplements with and without probiotics for infants and toddlers with CMA. *WAOJ*; 17:100888
- Fox A et al (2019). An update to the Milk Allergy in Primary Care guideline. *Clin Transl Allergy* 9(1), 1-7.
- Meyer R et al, 2018. When should infants with cow's milk protein allergy use an amino acid formula? A practical guide. *J Allergy Clin Immunol Pract*; 6(2): 383-399
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- Venter C et al (2013) Diagnosis and management of non-IgE mediated cow's milk allergy in infancy - a UK primary care practical guide. *Clin Transl Allergy* 3:23
- Venter C et al (2017) Better recognition, diagnosis and management of non-IgE-mediated cow's milk allergy in infancy: iMAP – an international interpretation of the MAP (Milk Allergy in Primary Care) guideline. *Clin Transl Allergy*. 7:26.

## Appendix 1 - Allergy focused clinical history assessment sheet (page 1)

Name: \_\_\_\_\_ DOB \_\_\_\_\_ NHS no. \_\_\_\_\_

If there is an immediate reaction to food resulting in breathing difficulties/ wheeze, lethargy or other systemic symptoms, or a reaction to trace amounts of food, refer if appropriate to A&E or refer directly to secondary care. In all other cases, please attach this form to the child's record and include as part of the referral to dietetics, once food allergy has been confirmed.

### Child's History

Any atopic disease (eczema, asthma, hay fever)? .....

Any parental concerns around food allergy or intolerance?.....

### Family History

Any atopic disease in parents or siblings (eczema, asthma, hay fever)? .....

Any history of food allergies or intolerance in parents or siblings? .....

Were there any feeding issues with the parents as babies? .....

### Feeding History (from birth)

Initial feeding method, changes in feeding and reasons why e.g. stopped breastfeeding, started mixed feeding, changes in formula brand or type .....

Current feed volumes and frequency per day.....

Age of weaning, types of solids introduced so far .....

Any poor feeding/ food refusal/ aversion .....

### Bowels

Consistency (slimy, frothy, hard, soft, watery), colour, offensive smell .....

Frequency .....

Changes in bowel habits/ at what age/ does it coincide with anything e.g. introduction of formula or solids, or following/ during a feed .....

Presence of mucus, blood or nappy rash .....

Straining to pass soft/ loose stools .....

### Discomfort

Severity and type e.g. screaming, drawing up legs, tense abdominal distension/ pain .....

Time of day, how long for, is the baby able to sleep appropriately .....

What settles baby e.g. position (supine/ prone), alternative environments?.....

**Allergy focused clinical history assessment sheet (page 2)**

**Name:** \_\_\_\_\_ **DOB** \_\_\_\_\_ **NHS no.** \_\_\_\_\_

**Sickness**

When does the sickness occur?.....  
If associated with feeds, how soon after feed and after how much feed, how many times a day, how much vomit and is it projectile?.....

Does anything reduce the vomiting (e.g. position - laying on front, staying upright)? Ensure family is aware of safe sleep positioning

Any retching, coughing or gurgling in throat during feeding? .....

**Breathing**

Are they chesty, is there a cough, wheeze or nasal secretions/ congestion?.....

**Skin**

Rashes e.g. redness (erythema), urticaria, swelling (angio-oedema) and timing of onset of rashes following food/drink? .....

Dry skin/ eczema. Severity of eczema – do they need steroid creams/ wet wraps and if so, how often? Does the skin bleed?.....

**Weight/ growth and signs of malnutrition**

Are they gaining weight and growing well? Yes  No

Are they active or unduly tired?

Do they look pale or frequently suffer from illnesses?

**Treatments**

What medications or other therapies have they tried so far and what has/ hasn't worked?

What medications are they currently on? .....

Have they been referred to anyone?.....

Name of Health Professional: \_\_\_\_\_ Tel no \_\_\_\_\_

Email: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Introducing hypoallergenic formula

- The formula can be bitter, and your infant may not like it at first.
- To encourage infants to take it, you are likely to need to introduce your infant gradually to the formula. This is called grading.
- Please note, grading is not possible for babies suffering with **immediate symptoms of cow's milk allergy e.g. hives, lip swelling.**

For babies from around 8 weeks of age, you should grade your baby onto the formula in 1 fluid ounce (floz) increases. If they are younger babies, there may be no need to gradually introduce the new formula. One scoop of formula is added to 1floz water.

For example, if using a 5floz bottle:

Days	Volume of pre-boiled water	Number of scoops cow's milk formula	Number of scoops hypoallergenic formula
1	150ml (5floz)	4	1
2	150ml (5floz)	3	2
3	150ml (5floz)	2	3
4	150ml (5floz)	1	4
5	150ml (5floz)	0	5

**If you are still struggling to introduce hypoallergenic formula**

- You could try adding a few drops of alcohol-free vanilla essence to flavour it and then gradually reduce the vanilla essence once accepted.
- In children over 6 months of age who are refusing hypoallergenic formula, you may need to introduce it in 1-3 tsp increments (5-15ml) per bottle per day. To do this, make up 1floz of hypoallergenic formula and add the required amount.
- Older infants are more likely to accept lactose containing whey-based extensively hydrolysed formula. Ask your GP about this if you can't get your infant to take their current formula and have tried all the above.



### **How to make up the formula**

Follow NHS safe practices on reconstituting formula. The NHS website has a step-by-step guide on how to do this. [How to make up baby formula - NHS \(www.nhs.uk\)](https://www.nhs.uk)

Don't forget:

- Good hygiene is important when making up formula feeds because your baby's immune system is not fully developed.
- Add 1 litre of fresh water from the cold tap to a kettle and boil. Allow it to cool for no more than 30 minutes.
- Aim for a temperature of around 70°C.



### **If using hypoallergenic formula with probiotics**

eg. Nutramigen LGG, Neocate Syneo.

If your formula contains live bacteria (probiotics), you will need to make it up with boiled water which is left to cool for longer. Refer to instructions on the tin. This is to avoid destroying the bacteria and its potential benefits.

- Only do this once the infant has fully changed onto the hypoallergenic formula.
- If you are concerned about the potential increased risk of infection, please discuss with a health professional.

**Please note:**

Hypoallergenic formula is likely to make your babies' poo turn green. Do not worry, this is normal.

## Patient information leaflet to guide you on confirming or excluding if your child has a cow's milk allergy

### When should I reintroduce cow's milk?

2-4 weeks after your child has stopped having cow's milk in their diet (from breast milk, infant formula and foods if eaten), you should give them cow's milk again to see if their symptoms come back.

- **do not** start the reintroduction if your child is unwell e.g.
  - any breathing problems (this includes a common cold).
  - any tummy or teething symptoms.
  - if your child has a flare up of their eczema.
- **do not** start the reintroduction if your child is on any medication that may upset the bowels.
- **do not** stop any medication that your child may be on e.g. reflux medicine, laxatives.
- **do not** introduce any other new foods during the reintroduction.

Keep a record of what your child eats and drinks during the reintroduction. Also record any symptoms such as vomiting, bowel changes, feeding issues, distress, rashes or changes in their eczema.

**Do not reintroduce cow's milk if your child gets hives, lip swelling or similar reactions immediately after having cow's milk.**

### How do I do the cow's milk reintroduction at home?

#### Formula-Fed Child (any child who has at least one bottle of formula a day):-

You should grade your baby back onto normal cow's milk formula in 1 scoop (1floz) increases each day. Start with the first bottle of the day (see table below). For the rest of the day, keep giving the prescribed low allergy formula only.

#### **Practical example for reintroducing normal formula**

For example, if using a 5floz bottle:

Days	Volume of pre-boiled water	Number of scoops of prescribed low allergy formula <b>In first bottle only</b>	Number of scoops cow's milk formula <b>In first bottle only</b>
1	150ml (5floz)	4	1
2	150ml (5floz)	3	2
3	150ml (5floz)	2	3
4	150ml (5floz)	1	4
5	150ml (5floz)	0	5

### **What do I do if the symptoms come back on normal formula?**

- if the symptoms return, **stop** the reintroduction.  
give only the low allergy prescribed formula again.
- your child's symptoms should settle again within a few days to weeks.
- let your doctor or health visitor know. They should refer your child to a dietitian.

**The diagnosis of cow's milk allergy is now confirmed**

### **What do I do if the symptoms do not come back?**

- if your child still has no symptoms after a week and they are drinking a full bottle of normal cow's milk formula, you can stop giving prescribed formula.
- make up all their bottles with normal formula.
- if you are mixed feeding, there is no need for mum to cut out cow's milk from her diet.
- let your doctor or health visitor know.

**If after 2 weeks of drinking normal cow's milk formula your child still has no symptoms, they do not have cow's milk allergy and can have a normal diet.**

### **Fully Breast-Fed Child**

You should go back to eating and drinking all cow's milk and cow's milk containing foods that you used to have. You do not need to do this gradually.

- if the symptoms come back, cut out all cow's milk and cow's milk foods again (read all labels).
- your child's symptoms should settle again within a few days to weeks.
- let your doctor or health visitor know. They should refer your child to a dietitian.

**The diagnosis of cow's milk allergy is now confirmed**

**If after 2 weeks of drinking normal cow's milk and eating foods like yogurt and cheese while breastfeeding and your child still has no symptoms, they do not have cow's milk allergy and you can both have a normal diet.**

In a few children, symptoms of cow's milk allergy may appear later, when larger amounts of cow's milk protein are taken by the child. Examples include drinking cow's milk formula, fresh cow's milk or milk containing foods like yogurt or cheese. Should this happen, contact your doctor or health visitor.

You have been advised to exclude all traces of cow's milk from your child's diet. This means checking the ingredients list for cow's milk on food labels.

- Labels have to clearly state whether milk is in the food product.
  - The word 'milk' is usually in bold or underlined.
  - Milk free foods may be referred to as 'dairy free'.
- Food labelling laws apply to all packaged and manufactured foods and drinks sold in the UK
  - They also apply to foods sold loose (e.g. from a bakery, delicatessen, butcher or café) and foods packed or pre-packed on the premises such as cafés, sandwich bars, food outlets, market stalls.
  - If you travel outside the UK, be aware that labelling laws are different, so check ingredients carefully.
  - For foods sold **without packaging** e.g. in a bakery, café or pub, allergen information has to be provided either in writing or verbally.

More information on food allergy labelling is available from Allergy UK:

[Food Labelling | Allergy UK | National Charity](#)



There are many ways in which cow's milk can be labelled, so carefully check the ingredients list on food items and **avoid foods which contain:**

Cow's milk (fresh, UHT)	Cow's milk infant formula	
Butter milk, butter oil	Milk powder	Casein (curds), caseinates
Evaporated milk	Milk protein	Calcium caseinate
Yogurt, fromage frais	Modified milk	Sodium caseinate
Margarine	Skimmed milk powder	Hydrolysed casein
Butter, Ghee	Condensed milk	Hydrolysed whey protein
Cheese	Milk solids,	Whey, whey solids
Ice cream	Non fat milk solids	Whey protein
Cream/ artificial cream	Lactoglobulin	Lactoalbumin

Lactose may be contaminated with milk proteins, so it is best to avoid.

Lactose is usually tolerated in medications.

#### Example of a food label containing cow's milk

##### Olive spread (margarine):

**Ingredients:** Vegetable oils [including olive oil (22%)], water, **whey powder (milk)**, salt (1.3%), stabiliser (sodium alginate), emulsifier (mono and diglycerides of fatty acids), lactic acid, natural flavouring, vitamins A and D, colour (carotenes)

**Allergy Advice:** for allergens, see ingredients in bold.

Use of soya alternatives:

- During the 2-4-week cow's milk exclusion trial, we recommend that you **avoid soya-based products** such as soya milk, soya yogurts/ desserts or soya-based cheese alternatives
- There is a chance that your child may react to soya as well. This means that your child's symptoms will not get better after you have cut out cow's milk.
- They may get better at first, then the symptoms start to come back again
- Breastfeeding mothers cutting out cow's milk should also avoid soya for the 2-4 week trial.

Soya, however, is the best protein rich plant-based alternative, so we usually recommend trying soya products around 8-10 months of age, once a wide range of other foods have been introduced first.

**'May contain...'/ 'Made in a factory...'** labelling: Some labels say 'may contain cow's milk' or 'not suitable for cow's milk allergy' as the manufacturer cannot be sure that the food does not contain small amounts, due to cross-contamination. These foods should generally be ok, but if you think your child may react, just avoid that brand/ factory.

Detailed information on a cow's milk free diet from Allergy UK:

<https://www.allergyuk.org/resources/cows-milk-free-diet-information-for-babies-and-children/>



Information on vitamins and minerals from the BDA:

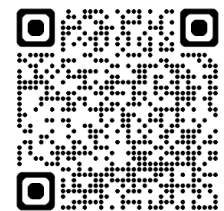
Fact sheets on vitamin D, calcium and iodine

[Nutrients food facts - British Dietetic Association \(BDA\)](#)



Introduction of solids and early introduction of allergens for prevention of further food allergies

<https://www.allergyuk.org/resources/weaning-support-pack/>



Webinars and more resources on the management of cow's milk allergy including the iMAP ladder can be found on the patient webinar website:

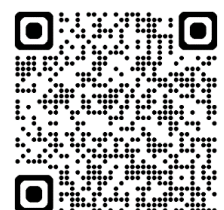
<https://patientwebinars.co.uk/condition/food-allergy-in-children/webinars>

[Further Information & Hand Outs on Food Allergy in Children - patientwebinars.co.uk](#)



Reintroduction of cow's milk - the milk ladder home challenge:

Suitable to start once your child is eating a wide range of family foods from around 9 months of age onwards. This leaflet is based on the iMAP ladder which can be found via the patient webinar site above



**Appendix 5: Derby City and Southern Derbyshire Community Health Services Nutrition and Dietetic Service specific referral form for Non-IgE Cow's Milk Allergy Referral Form (P1 of 2)**

<p><b><u>Patient details</u></b></p> <p>Surname: Forename(s):</p> <p>DOB NHS No:</p>	<p><b>Address:</b></p> <p>Postcode: Tel no: Email:</p>
<p><b><u>Communication</u></b></p> <p>Has the patient/ carer consented to the referral?</p> <p>Does the patient/ carer have any disabilities/ communication barriers?</p> <p>Does the patient require an interpreter?</p> <p>Does written information need translating?</p> <p>What methods of communication are suitable for the family?</p>	<p><input type="checkbox"/> Yes/ <input type="checkbox"/> No</p> <p><input type="checkbox"/> Yes/ <input type="checkbox"/> No. If yes, please describe.</p> <p><input type="checkbox"/> Yes/ <input type="checkbox"/> No. If yes, please specify language</p> <p><input type="checkbox"/> Yes/ <input type="checkbox"/> No. If yes, please specify language</p> <p><input type="checkbox"/> Attend clinic <input type="checkbox"/> Access videoconferencing <input type="checkbox"/> Telephone <input type="checkbox"/> Access to email</p>
<p><b><u>GP details</u></b></p> <p>Name: Contact number:</p>	<p>GP address Post code:</p>
<p><b><u>Health visitor details</u></b></p> <p>Name:</p>	<p>Base: Contact number:</p>
<p>Are there other health professionals/ social services involved? <input type="checkbox"/> Yes/ <input type="checkbox"/> No If yes, please specify service, name and contact details</p>	<p>1. 2. 3.</p>
<p><b><u>CMA diagnostic details</u></b></p> <p>Has the allergy focused history been completed and attached to referral? <input type="checkbox"/> Yes/ <input type="checkbox"/> No</p>	<p>Date allergy history completed: <b>Do not refer without an allergy history attached</b></p>
<p>Has the 4-week cow's milk exclusion trial been completed? If yes, did the symptoms resolve? If no, why was the exclusion trial not completed?</p>	<p><input type="checkbox"/> Yes/ <input type="checkbox"/> No</p>
<p>If the 4-week exclusion trial was completed, has the re-introduction to confirm diagnosis been undertaken? If yes, what was the outcome of reintroduction? If no, why not?</p>	<p><input type="checkbox"/> Yes/ <input type="checkbox"/> No</p>
<p><b><u>Growth</u></b></p> <p>Please include birth weight and OHC centile, latest measurements and indication of growth trends.</p> <p>Gestational age: ... /40</p> <p>Birth Weight (kg).....OHC (cm) .....</p> <p>BW Centile.....OHC birth centile.....</p>	<p><b>Most recent growth.</b>      Date:</p> <p>Weight (kg)..... Centile.....</p> <p>Length/ Height (cm)..... Centile.....</p> <p>OHC (cm)..... Centile.....</p> <p>BMI..... Centile.....</p> <p>Growth trends/ concerns:</p>

**Derby Nutrition and Dietetic Service Non-IgE Cow's Milk Allergy Referral Form (P2 of 2)**

**Medications**

Please list those currently on repeat and acute

Also relevant past medications & whether responded to them e.g. anti-reflux agents, laxatives, eczema treatments, specialist infant formulas etc

**Feeding history and relevant symptoms/ concerns**

**Please provide any additional information that you feel is relevant to support this referral:**

(consider family's concerns/ anxieties, developmental concerns, social information, safeguarding concerns)

**Referrer's details**

**Name:**

**Job role:**

**Address:**

**Telephone number:**

**Email:**

**Date referred:**

Please return form to South Derbyshire dietitians by email at [dhft.kidsnutrition@nhs.net](mailto:dhft.kidsnutrition@nhs.net). For dietitians at Chesterfield Royal Hospital or Queens Hospital, Burton please use existing generic referral forms. Refer patients with suspected IgE mediated reactions directly to a secondary care consultant/ allergy clinic.

GP's in southern Derbyshire can continue to refer patients by Choose and Book under the following categories: Speciality: Dietetics, Clinic type: Food allergy and intolerance but must ensure an allergy focused history and cow's milk re-challenging to confirm diagnosis have been undertaken and documented for the referral to be accepted.




## Appendix 6: Formulary for hypoallergenic infant formula in the management of CMA

<u>Name</u>	Tin size	Price per tin	Unique Aspects/ Cautions
<b>Extensively hydrolysed formula (First line for most infants). Note that EHF have differing levels of allergenicity, so may not be equally tolerated</b>			
<b>Nutramigen LGG (Mead-Johnson)</b>  See reconstitution advice on page 8	400g	£11.84	Casein hydrolysate, with probiotic (Lactocaseibacillus strain GG). Lactose free. LGG 1 marketed for infants <6mths and LGG 2 for infants >6mths, but there is no need to change at 6 mths of age. No need for LGG 3 (>1yr age). Not suitable for halal diet, premature or immunocompromised infants
<b>SMA Althéra (Nestle)</b>	400g	£11.04	Whey hydrolysate, contains lactose, so tends to be more palatable. Halal certified.
<b>Aptamil Pepti (Nutricia)</b>	400g 800g	£9.86 £19.72	Whey hydrolysate, contains lactose and fish oil. More palatable than casein-based EHF. Pepti 1 marketed for infants <6mths and Pepti 2 for infants >6mths, but there is no need to change at 6 mths of age. Not suitable for halal diet
<b>Aptamil Pepti Syneo (Nutricia)</b>	400g 800g	£9.86 £19.72	Whey hydrolysate, contains lactose and fish oil. More palatable than casein-based EHF. Contains pre and probiotics (Bifidobacterium breve M16V). Not suitable for halal diet, premature or immunocompromised infants.
<b>Amino acid formula (for severe cases; faltering growth, multi-system involvement including moderate to severe infantile eczema, anaphylaxis and unresponsiveness to EHF)</b>			
<b>SMA Alfamino (Nestle)</b>	400g	£25.73	Amino acid based, no milk protein and no lactose. Contains potato starch. Free from coconut oil.
<b>Neocate Syneo (Nutricia)</b>  See reconstitution advice on page 8	400g	£24.82	Amino acid based, no milk protein and no lactose. Contains coconut oil. Contains pre and probiotics (Bifidobacterium breve M16V) which may help those prone to constipation and reflux. Not suitable for premature or immunocompromised infants
<b>Neocate LCP (Nutricia)</b>	400g	£24.82	Amino acid based, no milk protein and no lactose. Contains coconut oil.
<b>Nutramigen Puramino</b>	400g	£22.98	Amino acid based, no milk protein and no lactose. Contains MCT, coconut and soya oil, and MSG



Specialist infant formula NOT TO BE PRESCRIBED OR RECOMMENDED for CMA			
Name	Tin size	Price per tin	Unique Aspects/ Cautions
Alimentum (Abbott)	400g		Casein hydrolysate. Contains HMO's. Lactose Free. Withdrawn from UK market
Aptamil PeptiJunior	450g	£16.92	Whey protein hydrolysate with 50% fat as MCT. Designed for GI malabsorptive conditions
Elecare (Abbott)	400g		Amino acid based, no milk protein and no lactose. Contains HMO's. Withdrawn from UK market
Infatrini Peptisorb	200ml	£5.03	High energy (1kcal/ml) extensively hydrolysed whey protein feed with 52% MCT, designed for GI malabsorptive conditions, only available in liquid format.
SMA Lactose Free Aptamil Lactose Free	400g	£6.46	Not suitable for CMA as contains whole cow's milk protein. Can be bought OTC for secondary lactose intolerance
SMA Comfort C&G Comfort Aptamil Comfort HiPP Comfort Kendamil Comfort	400g		Not suitable for CMA as contains partially hydrolysed cow's milk protein
C&G Anti-reflux Aptamil Anti-reflux SMA Anti-reflux HiPP Anti-reflux	400g		Not suitable for CMA as contains whole or partially hydrolysed cow's milk protein
Goat/ sheep infant formula	400g		Milk proteins in other 4-legged animals are too similar to cow's milk protein to be tolerated (approx. 92% cross-reactivity)

### Key

-  Recommended first line options
-  Second line alternatives with agreement from a dietitian
-  DO NOT PRESCRIBE/ RECOMMEND

## Appendix 7 - Nutrition check list

Please use the following table to assess whether the child is taking a nutritionally adequate diet, to support appropriate transitioning off hypoallergenic formula onto an alternative plant-based milk substitute after 1 year of age. If there are any concerns, please liaise with the dietitian or refer to resources below.



Meal time	Fruit and vegetables	Bread, rice, potatoes, pasta, cereals & other grains	Meat, fish, eggs, pulses, lentils, quorn, nuts and seeds	Plant-based milk and dairy alternatives
Breakfast				
Mid morning snack				
Lunch				
Mid afternoon snack				
Evening				
Supper				
Total				
Recommended number of portions	Aim for 5 x 40g portions per day.	3 portions per day, one at each meal. Weights will vary but approx 80g pasta/ rice/ potato, 25g bread or 15g dried cereal	2 x 40-50g portions of meat, fish eggs per day or 3 portions of vegan alternatives eg nuts, pulses, seeds, quorn	3 portions per day of calcium, fortified products. A portion is 100ml milk, 60g pot yogurt or 15g piece of cheese.

Add in foods being eaten at each mealtime under the food group headers and then total up the number and compare with recommended number of portions. A standard portion size is relative to the child's size and age. The following provide useful guides on portion sizes:

**Caroline Walker Trust;** Eating well for 1-4 year olds Practical Guide [Layout 1 \(cwt.org.uk\)](https://www.cwt.org.uk/resources/layout-1)

**First Steps Nutrition Trust:** Good food choices and portion sizes for 1-4 year olds [Good+Food+choices+May+2021+for+web.pdf \(squarespace.com\)](https://www.firststepsnutrition.com/wp-content/uploads/2021/05/Good-Food-choices-May-2021-for-web.pdf)

**Infant and Toddler Forum** portion sizes for 1-4 years: [1.3 - Portion Sizes for Children 1-4 Years.pdf \(infantandtoddlerforum.org\)](https://www.infantandtoddlerforum.org/resources/1.3-Portion-Sizes-for-Children-1-4-Years.pdf)