



County Durham & Tees Valley  
Area Prescribing Committee



North Yorkshire & York Area  
Prescribing Committee

## Quick Reference Guide - Recognition and management of non- IgE cow's milk allergy in children

This pathway is intended for use by both primary and secondary care

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Version 1

We promote breast feeding as the best form of nutrition for infants and this should be promoted and supported wherever possible. Almost all children with cow's milk allergy can continue to be successfully breast-fed with modification of mother's diet under the direction of a dietitian.

Guideline and Pathway developed and ratified by the **Tees Valley Cow's Milk Allergy Steering Group** and **Harrogate Dietetic Group** - all members have declared any conflicts of interest to maintain transparency

## Managing Cow's Milk Allergy Pathway

Symptoms suggestive of CMA/parental concerns regarding possible milk allergy ([Diagnosing CMA](#))

Step 1 -Allergy focused clinical history  
Feeding History/ Check Growth Parameters  
Consider Alternative Diagnosis/Milk related Conditions

Suspected non IgE CMA

Suspected IgE CMA  
(acute reaction)

### Mild to Moderate Symptoms

- advise milk exclusion- encourage continued breast feeding with maternal milk exclusion with Vit D + Calcium Supplement
- Prescribe EHF ( Extensively Hydrolysed Formula) for formula fed/ mixed feeding ( Not Soya Milk < 6 months),
- Provide patient information from Allergy UK/resources ([Appendix6](#))

### Severe Symptoms

Breast feeding- Maternal Milk exclusion with Vit D+ Calcium Supplements

Formula Fed/ Mixed feeding - Prescribe AA formula (Amino Acid Formula)

- Advise milk exclusion-if breast feeding, maternal milk exclusion with Vitamin D + calcium
- provide patient information from Allergy UK- Allergy action plans/ Antihistamines
- **Do Not Re-challenge**

Step 2 -Trial of Milk exclusion ([Appendix 1](#)) up to 4 weeks- Minimum 2 weeks

Referral to Secondary care- Paediatric Allergy Clinic/ Dietician

Review after 2-4 weeks

EHF not accepted

Education/strategy for introduction ([Appendix 3](#))  
Consider Alternative EHF

Some improvement

Consider extending trial for further 2 weeks/alternative EHF or trial of AA formula  
Consider excluding soya as well (maternal diet/ if started solids)

Improvement

No Improvement

If strong suspicion, Trial of AA formula: Consider other exclusions-soy/eggs  
Consider alternative diagnosis  
Or On-going concerns regarding faltering growth  
Seek Advice from secondary care

Re-challenge with cow's milk using iMAP guidelines after 4 week period

No return of Symptoms

NOT CMA  
Keep milk in diet,  
consider alternative diagnosis

Return of Symptoms

- CONFIRM diagnosis of non-IgE CMA (Step 3)
- Continue exclusion diet and signpost to resources/ websites
- Refer to local dietetic services for further support and advice

Continue strict milk free diet for 6 months after diagnosis or until 9-12 months of age (NICE 2011),  
Advise on reintroduction of milk proteins using milk ladder

**Diagnosing Cow's Milk Allergy (CMA) ([Primary Care \(iMAP\) guidelines](#), [NICE CMA guideline 116](#))**

**CMA:**

- 2 types need to be differentiated- IgE/non Ig CMA
- Symptoms varied in non- IgE CMA-Diagnosis can be a challenge
- Typically presents in the 1st year of life

**Allergy-focused clinical history**

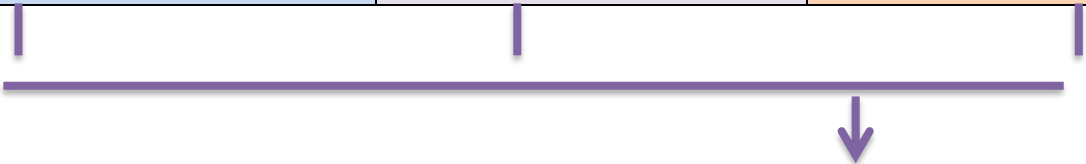
- A family history of eczema, asthma, hay fever, allergic rhinitis or food allergy is more likely in IgE-mediated food allergy.
- Feeding history – check the source of cows’ milk e.g. is the infant breastmilk/formula fed or weaned onto solids.
- Presenting symptoms – Ask about **age** of first onset, **speed** of onset, **reproducibility**, **duration** and **severity** following milk ingestion (IgE/ Non IgE CMA)
- Also ask about previous management including medication use and response to elimination/reintroduction Of foods- Rule out other Milk related conditions like reflux, lactose intolerance
- Weigh and measure the child to assess growth.

Mild-moderate non-IgE CMA	Severe non-IgE CMA	IgE CMA
<p>Mostly 2-72 hours after ingestion of cow's milk protein (CMP) Formula fed, exclusively breast-fed or at the onset of mixed feeding Treatment resistance- Eg atopic dermatitis or reflux, increases the likelihood of allergy</p>	<p>Mostly 2-72 hours after ingestion of cow's milk protein (CMP) Mostly formula fed, exclusively breast-fed or at the onset of mixed feeding  Treatment resistance example atopic dermatitis or reflux, increases the likelihood of allergy</p>	<p>Mostly within minutes (maybe up to 2 hours) after ingestion of cow's milk protein (CMP)  Mostly formula fed or at the onset of mixed feeding</p>
<p><i>(Usually several of the following symptoms)</i></p> <p><b>Gastrointestinal:</b></p> <ul style="list-style-type: none"> <li>• Irritability – colic</li> <li>• Vomiting – reflux – GORD</li> <li>• Food refusal or aversion</li> <li>• Diarrhoea like stools – loose and or more frequent</li> <li>• Constipation – especially soft stools with excessive straining, abdominal discomfort, painful flutters</li> <li>• Blood and/or mucus in stool in other otherwise well infant</li> </ul> <p><b>Skin:</b></p> <ul style="list-style-type: none"> <li>• Pruritus (itching)</li> <li>• Erythema(flushing)</li> <li>• Nonspecific rashes</li> <li>• Moderate persistent atopic dermatitis</li> </ul>	<p><i>(Severe persisting symptoms of one or more of the following)</i></p> <p><b>Gastrointestinal:</b></p> <ul style="list-style-type: none"> <li>• Diarrhoea,</li> <li>• Vomiting</li> <li>• Abdominal pain</li> <li>• Food refusal or aversion</li> <li>• Significant blood or mucus in stools</li> <li>• Irregular or uncomfortable stools +/-faltering growth</li> </ul> <p><b>Skin:</b></p> <ul style="list-style-type: none"> <li>• Severe atopic dermatitis +/- faltering growth</li> </ul>	<p><i>(One or more of the following symptoms)</i></p> <p><b>Gastrointestinal</b></p> <ul style="list-style-type: none"> <li>• Acute vomiting or diarrhoea, abdominal pain/colic.</li> </ul> <p><b>Skin:</b></p> <ul style="list-style-type: none"> <li>• Acute pruritus, erythema urticaria angioedema</li> <li>• Acute flaring of persisting atopic dermatitis Acute worsening of eczema,</li> </ul> <p><b>Respiratory:</b></p> <ul style="list-style-type: none"> <li>• acute rhinitis +/- conjunctivitis</li> </ul> <p><b>Anaphylaxis</b></p> <ul style="list-style-type: none"> <li>• Severe IgE mediated cow's milk allergy</li> <li>• Collapse/pallor</li> </ul>

**Red Flags:**  
History of Collapse/ Anaphylaxis  
Faltering Growth  
Severe Atopic Dermatitis  
FPIES Reaction – Profuse vomiting, collapse  
Ongoing blood in stools despite intervention

Follow Cow's Milk Allergy Pathway

Urgent Referral to Secondary care- Allergy clinic/ Dietician



## Appendix 1: Hypoallergenic milk formulas

Choice of formula within each group should not be dependent on the cost of formula alone; additional benefits seen with formulas incorporating a prebiotic or probiotic can include a more rapid resolution of symptoms and a reduced likelihood of developing other atopic problems in the future. If a baby does not settle on one EHF they may settle with another EHF with a different base. Paediatric dietitians in each ICS are happy to offer advice about choice of EHF.

Extensively Hydrolysed Formulas (eHF)		
First line and alternative eHF	Age Range	Notes
<b>Althera® (450g) (Nestle)</b>	Birth to 3 years	Whey based, contains lactose, medium chain triglycerides (MCT), more palatable for infants who have started weaning.
<b>Aptamil Pepti 1® (400g/800g)</b> <b>Aptamil Pepti 2® (400g/800g)</b> (Danone Nutricia)	Birth to 6 months 6 months – 2 years	Whey based, contains lactose( 3.8g per 100mls), more palatable for infants who have started weaning <b>Contains prebiotic oligosaccharides</b> (9:1 blend of Galacto- and Fructo-oligosaccharides(GOS/FOS) (Least level of Hydrolysis of Milk protein)
<b>*Nutramigen 1 with LGG® (400g)</b> <b>*Nutramigen 2 with LGG® (400g)</b> (Mead Johnson)	Birth to 6 months 6 months to 2 years	Casein based, Lactose free <b>Note:</b> preparation instructions differ to other milk formulas. <b>Contains LGG(Lactobacillus Rhamosus) probiotics</b> -Clinically proven to accelerate return to cow's milk and reduce risk of other allergic manifestations- <i>Not suitable for premature or immunocompromised infants</i>
<b>*Similac Alimentum® (400g)</b> (Abbott) <b>*Currently Product recalled as of 11/03/2022</b>	Birth to 2 years	Casein based, lactose content < 10mg/100 mls, Contains 33% MCT <b>Contains prebiotic</b> (2-'FL HMO-Human Milk Oligosaccharide)- proven benefit for the gut bacteria and can affect systemic immune responses
Notes		
<ul style="list-style-type: none"> <li>• If first line formula is not tolerated/accepted, <b>STOP</b> and then trial an alternative eHF.</li> <li>• For infants with <b>severe diarrhoea</b> trial <b>lactose free eHF first line</b>.</li> <li>• Nutramigen 1 &amp; 2 with LGG® and Neonate Syneo® should be prepared with boiled water cooled down to room temperature (not 70°C). <b>Note: This is currently not in line with DOH guidance on safe preparation of infant formula and parents should be made aware of the risk of infection.</b></li> <li>• Consider AAF if trial of two different eHF products have not been tolerated.</li> </ul>		
<b>Amino Acid Formula (AAF) for severe CMPA</b>		
<b>DO NOT INITIATE IN PRIMARY CARE UNLESS SEVERE CMPA unresponsive or partially responsive to Ehf</b>		
<b>Criteria for AAF prescription – Severe symptoms, faltering growth, persistent blood in stools, poor response to EHF and CMA Strongly suspected, severe Eczema, Multiple food allergies</b>		
Amino Acid Formula	Age Range	Notes
<b>SMA Alfamino® (400g)</b> (Nestle)	Birth to 3 years	Contains 24.4% MCT ( Medium Chain Triglycerides)
<b>Neocate Infant® (400g)</b> (Nutricia)	Birth to 12 months	MCT 33%, Has added Nucleotides & DHA/ARA, (Docosahexanoic acid (DHA). Arachidonic Acid(ARA)
<b>Nutramigen Puramino® (400g)</b> (Mead Johnson)	Birth to 2 years	Contains 33% MCT
<b>Elecare ( Abbott)</b> <b>*Currently Product recalled as of 11/03/2022</b>	Birth to	33% MCT, Contains prebiotic (2-'FL HMO-Human Milk Oligosaccharide)- proven benefit for the gut bacteria and can affect systemic immune responses
<b>Neocate Syneo® (400g)</b> (Nutricia)	From birth	Amino acid formula with pre- and probiotics( HMO, DHA/ARA and Bifidobacterium Breve) <i>Not suitable for premature or immunocompromised infants.</i>

### Appendix 3: Improving acceptability of milk free formulas:

EHF and AAF (see second line options) have an unpleasant taste and smell, which is better tolerated by younger patients. Some babies, especially those younger < 12 weeks might have no issues with acceptability. Unless there is IgE mediated or severe allergy, advice parents to introduce the new formula gradually by mixing with the usual formula in increasing quantities until the transition is complete. Serving in a closed cup or bottle or with a straw (depending on age) may improve tolerance. Paediatric Dieticians will be able to support with specific advice if required.

Lactose-containing products (Althera and Aptamil Pepti) aids the palatability of the formula; however some non-CMA babies may have temporary lactose intolerance in addition to their milk allergic symptoms.

### Appendix 6: Useful resources for Parents/ Professionals

#### Resources for Parents

- [Cow's Milk Free Diet for Infants and Children; British Dietetic Association 2020.](#)
- [iMAP guideline: The Early Home Reintroduction to Confirm the Diagnosis of Cow's Milk Allergy](#)
- [iMAP Milk Ladder](#)
- [iMAP milk ladder recipes](#)
- [iMAP fact sheet for infants with symptoms of a possible mild to moderate non-IgE mediated allergy whilst being exclusively or partly breastfed](#)
- [Allergy UK Quick guide: Does my child have a Cows Milk allergy ?](#)
- [Allergy UK Quick Guide: Cow's Milk Free Diet Information For Babies and Children](#)
- [Allergy UK leaflet: Could it be Cow's Milk Allergy ?](#)

#### Resources for Professionals

- [Presentation of Suspected Cow's Milk Allergy \(CMA\) in the 1st Year of Life algorithm](#)
- [iMAP Treatment algorithm: Management of Mild to Moderate Non-IgE Cow's Milk Allergy \(CMA\)](#)

### Appendix 7 -Useful online resources:

- British Society for Allergy and Clinical Immunology (BSACI) website. Available at <http://www.bsaci.org/index.htm>
- Allergy UK factsheets. Available at: <https://www.allergyuk.org/information-and-advice/conditions-and-symptoms>.
- National Health Service: What should I do if I think my baby is allergic or intolerant to cows' milk? Available at: <https://www.nhs.uk/common-health-questions/childrens-health/what-should-i-do-if-i-think-my-baby-is-allergic-or-intolerant-to-cows-milk/>.
- iMAP Milk Ladder. Published Oct 2013, available at: <http://ifan.ie/wp-content/uploads/2014/02/Milk-Ladder-2013-MAP.pdf>.
- Allergy UK, Types of food allergy. Available at: <https://www.allergyuk.org/information-and-advice/conditions-and-symptoms/36-types-of-food-allergy>.
- British Dietetic Association, Food factsheets. Available at <https://www.bda.uk.com/foodfacts/home>.