NHS Surrey Heartlands

Guidelines for the Management of Cow's Milk Allergy in Primary Care

Cow's milk allergy (CMA) is an abnormal response of the body's immune system to the proteins in milk. CMA affects 2-4% of infants, and most children, will outgrow the allergy.

If a diagnosis of CMA is suspected on the basis of reported or observed clinical features, assess the child by taking an allergy focussed history, physical examination and try to distinguish between IgE and non-IgE mediated allergy, to manage appropriately. The steps below detail how to manage IgE and non-IgE CMA. Please also refer to the updated iMAP guidelines on the recognition and management of CMA.

Always support and encourage continued breastfeeding where possible.

1. Identify type of CMA

	Mild to moderate non-IgE CMA (80% of cases of CMA)	Severe non-IgE CMA	Mild to moderate IgE CMA	Severe IgE CMA
	Usually formula fed, at onset of mixed feeding			
	Delayed onset, 2-72 hours		**Acute onset, minutes-2 hours**	
Symptoms	**Usually several symptoms which persist despite first line measures** **Gastrointestinal**: • Colic • Reflux/ GORD • Food refusal or aversion • Diarrhoea • Constipation • Abdominal discomfort • One incident or occasional blood &/or mucus in stools **Skin**: • Pruritus • Erythema • Moderate persistent atopic dermatitis	**Usually ≥1 symptom, severe and treatment resistant** **Gastrointestinal**: • Diarrhoea • Vomiting • Severe abdominal pain • Significant blood &/or mucus in stools • Irregular or uncomfortable stools **Skin**: • Severe atopic dermatitis +/- Faltering growth	**Skin**: • Acute pruritus • Erythema • Urticaria • Angioedema • Acute flaring of persistent atopic dermatitis **Gastrointestinal**: • Vomiting • Diarrhoea • Abdominal pain/ colic **Respiratory**: • Acute rhinitis and /or conjunctivitis	**Anaphylaxis** • Immediate reaction with severe respiratory and/or cardiovascular system signs & symptoms **Gastrointestinal** (rare): • Severe gastrointestinal reaction

2. Confirm diagnosis

	Complete diagnostic dietary elimination trial: → Exclude cow's milk for 2-4 weeks: • If breastfed: mother to follow cow's milk free diet • If formula fed: prescribe 2-4 week trial of extensively hydrolysed formula (see first line options overleaf) → If clear improvement in symptoms, confirm diagnosis with home milk challenge: • If symptoms return exclude cow's milk. CMA confirmed if symptoms clearly improve again. • Provide iMAP milk allergy fact sheet for parents and BDA milk allergy fact sheet.	*Move directly to treatment and referral process*	*Move directly to treatment and referral process*	**Severe IgE CMA with anaphylaxis requires emergency treatment and admission.**

3. Treatment and referral process

Advise strict adherence to a cow's milk-free diet for the mother/infant until the child is 9–12 months old and for at least 6 months.

Type of CMA	Mild to moderate non-IgE CMA (80% of cases of CMA)	Severe non-IgE CMA	Mild to moderate IgE CMA	Severe IgE CMA
Treatment if breastfed	Encourage and support mother to continue breast feeding. Refer to health visitor/ for breast feeding support if required. Advise mother to follow cow's milk free diet and mother to start daily calcium and vitamin D supplement.			
Treatment if botte fed/ mixed fed	Prescribe extensively hydrolysed formula (EHF)*	Prescribe amino acid formula (AAF)	Prescribe EHF	Prescribe AAF
Where to refer	**Local paediatric dietitian** for cow's milk free weaning advice and appropriate reintroduction via the milk ladder	**Urgent referral to secondary care** (paediatricians and dietitians)	**Secondary care** allergy service (paediatricians and dietitians)	**Urgent referral to secondary care** allergy service (paediatricians and dietitians)

*For mild to moderate non-IgE CMA, suggest 6 month check planned at time of prescribing to review progress and ensure initiation of the milk ladder.

4. When to stop EHF or AAF milk prescriptions

- The child is 12-15 months old, and there are no concerns with growth.
  Most children at 1 year of age can safely transition onto a supermarket plant-based milk, fortified with calcium and iodine, as their main milk drink. A dietitian will advise on the most suitable alternative.
- The formula has been prescribed for more than one year. If a child has multiple allergies, please consider a referral to the dietitian to review formula first.
- The child can tolerate cow's milk as a drink or in food.

Extensively Hydrolysed Formula (EHF)

EHF is the first line treatment for mild to moderate CMA in primary care. These formulas are tolerated by 90% of infants with CMA. Infants who do not tolerate one EHF may tolerate another. Therefore, it is worth prescribing only 1 or 2 tins initially and if not tolerated or taken after perseverance **trying another EHF**.

Whey based formula can be more palatable but should be used cautiously in infants with gastrointestinal symptoms as they contain lactose.

Extensively Hydrolysed Formula (Listed alphabetically)	Suitable from birth	Suitable from 6 months	Casein based	Whey based	Contains lactose	Suitable for vegetarians	Suitable for vegans	Suitable for Halal diets	Suitable for Kosher diets
Aptamil Pepti 1	✓	✓	✗	✓	✓	✗	✗	✗	✓
Aptamil Pepti 2	✗	✓	✗	✓	✓	✗	✗	✗	✓
Aptamil Pepti Syneo	✓	✓	✗	✓	✓	✗	✗	✗	✓
Nutramigen 1 with LGG®	✓	✓	✓	✗	✗	✗	✗	✗	✗
Nutramigen 2 with LGG®	✗	✓	✓	✗	✗	✗	✗	✗	✗
SMA Althera	✓	✓	✗	✓	✓	✓	✗	✓	✗
FOR INITIATION BY DIETITIAN OR SECONDARY CARE ONLY									
Nutramigen 3 with LGG®	✗	✗	✓	✗	✗	✗	✗	✗	✗

Amino Acid Formula (AAF)

AAF should be reserved for infants with severe CMA symptoms and should **NOT** be used first line for the management of mild to moderate CMA in primary care. If a patient presents with a clear anaphylactic reaction to cow's milk AAF should be commenced in primary care, with immediate onward referral to a specialist or secondary care.

Amino Acid Formula (Listed alphabetically)	Suitable from birth	Suitable from 6 months	Contains lactose	Suitable for vegetarians	Suitable for vegans	Suitable for Halal diets	Suitable for Kosher diets
Neocate LCP	✓	✓	✘	✓	✘	✓	✓
Neocate Syneo	✓	✓	✘	✓	✘	✓	✓
Nutramigen Puramino	✓	✓	✘	✘	✘	✓	✓
SMA Alfamino	✓	✓	✘	✓	✘	✓	✘
FOR INITIATION BY DIETITIAN OR SECONDARY CARE ONLY							
Neocate Junior	✘	✘	✘	✓	✘	✓	✓

Please note: Both EHF and AAF have an unpleasant taste and smell, which is better accepted by younger infants. Unless there is anaphylaxis, parents should be advised to introduce the new formula gradually by mixing with the infant's usual formula in increasing quantities until the transition is complete.

PRESCRIBING DOs AND DON'Ts[1]

✓ DO	✘ DON'T
✓ **Support and encourage breastfeeding** where it is clinically safe and the mother is in agreement. ✓ **Refer ALL infants with CMA to a paediatric dietitian** at diagnosis and prior to weaning to receive advice for a cow's milk free diet. ✓ **Advise about a maternal milk free diet** for infants with CMA who are breast fed (refer to paediatric dietitian). ✓ **Prescribe only 1 or 2 tins initially** until compliance/tolerance is established. ✓ **Request dietitian to review the prescription** if the patient is prescribed a formula for CMA but able to tolerate significant amounts of any of the following foods – cow's milk, cheese, yogurt, ice cream, custard, milk chocolate, cakes, cream. If tolerating all dairy foods in their diet suggest trialling a graded transition to normal formula (for <1year) or cow's milk (for ≥1year).	✘ **Do not add infant formulas to the repeat prescribing template in primary care** unless a review process is established to ensure the correct product and quantity is prescribed for the age of the infant. ✘ **Do not suggest goat's milk and formulas made from it, sheep's milk or other mammalian milks** for those with CMA as there is a risk of possible allergenic cross-reactivity and they may be nutritionally unsuitable for infants and young children. ✘ **Do not prescribe lactose free formula** (SMA LF®, Enfamil O-Lac®) for infants with CMA. They are based on cow's milk protein and are unsuitable. ✘ **Do not suggest rice milk** for those under five years due to high arsenic content. ✘ **Do not routinely prescribe soya formula** (SMA Wysoy®) for those with CMA. This is because a proportion of infants with non-IgE mediated CMA may also react to soya. It should not be prescribed at all in those under six months due to high phyto-oestrogen content.

[1] Based on Prescqipp guidance. Appropriate prescribing of specialist infant formulae. B146 | November 2016 | 2.1

GUIDELINES FOR QUANTITY TO PRESCRIBE

- Check the amount of formula prescribed is appropriate for the age of the infant (see table below).
- Refer to the most recent correspondence from the paediatric dietitian to confirm recommended quantity of formula.
- Infants aged 6-12 months will require less formula as solid food intake increases.

Age/weight of infant	400g tins/28 days (approx.)	800g tins/28 days (approx.)
Under 6 months	13	6.5
6-12 months	6-12	3-6
Over 12 months	Dietitian review for continued need for formula. A minimum of 350ml milk or milk alternatives is recommended.	

PAEDIATRIC DIETETIC CONTACT DETAILS

Area		Telephone number	Email address
East Surrey	Local Community Team	01293 600314	firstdietitians@nhs.net
	Acute Team	01737 768511 ext 6096	sash.dietitians@nhs.net
Guildford & Waverley	Local Team	01483 464119	rsch.paediatricdietitians@nhs.net
North West Surrey	Local Team	01932 722202	asp-tr.paedsnutrition@nhs.net
Surrey Downs	Local Community Team	01372 730040	CSH.CommPaedDietetics@nhs.net
	Acute Team	01372 735565	esth.eghpaediatricdietitians@nhs.net