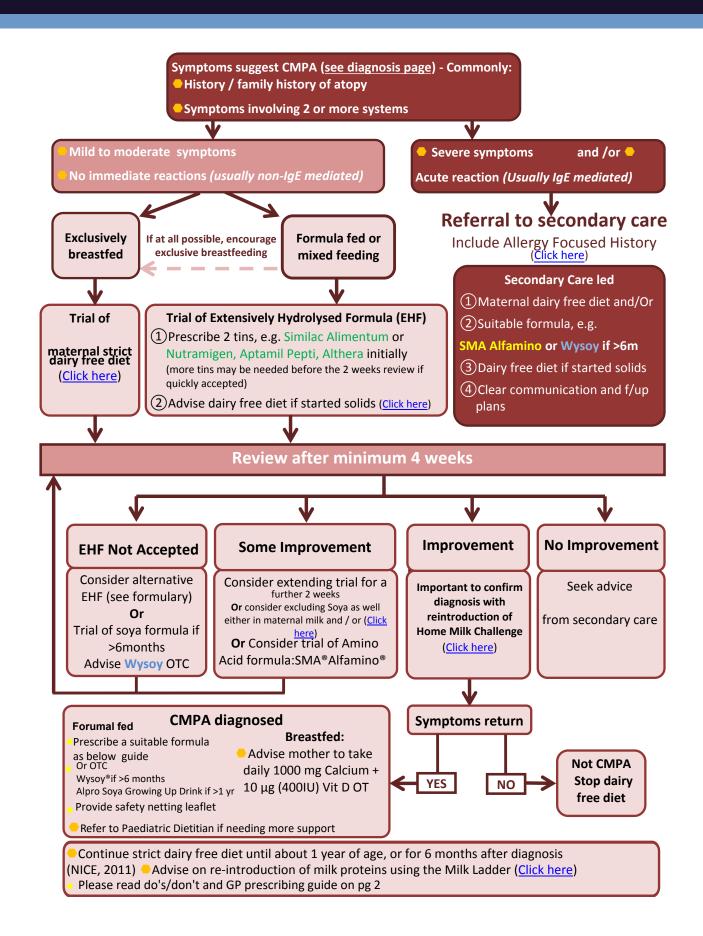
# Managing Cow's Milk Protein Allergy (CMPA) Pathway







Look at page 4 for additional guidence



## Dos and Don'ts of Prescribing Specialist Infant Formulae

#### DO

- Promote & encourage breastfeeding if clinically safe / mother is in agreement.
- Refer where appropriate to secondary or specialist care see advice for each condition.
- Seek prescribing advice if needed in primary care from the health professional involved in the child's care, or Paediatric Dietitians.
- Prescribe only 2 tins initially until compliance/tolerance is established.
- Advise to follow the manufacturer's advice on safe storage once feed mixed or tin opened.
- ☑ Check any formula prescribed is appropriate for the age of the infant.
- Check the amount of formula prescribed is appropriate for the age of the infant and /or refer to the most recent correspondence from the Paediatric Dietitian.
- ☑ Review prescriptions regularly to ensure quantity is still age and weight appropriate.
- Review prescription (and refer to Paediatric Dietitian if appropriate) where:
  - The child is >2 years old
  - The formula has been prescribed for more than 1 year
  - Greater amounts of formula are being prescribed than would be expected
  - The patient is prescribed a formula for CMPA\* but able to drink cow's milk
- Refer to Dietitian if child is >1 year old and is able to take cow's milk but refuses due to fussy eating, and/or financial constraints of parents.

#### DON'T

- Recommend lactose free formula (Aptamil LF°, SMA LF°, Enfamil O-Lac°) for infants with CMPA\*.
- Recommend low lactose /lactose free formula in children with secondary lactose intolerance over 1 year who previously tolerated cow's milk (they can use Arla Lactofree whole or Alpro growing up drink from supermarkets).
- Recommend soya formula (SMA Wysoy\*) for those **under 6 months** with CMPA\* or secondary lactose intolerance due to high phyto-oestrogen content.
- Suggest other mammalian milks (goat's, sheep's...) for those with CMPA\* or secondary lactose intolerance due to their similarity to cow's milk.
- Suggest rice milk for those under 5 years due to high arsenic content.
- Prescribe Infant Gaviscon® if the infant is taking anti-reflux- formulae or separate thickeners.
- Suggest Infant Gaviscon® > 6 times/24 hours or if the infant has diarrhoea/fever, (due to sodium content).
- Prescribe Nutriprem 2 Liquid® or SMA Gold Prem 2 Liquid® unless there is a clinical need, and don't prescribe after 6 months of corrected age **unless** advised by a specialist.

\*CMPA: Cow's Milk Protein Allergy



# GPs' quick prescribing reference guide

Emphasize the need to strictly follow manufacturer's instructions when making up formula milk

Condition	Formula		Age range*	Feed type	Key Points	
Cow's Milk Protein Allergy (CMPA)  Take an allergy focused clinical history	Use 1st Use if	Alimentum®  Aptamil Pepti 1®  Nutramigen 1	0-12 months 0-6 months	Extensively Hydrolysed formula (EHF)	EHF: Indicated if mild-moderate IgE/nonIgE symptoms Non-IgE delayed symptoms Confirm diagnosis with home milk challenge 2 weeks after	
	mild- moderate eczema or atopic family	Aptamil Pepti 2® Nutramigen 2 with LGG®	6 -12 months		starting feed  • Maintain CMP elimination diet until 9-12 months old, or for 6 months after diagnosis  IgE/immediate allergy  • Refer to secondary care	
	Use 1st	SMA® Alfamino			AAF: Indicated if anaphylactic reaction/ severe reactions/ reaction to breast milk	
	Nutramigen Puramino® Neocate LCP®		0-12 months	Amino acid formula (AAF)	Refer to secondary care	
	If severe symptoms, severe eczema and atopic family use Neocate Syneo®				If IgE or moderate-severe eczema refer to allergy clinic for review & advice on reintroduction	
	отс	SMA® Wysoy®	6-12 months	Soya formula	• For >6 months only and if no allergy to soya	
	отс	e.g.Alpro Soya Growing Up Drink®	12+ months	Soya formula	1 year if infant refuses     specialist formula & tolerates     soya	
Faltering growth	Use 1st	SMA® High Energy	0-18 months	Energy dense ready-	Ensure regular weight/length monitoring     Encourage Food First & food	
	Similac <sup>®</sup> High Energy Infatrini <sup>®</sup>		or 8kg	to-use formula	fortification if weaned and over 6 months (diet sheet available)	
Pre-term or IUGR (post discharge from hospital)	Use 1st	Use 1st Nutriprem 2 Powder®		Use Prem feed  Powder  not ready-to-drink  formula	Follow hospital discharge instruction	
	SMA® Gold Prem 2 Powder		corrected age		Ensure review at 6 months corrected age	
Gastro- Oesophageal Reflux (GOR)	ОТС	SMA® Anti-reflux	0- 12 months	Thickening formulae (reacts with stomach acid)	<ul> <li>Try non-medical intervention first, check for overfeeding</li> <li>Follow feed preparation instructions carefully</li> </ul>	
		Aptamil Anti-reflux®  Cow & Gate® Anti reflux  HiPP Organic® Anti- reflux		Pre-thickened formula	Do not use in conjunction with separate thickeners, or medication such as Infant Gaviscon, antacids or PPI	
	отс	Instant Carobel®	From birth	Thickener	<ul> <li>If anti-reflux formula not practical/possible (e.g. using pre- term or specialised formula)</li> </ul>	
Secondary lactose intolerance	отс	Aptamil LF® Enfamil O-Lac® SMA LF®	0-12 months	Lactose-free formula	<ul> <li>Use up to 8 weeks at a time</li> <li>&gt; 1 year use supermarket lactose free milk e.g. Alpro Soya Growing Up Drink, Arla Lactofree Whole</li> </ul>	
		SMA® Wysoy®		Soya formula	• For >6 months only and if no allergy to soya	
<b>KEY:</b> Prescribe First Line		Prescribe if first line not an option or not working			Over the counter product	



## **Guidance on feed volumes to prescribe for infants**

Always be guided by the babies appetite and feed responsively

Age Category	Royal College feed guidance	-	Suggested volume per day	Quantity of powder per day	Equivalent in Tins per 28 days
Up to 2 weeks	<b>7-8 feeds</b> 60-70mls/feed	150ml/kg	420 -560mls	70 -90g	5 -6 x 400g
2 weeks - 2 months	<b>6-7 feeds</b> 75-105mls/feed	150ml/kg	450 -735mls	70 -110g	5 -8 x 400g
2-3 months	<b>5-6 feeds</b> 105-180mls/feed	150ml/kg	525 -1080mls	80 -160g	6 -12 x 400g
3-5 months	5 feeds 180-210mls/feed 3-4 months 4-5 months	150ml/kg 120ml/kg	900 -1050mls	140 -160g	10 -12 x 400g
About 6 months	4 feeds 210-240mls/feed	120ml/kg	840 -960mls	130-150g	9 -11 x 400g

#### General guidance on feeding after 6 months, for average weight children

If a child is under the paediatric dietitians, they will provide guidance on appropriate monthly prescription quantity.

7-9 months	<b>4 feeds</b> 150mls/feed	About 600mls	90g	7 x 400g or 3 x 900g
10-12 months	<b>3 feeds</b> e.g. 2 x 100ml + 1 x 200ml feed	About 600mls	90g	7 x 400g or 3 x 900g
1-2 years	<b>3 feeds</b> e.g. 2 x 100ml + 1 x 200ml feed	About 400mls of whole cow's milk or other suitable milk drink	70g	5 x 400g

Adapted from the First Steps Nutrition Trust: A simple guide to Infant Milks. May 2018

- Specialist infant formulae are for age 0-12 months unless advised to continue by a paediatrician or paediatric Dietitian
- Advise parents to follow the manufacturer's advice on safe storage once mixed or opened.
  Note: Instructions for making up Nutramigen LGG and Neocate Syneo includes the use of cooled boiled water, which goes against current DoH guidelines.
- Only <u>prescribe 2 tins initially</u> until compliance/tolerance is established.



## Cow's Milk Protein Allergy (CMPA) additional notes

Breastfeeding is the optimal way to feed a baby with CMPA, with if required, maternal elimination of all cow's milk protein foods (plus calcium and vitamin D supplementation). For more detailed directions to diagnose and manage CMA, use the 'Managing Allergy in Primary care' (iMAP) guidelines

- CMPA commonly appear when a formula is introduced in a usually breastfed baby. Therefore returning to exclusive breastfeeding should be discussed and encouraged at the earliest opportunity.
- Only about 10% of babies with CMPA will require an Amino Acid Formula (AAF) (Murano et al., 2014). The remainder should tolerate an Extensively Hydrolysed Formula (EHF).
- 10-14% of infant with CMPA will also react to soya proteins (and up to 50% of those with non-IgE mediated CMPA). But due to better palatability soya formula is worth considering in babies >6 months.

#### **Top Tips**

- EHF and AAF have an unpleasant taste and smell which is better tolerated by younger babies. Unless there is anaphylaxis or obvious IgE mediated symptoms, advise 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.
- Warn parents that it is quite common for babies to develop green stools on these formulae.
- **Prescribe 2 tins initially** and encourage parents to persevere, it may take several days until compliance/tolerance is established. Only then give a monthly repeat prescription. Infants who do not tolerate first line formula after perseverance, may tolerate a comparable second line formula.
- For babies with mild to moderate delayed symptoms (unless there is evidence of IgE mediated symptoms and signs) confirm diagnosis with home milk challenge. This can be initiated two weeks after starting a specialised formula.
- For babies with severe symptoms or an acute reaction (usually IgE mediated): refer to secondary care. Reintroducing milk protein should be supervised by a paediatric Dietitian or paediatrician.

#### Review and discontinuation of treatment

- 60-75% of children outgrow CMPA by 2 years of age, rising to 85-90% of children at 3 years of age (EuroPrevall study, 2012).
- Review prescriptions regularly to check that the quantity and type of formula is appropriate for the child's age.
- **Prescriptions can be stopped** when the child has outgrown the allergy, or on advice of the dietitian/paediatrician.
- Trial of reintroduction of cow's milk -use the milk ladder and if parents need more support refer to the paediatric dietician led CMPA group. The milk ladder should not be used in cases of IgE/immediate allergy-refer these babies to secondary care

#### Review the need for the prescription if:

- The child is over 2 years of age. Children with multiple and/or severe allergies or faltering growth may require prescriptions beyond 2 years. This should always be on the advice of the paediatric Dietitian or paediatrician.
- The formula has been prescribed for more than 1 year
- The patient is prescribed more than the suggested formula quantities according to their age/weight
- The patient is able to drink cow's milk or eats yoghurts/cheese

#### When to refer to the paediatric dietitian:

When the patient is diagnosed with CMPA and/or has multiple allergies and needs support with weaning. Or has non-IgE delayed CMPA and needs help re-introducing using the Milk Ladder.