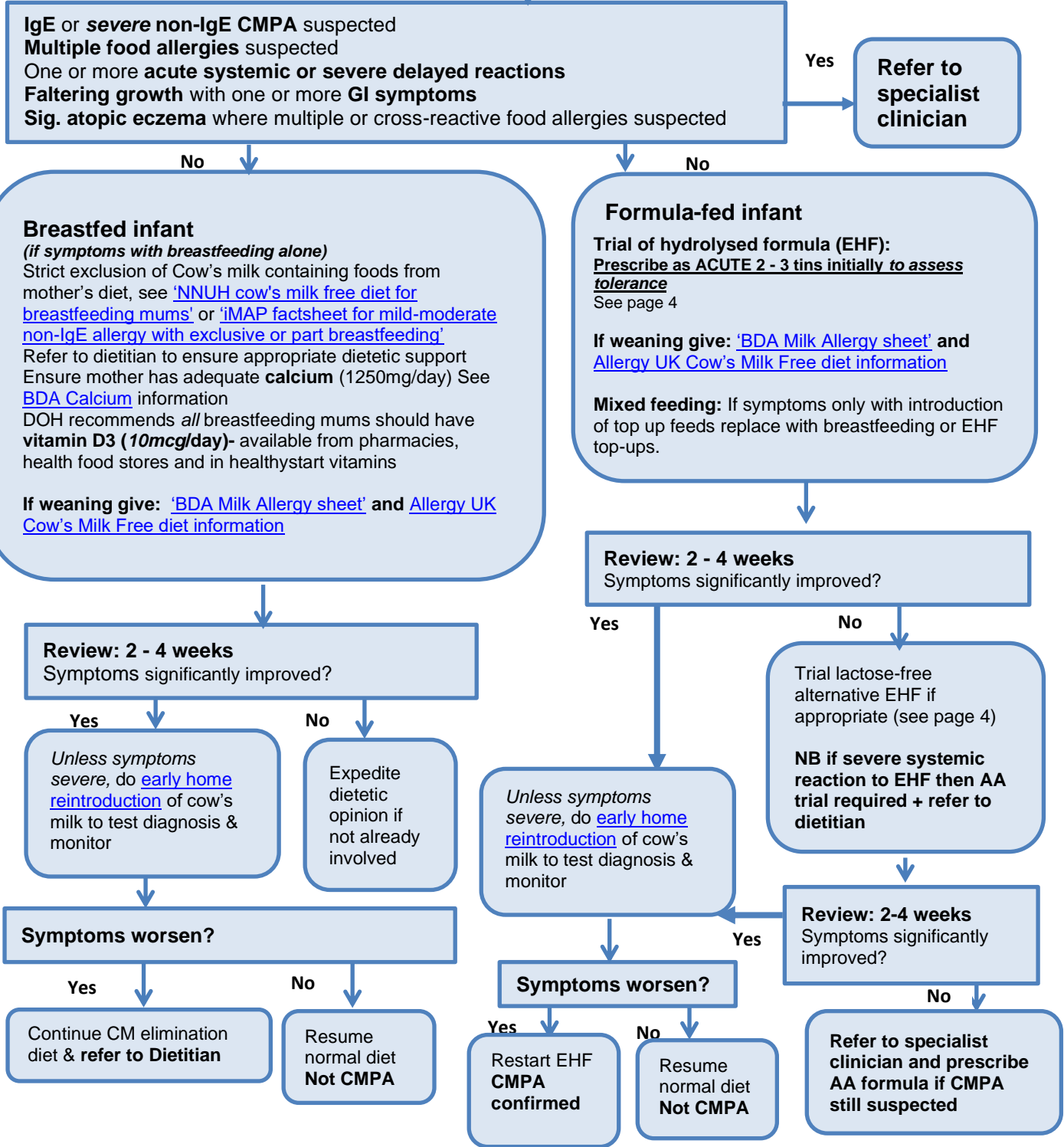


# **NHS Norfolk and Waveney Policy Statement and Formulary: Infant Formula Milk Products**

## **Guide 1: Cow's Milk Protein Allergy (CMPA)**

# Cow's Milk Protein Allergy (CMPA): Treatment flow chart for CMPA in primary care

**Allergy Focused Clinical history AND Examination**  
[NICE CG 116 pathway & iMAP Allergy-focused Clinical History](#)



**Simple mild/moderate non-IgE CMPA can be managed in primary care, please ensure:**

- Parents/carers are given the correct resources and information (see page 5 for appropriate literature)
- Parents/carers are aware that 80% infants grow out of CMPA by the time they're 2 so it's important to reintroduce milk gradually with the milk ladder once the baby is 9-12 months old (or 6 months from diagnosis)
- Milk prescription is reviewed regularly to ensure age-appropriate amounts
- GP/primary care clinician to review at 1 year to advise on weaning off formula and onto alternative plant-based milk if the milk allergy is still present. See page 8 for suitable milks. Ensure a plan for reviewing and stopping formula
- Ensure dietetic support is available if needed when weaning

## Cow's Milk Protein Allergy (CMPA)

**Presentation: see iMAP Presentation of suspected CMPA in 1<sup>st</sup> year of life on page 6**

- There are 2 types of CMPA: Non-IgE-mediated and IgE-mediated. Mild/moderate non-IgE-mediated allergy can be managed in primary care
- If CMPA suspected complete allergy focused clinical history (**Resource 1 page 5**)

**Treatment- see flow chart on page 2**

- Provide advice to parent/carer about CMPA and the treatment process. **Provide Resource 2 (page 5)** information sheet if possible
- **Breast fed babies** can react to milk proteins that are transferred in breast milk from the mother's diet (though not always). If it is suspected that a breastfed baby is reacting to cow's milk protein via breast milk, the mother should be advised to avoid cow's milk and dairy products in their diet while breastfeeding. This involves a cow's milk elimination trial of up to six weeks. Support and information should be provided to the mother. Please note mild-to-moderate non-IgE mediated cow's milk allergy in exclusively breastfed babies is rare and is not a reason to stop breastfeeding. **Provide Resource 3 to carers (page 5)**
- **Formula fed infants** should be trialled on Extensively Hydrolysed Formulae (EHF), see table below for products. EHF's are suitable for 90% of infants with CMPA. The taste and smell of hydrolysed formulae can be unpleasant. Compliance can be improved by using a bottle, closed cup, or a straw. Younger infants may take them more readily than older infants
- Lactose-containing EHF's are now first line as evidence suggests lactose is an important prebiotic for infants, leading to colonisation of the gut by beneficial bacteria. This is thought to improve the gut microbiome and have positive effects on the immune system. If the infant does not tolerate lactose-containing EHF after a reasonable trial, then a lactose-free EHF should be trialled before stepping up to an amino acid formula (AAF). NB infants who have a systemic reaction to EHF are unlikely to tolerate alternative EHF and will need an AAF
- Introduction of a new formula to babies **who do not have a severe reaction** is best done by mixing it with their current formula and gradually changing over
- Only prescribe 3 or 4 tins initially to ensure acceptance of the product
- **In order to confirm the diagnosis it is essential to advise a planned home reintroduction during weeks 2-4 of the cow's milk elimination diet for both breast- and formula-fed infants** (only in suspected non-IgE mild-moderate allergy). This is now a NICE Food Allergy Quality Standard. Provide **Resource 5 (page 5)** to carers to support this
- The child/infant should follow a cow's milk free diet until 9-12 months of age and for at least 6 months after diagnosis
- Early introduction of some allergenic foods in infants at high risk of allergies may be advised by the dietitian/paediatrician, there is evidence that this may help to prevent other food allergies
- Beyond 1 year calcium enriched plant-based milks can be purchased/used as an alternative source of milk (see page 8 for a list of suitable milks)
- Ongoing prescription of specialist formulas beyond 1 year may be required in those with severe or multiple allergies (e.g., soya). This should be led by the Paediatrician or allergy Dietitian

## Review and discontinuation

- Review prescriptions regularly to check that the formula prescribed is appropriate for the child's age
- Quantities of formula required will change with age. Avoid adding to the repeat template for these reasons unless a review process is established
- Challenging with cow's milk: Milk tolerance should be evaluated by using the (mild/mod non-IgE allergy only) with the published recipes (**See Resources 6 & 7 on page 5**), or a supervised challenge (by specialists for severe non-IgE or IgE-mediated allergy)
- Review the need for the prescription if you can answer 'yes' to any of the following questions:
  - Is the patient over one year of age?
  - Has the formula been prescribed for more than one year?
  - Is the patient prescribed more than the suggested quantities of formula according to their age?
  - Is the patient prescribed a formula for CMPA but able to eat/drink cow's milk containing foods? (E.g., cheese, yoghurt, ice-cream, custard, chocolate, cakes, cream, butter, margarine)

<b>Extensively hydrolysed Formula (EHF)</b>			
<b>Product</b>	<b>Pack size</b>	<b>Cost per 100kcal</b>	<b>Indicated Age Range</b>
<b>First Line (lactose-containing)</b>			
SMA Althera® (Contains lactose) SMA Nutrition/Nestle	400g	£0.49	Birth until infant has grown out of allergy (up to 12m as per policy)
Aptamil-Pepti 1® (Contains lactose) Nutricia	400g or 800g	£0.51	Birth to 6 months
Aptamil-Pepti 2® (Contains lactose) Nutricia	400g or 800g	£0.50	6 months until infant has grown out of allergy (up to 12m as per policy)
<b>Second line (lactose-free)</b>			
*Alimentum® (Clinically lactose free) Abbott Nutrition	400g	£0.48	Birth until infant has grown out of allergy (up to 12m as per policy)
Nutramigen 1 LGG® (Clinically lactose-free) Mead-Johnson	400g	£0.56	Birth to 6 months
Nutramigen 2 LGG® (Clinically lactose-free) Mead-Johnson	400g	£0.56	6 months until 1 year (Nutramigen 3 LGG available for >1 year in exceptional clinical need)
<b>Amino Acid Formula –GPs may only initiate if EHF not tolerated after reasonable trial and if they have made a formal referral to a paediatrician or paediatric allergy dietitian, and it is not clinically appropriate to wait for a specialist recommendation</b>			
Elecare® Abbott Nutrition	400g	£1.11	Birth until infant has grown out of allergy (up to 12m as per policy)

Nutramigen Puramino® Mead Johnson	400g	£1.13	Birth until infant has grown out of allergy (up to 12m as per policy)
SMA Alfamino SMA Nutrition/Nestle	400g	£1.15	Birth until infant has grown out of allergy (up to 12m as per policy)
Neocate LCP® Nutricia	400g	£1.16	Birth until infant has grown out of allergy (up to 12m as per policy)

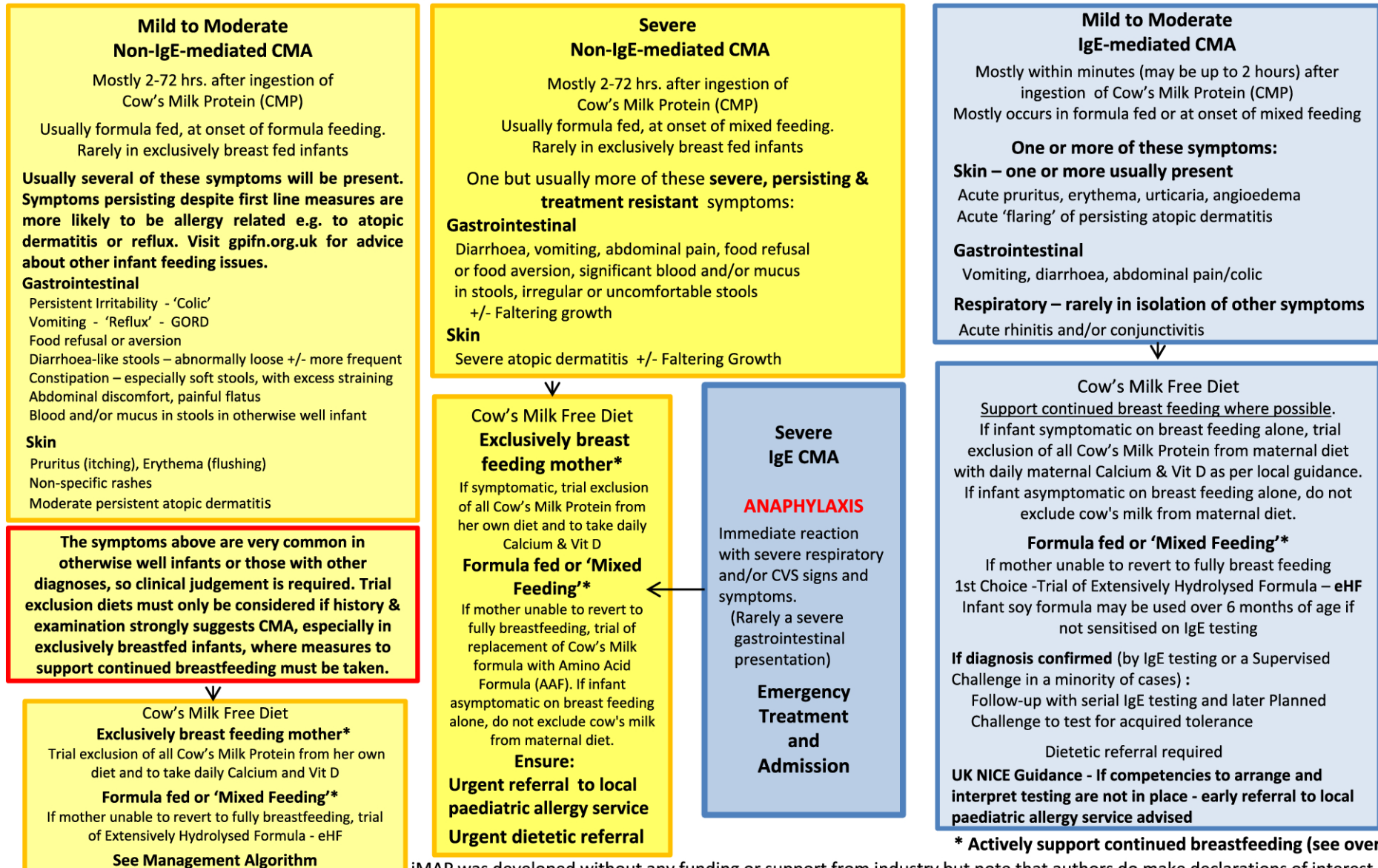
\*Please note at the time of writing Alimentum® is currently unavailable

### Resources list- please provide suitable information to parents/carers

- 1) Allergy Focused Clinical History (iMAP) [imap-allergy-focused\\_history\\_original.pdf \(wordpress.com\)](#)
- 2) Initial Fact Sheet for Parents (iMAP) [suitable for breastfeeding and formula feeding] [https://gpifn.files.wordpress.com/2019/10/imap\\_patient\\_factsheet\\_original.pdf](https://gpifn.files.wordpress.com/2019/10/imap_patient_factsheet_original.pdf)
- 3) Initial fact sheet for infants with symptoms of mild to moderate non-IgE mediated allergy whilst being exclusively or partly breastfed (iMAP) <https://gpifn.files.wordpress.com/2019/10/imap-supporting-breastfeeding-factsheet.pdf>
- 4) The Early Home Reintroduction to Confirm the Diagnosis of Cow's Milk Allergy (iMAP) [https://gpifn.files.wordpress.com/2019/10/home\\_reintroduction\\_protocol\\_to\\_confirm\\_or\\_exclude\\_diagnosis\\_original.pdf](https://gpifn.files.wordpress.com/2019/10/home_reintroduction_protocol_to_confirm_or_exclude_diagnosis_original.pdf)
- 5) The iMAP Milk Ladder [imap\\_final\\_ladder-may\\_2017\\_original.pdf \(wordpress.com\)](#)
- 6) iMAP Milk Ladder recipes [imap-recipes\\_final\\_original.pdf \(wordpress.com\)](#)
- 7) Cow's Milk free diet for breastfeeding mums [Norfolk and Norwich University Hospitals NHS Foundation Trust » Cows-Milk Free Diet for Breast Feeding Mums 10.1.4 – V3 \(nnuh.nhs.uk\)](#)
- 8) Milk free weaning [Milk allergy | British Dietetic Association \(BDA\)](#) and/or [Cows-Milk-Free-Diet-Information-For-Babies-and-Children.pdf \(allergyuk.org\)](#)
- 9) British Dietetic Association Calcium information sheet (for breastfeeding mothers avoiding cow's milk) [Calcium Food Fact Sheet, British Dietetic Association \(bda.uk.com\)](#)

Having taken an Allergy-focused Clinical History and Physically Examined

Less than 2% of UK infants have CMA. There is a 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 reintroduction. Such situations must be avoided. There should be increased suspicion of CMA in infants with multiple, persistent, severe or treatment-resistant symptoms. iMAP primarily guides on early recognition of CMA, emphasizing the need for confirmation of the diagnosis, either by allergy testing (IgE) or exclusion then reintroduction of dietary cow's milk (non IgE). Breast milk is the ideal nutrition for infants with CMA and any decision to initiate a diagnostic elimination diet trial must include measures to ensure that breastfeeding is actively supported. Refer to accompanying leaflet for details of supporting ongoing breastfeeding in milk allergic infant. [Firststepsnutrition.org](http://Firststepsnutrition.org) is a useful information source on formula composition.



## Frequently asked questions about CMPA

### Q. Can goat's milk formula be used as a treatment for CMPA?

- No: Goat's milk and sheep's milk are not advised due to the cross reactivity with cow's milk

### Q. What happens when an infant reaches 1 year of age and is still allergic to cow's milk?

- Children over 1 year can use **unsweetened** and **fortified soya-based or pea-based** milk alternative which have suitable amounts of micronutrients, energy and protein and are widely available in supermarkets (see page 8 or [LinkClick.aspx \(knowledgeanglia.nhs.uk\)](#))
- In multiple/complex allergy continue prescription of specialist formula as recommended by allergy/paediatric dietitian

### Q. What happens when an infant reaches 2 years of age and still has multiple allergies and is prescribed specialist formula?

- The formula milk should no longer be required and the child can go onto an **unsweetened** and **fortified plant-based** milk alternative which has suitable amounts of micronutrients, energy and protein (see page 8 or [LinkClick.aspx \(knowledgeanglia.nhs.uk\)](#))
- **Rice milk is not suitable for children under the age of 4½ years**

### Q. Are vitamin and mineral supplements required?

- Department of Health recommends that all children aged 6 months to 5 years are given vitamin supplements containing vitamins A, C and D every day
- All infants from birth to 1 year of age who are being exclusively or partially breastfed should be given a daily supplement containing 8.5 to 10µg of vitamin D (340-400 IU/d)
- The government recommends that children from the age of 6 months to 5 years are given a daily supplement of vitamin A (233µg) unless they are consuming over 500ml of infant formula a day.
- Babies who are having more than 500ml (about a pint) of infant formula a day shouldn't be given vitamin supplements. This is because formula is fortified with vitamins
- Vitamin supplements can be obtained through the Healthy Start voucher scheme if eligible
- Children on a cow's milk free diet may require a calcium supplement. This will be advised by the Paediatric Dietitian

### Q. Why is soya formula not advised?

- Soya formula is no longer recommended for infants with CMPA as there is concern that phytoestrogens contained in these formulae could affect babies' reproductive development.
- Some infants with CMPA will also react to soya protein
- Soya formula contains added sugars instead of the milk sugar lactose which are more likely to harm babies' teeth. Parents wishing to feed their infant on a soya-based formula should be advised of the risks and advised to purchase the formula over the counter. It is not advised for infants below 6 months

### Q. Can lactose free products be used in cow's milk protein allergy?

- No. These products contain cow's milk protein and are therefore not suitable

## Suitable plant-based milk alternatives for age 1+ with Cow's Milk Protein Allergy (CMPA)

### Plant-based milks

- Global and UK dietary guidelines recommend that children who are not being breastfed after the age of 1 year drink animal milk as the main milk drink; normally cows' milk
- Animal milks contain high quality protein, all essential amino acids, and are a good source of vitamins and minerals including calcium, vitamin A, B vitamins, zinc and iodine
- Plant-based milk alternatives are variable, and many have limited nutritional equivalence to animal milks- some are low in energy and nutrients
- It is important to try to reintroduce animal/ cow's milk products (if following an omnivorous diet) when clinically appropriate to ensure 'tolerance' of cow's milk in foods and drinks (discuss this process with your healthcare professional)
- In the UK, public health guidance suggests that unsweetened, fortified milk alternatives can be included as the main milk drinks from the age of 1 (with the exception of rice-based milks which are high in arsenic)

### Types of plant-based milk alternatives that are suitable

- **Unsweetened** and **fortified soya-based** and **pea-based** products should be first choice as they contain suitable amounts of micronutrients, energy, and protein
- **Oat based** milk alternatives are second choice as they have a lower protein content and contain free sugars from the processing of oats
- Choose full fat/whole versions to improve the energy content
- Choose milks which are fortified with **calcium** and **iodine**, as well as **Vitamin D** and **B vitamins**
- Nut-based and coconut-based products are very low in energy and protein
- Please note: Unsweetened, full-fat plant-based alternative milks can be used in cooking and in weaning foods from 6 months

### Examples of some widely available suitable milks to be used as a drink for infants 1+ (this list is not exhaustive): Correct at the time of writing June 2022

Soya-based	<ul style="list-style-type: none"> <li>• Tesco Soya Unsweetened</li> <li>• Chilled Alpro Soya No sugars</li> <li>• Alpro Soya Growing up 1-3+ years</li> <li>• M&amp;S Plant Kitchen Unsweetened Soya Drink</li> </ul>	£1.00/L £1.60 £1.70/L £1.00/L
Pea-based	<ul style="list-style-type: none"> <li>• Unsweetened Mighty Pea M.LK</li> <li>• Qwrkee Plant-based Pea MI'k Unsweetened</li> </ul>	£2.00/L £2.50/L
Oat-based (ensure protein content is approx. 1g/100ml or more)	<ul style="list-style-type: none"> <li>• Oatly Barista/whole</li> <li>• Asda Oat Barista</li> <li>• MOMA Oat Drink Whole</li> <li>• Mighty Milkology Whole Dairy Free Oat Milk Alternative</li> </ul>	£1.90/L £1.20/L £1.85/L £2.10/L

#### Sources:

[Plant-based milk alternatives in the diets of 1–4-year-olds](#). First Steps Nutrition Trust [accessed June 2022]  
[Cow's Milk Free Diet Information For Babies and Children](#). Allergy UK [accessed June 2022]