

Primary Care Guidance: Cow's Milk Protein Allergy (CMPA)

Parental concern re dairy allergy

- Sx suggestive of CMPA (see Boxes 1 & 2) (Box 4 for LINKS)
- Sx involving 2 or more body systems or FHx of atopy
- Reproducibility of symptoms, duration, severity and frequency
- Early onset (1st year of life)

'Delayed' non-IgE Mediated CMPA with Mild to Moderate Symptoms (see Box 2)

- **GUT:** presumed colic, presumed reflux, blood/mucus in stools in otherwise well baby, irritable baby with back arching and screaming +/- vomiting, feed refusal/aversion, diarrhoea, constipation: straining but soft stools, uncomfortable, delayed onset protracted diarrhoea & vomiting
 - **SKIN:** significant atopic dermatitis requiring topical steroids
 - **+/- Faltering growth**
- [Occasionally, nasal congestion in combination with other Sx]

EXCLUSIVELY BREASTFED

- Encourage exclusive breastfeeding
- Trial of maternal dairy-free diet
- Maternal supplementation: calcium (1000mg) + vitamin D supplement (10ug /400 IU OTC)
- If baby started solids: strict dairy-free diet

FORMULA-FED or MIXED FEEDING

- Try extensively hydrolysed formula (EHF)
- Prescribe 2-4 tins first to check tolerance
- LINK TO PRESCRIBING GUIDANCE
- If baby started solids: strict dairy-free diet
- If mixed-fed: maternal dairy-free diet + calcium (1000mg)+ vitamin D supplementation (10ug OTC)

REVIEW AFTER 2 - 4 WEEKS

SOME improvement

- Consider:*
- Extending trial of EHF for a further 2 weeks (maximum 4 weeks). Then, if Sx continue, try an Amino Acid formula (AAF) for 2 weeks
 - If breastfed, further 2-week trial of additional soya exclusion from maternal diet (before reintroduction)

EHF not accepted

- Consider:*
- Alternative EHF
 - [Trial of rice-based formula if available on formulary]

NO Improvement

- Consider:*
- Other diagnoses

Improvement

[Reintroduce Milk at home](#) to confirm/refute Dx

No — **Symptoms return?** — Yes

NOT CMPA
Reintroduce dairy

Non-IgE CMPA
CONFIRMED

ACUTE 'Immediate' IgE Mediated and/or SEVERE Symptoms (within 2 hrs) (see Box 1)

REFER TO SECONDARY CARE

- Maternal dairy-free diet **ONLY** if baby reacts via breastmilk
- Prescribe AMINO ACID formula (AAF) if formula-fed or mixed fed + advise strict dairy-free diet for baby
- Clear communication and follow-up
- If **ABC** Sx (Box 1) suggestive of anaphylaxis, prescribe AAI (+ training) + Antihistamines + provide [BSACI Allergy Action Plan](#) (Prescribing advice in Box 3)
- Direct parent to the following information sheets: [Cow's Milk Allergy | Allergy UK | National Charity Dairy-Free-Products](#)

Are there red flags?

- Faltering growth
- Severe atopic dermatitis
- [FPIES](#)
- Anaphylaxis

YES

Urgent referral to Secondary Care

AVOID ALL DAIRY

IMPORTANT:

Lactose-free and animal (e.g. goat) formulas / milks are NOT suitable for CMPA.

Ongoing Management of non-IgE CMPA

- Continue dairy avoidance and refer to PAEDIATRIC DIETITIAN or CMPA group
- Provide safety-netting advice
- If formula/mixed fed, prescribe EHF/AAF until 1 year of age [SWLMedicinesOptimisation - Specialist formula](#)
- When aged 9-12 months or 6 months post Dx: trial of dairy reintroduction via the "milk ladder"
- Review at 1 year of age to consider need for ongoing dairy-free diet and advice on calcium-fortified dairy substitutes.

[Diary-Free-Products](#)
[BSACI Early Feeding Guidance](#)

Box 1 – IgE mediated cow's milk protein Allergy

- **IgE-mediated reactions via breast milk are very rare.** Most breastfed babies who react via breast milk will have a non-IgE CMPA.
- **Risk of anaphylaxis with IgE-mediated reactions.** While most children will tolerate baked milk forms, about 1/4 will have severe reactions to it. Therefore, dairy should not be reintroduced without further advice from a secondary care centre if an IgE-mediated CMPA is suspected.
- Most children outgrow their milk allergy by 3-5 years of age.
- First IgE-mediated reactions often when solids or a standard formula are introduced to breastfed babies
- Typical IgE-mediated symptoms:
 - Urticaria, angioedema, erythema within minutes
 - GI symptoms: vomiting, abdominal pain, diarrhoea within 2 hours
- More severe **anaphylactic** reactions are possible. Symptoms include:
 - **Airway** – hoarse voice/cry, persistent cough, stridor, excessive drooling, swollen tongue
 - **Breathing** – wheeze, cyanosis, breathlessness, increased work of breathing
 - **Circulation** – pale, floppy, dizzy, unusually and profoundly sleepy, loss of consciousness
- Referral to an allergy service with a dietitian is usually required, as dairy elimination can have significant nutritional consequences in infants/young children, including calcium, iodine and protein deficiency.

LINKS

Box 3 – Medications

- **Prescribe antihistamine** – chlorphenamine prn if <1 year or cetirizine prn if > 1 year as per BNFC.
- If required, **prescribe Adrenaline Autoinjectors (AAI)** as per BNFC advice. 2 AAIs should be available at all times:
 - 6 months to 6 years: 0.15 mg
 - 7 years to 16 years: 0.3 mg
- **Please signpost parents to the appropriate [Adrenaline Autoinjector websites](#) where they can watch the relevant training video and order practice pens.**

Box 2 – Non IgE mediated cow's milk protein Allergy

- Non-IgE mediated cow's milk allergy in young children is common: prevalence ~1-2%.
- 90% of children with non-IgE CMPA will have outgrown it by 3 years of age
- Typically presents 2-72 hours after dairy ingestion, with eczema flares and/or GI symptoms most common
- If non-IgE CMPA is suspected, try dairy exclusion for 2 – 4 weeks and then reintroduce looking for resolution during the exclusion period, followed by recurrence of symptoms.
- Most breastfed babies will tolerate maternal dairy intake but an exclusively breastfed baby presenting with Sx should lead to a 2-4 week maternal dairy-free trial, ALWAYS followed by reintroduction, to confirm/refute a Dx
- DO NOT recommend maternal dairy elimination when breastfed baby has been asymptomatic on breast milk.
- If non-IgE CMPA confirmed, baby to avoid all dairy for 6 months from Dx, or until 9-12 months of age
- Then, gradually reintroduce dairy starting with baked and moving to well cooked if tolerated, using the “milk ladder”. If milk is not tolerated, continue to avoid and re trial in ~3 months.
- Referral to a dietitian or CMPA group is usually required. Dietitians will support the use of suitable calcium-fortified dairy substitutes and the dairy reintroduction via the ‘milk ladder’ in due course.

[Reintroduction of Cow's milk at home](#)

[Dairy-Free-Products](#)

[Eczema in Children](#) | [Allergy UK](#) | [National Charity](#)

Box 4 – LINKS

[NICE GC 116](#)

iMAP – [The Milk Allergy in Primary Care \(MAP\) Guideline 2019](#) | [The GP Infant Feeding Network \(UK\)](#)

BSACI - [Milk and Egg Allergy - BSACI](#)

[BSACI early weaning resource](#)

[Unsettled Baby Healthier Together Pathway](#)