

Cow's milk allergy

What is it?

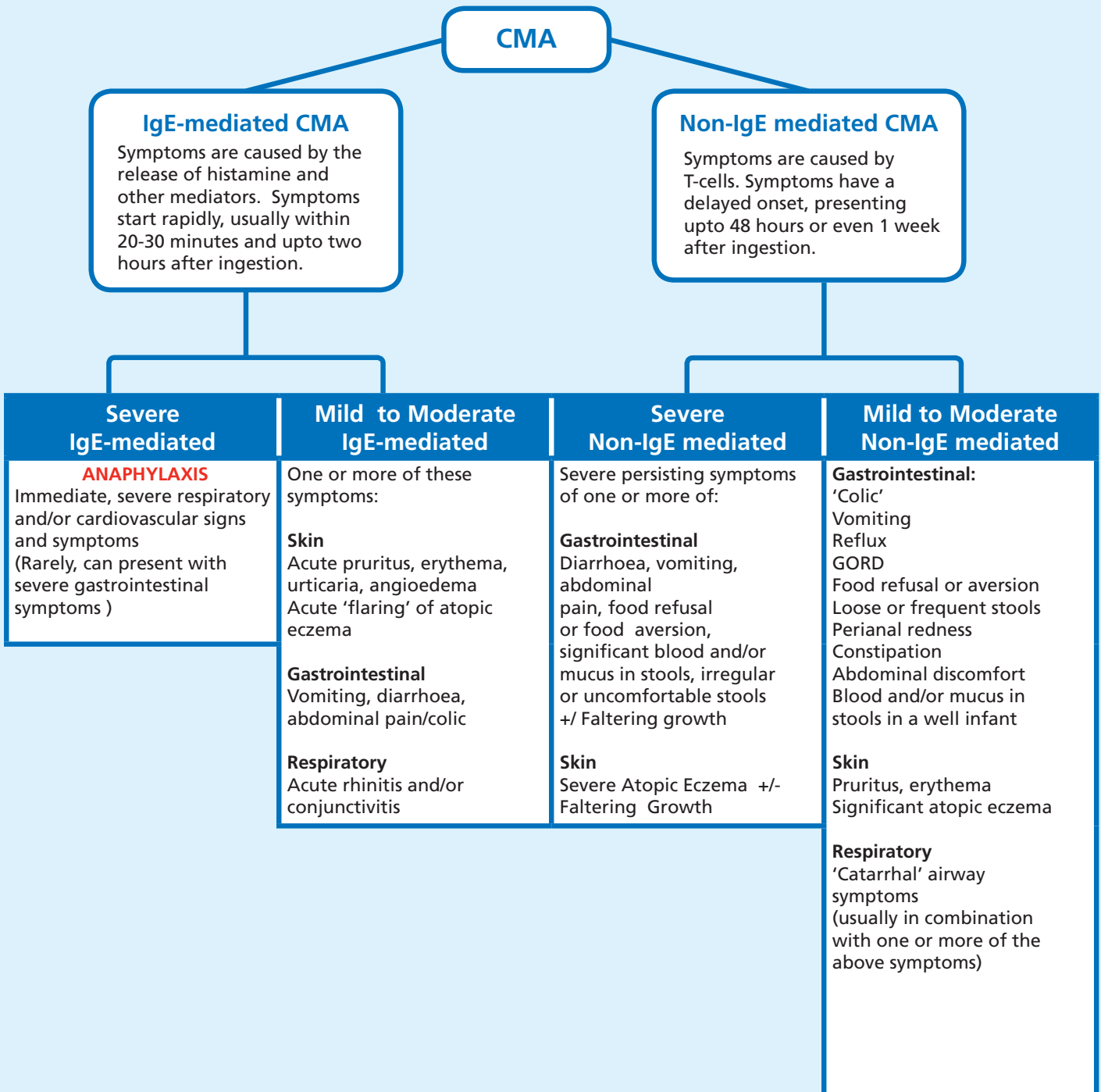
Cows' milk allergy (CMA) is an immune-mediated response to components in cow's milk.

2 -3 % of 1-2 year old children have proven CMA.

Prevalence is higher (7%) in formula or mixed-fed (breast and formula-fed) infants and lower (0.5%) in exclusively breastfed infants.

Children with asthma, eczema and a family history of atopy are at higher risk of developing CMA.

There are 4 clinical types of CMA:



Cows' milk allergy

What should I do?

Undertake an allergy focused history and examination, to classify into one of the 4 clinical types of CMA (See Flow chart on Page 7).

A) HISTORY:

- The age of the child when symptoms first started.
- Who has raised the concern about the suspected food allergy, and what the suspected allergen is.
- Setting of reaction (for example at school or home).
- What food, and how much exposure to it, causes a reaction.
- Speed of onset of symptoms, duration of symptoms, severity of reaction, and frequency.
- Details of any previous treatment, including medication such as antihistamines, and the response.
- Any response to the elimination and reintroduction of foods.
- Reproducibility of symptoms on repeated exposure.
- The child's feeding history, including the age at which they were weaned and whether they were breastfed or formula fed. If the child is currently being breastfed, ask about the mother's diet.
- Details of any foods that are avoided and the reasons why.
- Cultural and religious factors that affect the foods eaten.
- Any history of atopic disease (asthma, eczema, or allergic rhinitis) or food allergy.
- Any family history of atopic disease or food allergy in parents or siblings.

B) EXAMINATION:

- Plot height and weight to identify faltering growth.
- Examine for signs of co-morbidities such as asthma, eczema, chronic constipation.

C) MANAGEMENT

1. IgE-mediated (Mild to moderate and Severe) CMA:

- Refer to secondary care. (More than half of children with IgE-mediated CMA outgrow it by 5 years of age)

2. Non-IgE mediated CMA (Severe):

- Refer to secondary care

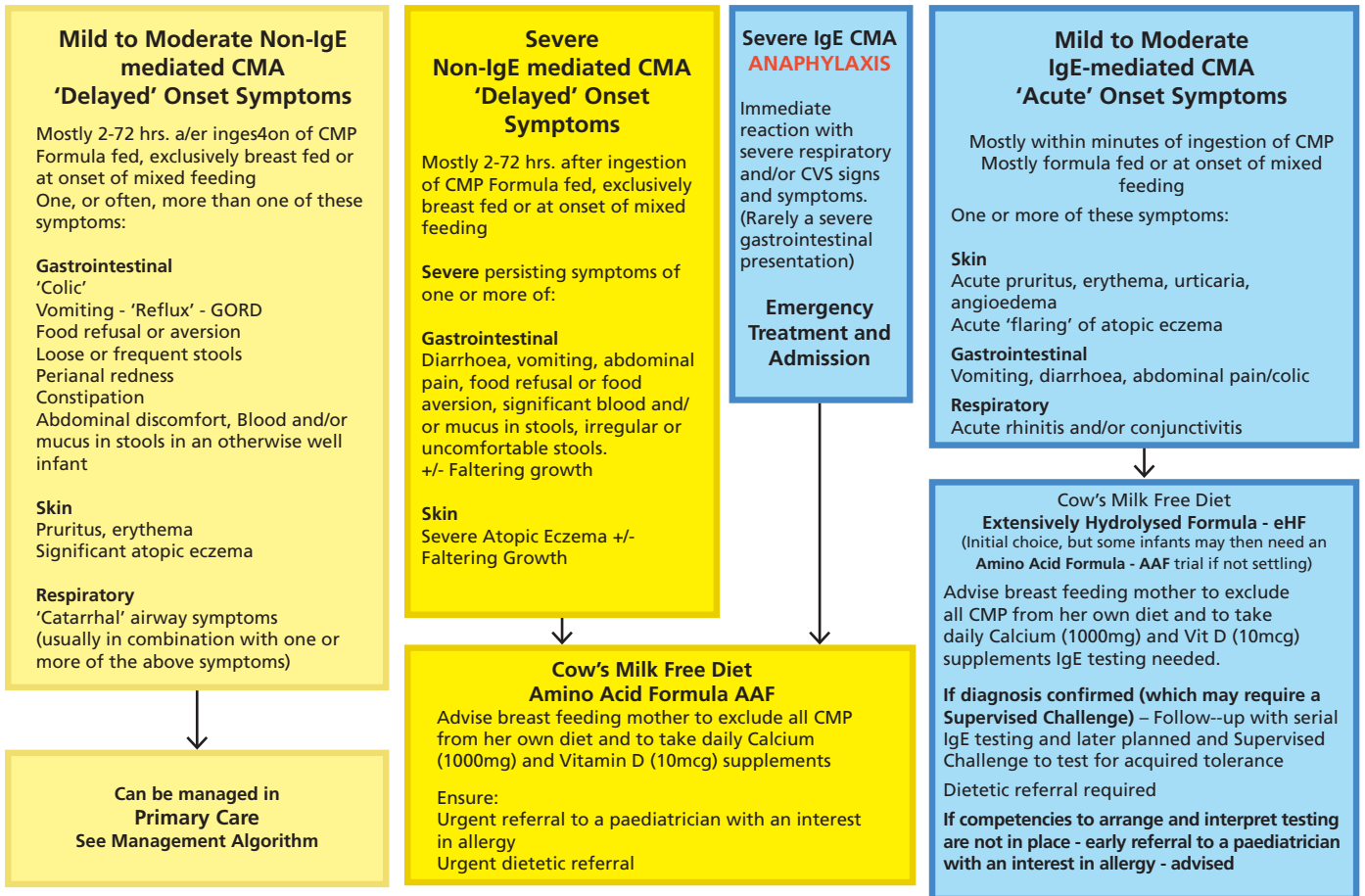
3. Non-IgE mediated CMA (Mild to Moderate):

- Can be managed in primary care with a balanced dietary elimination under community paediatric dietician supervision.
- Completely exclude cows' milk from the child's diet (or mother's diet if the child is breastfed) for 4 to 6 weeks. (See Page 8 for details of Substitute milks which can be used)
- If symptoms resolve, reintroduce cows' milk: a recurrence of symptoms will help to confirm the diagnosis.
- Continue the dairy elimination diet for a minimum of 6 months, or until the child is 9–12 months old.
- Assess the child every 6 to 12 months to evaluate whether they have developed tolerance, in which case, cows' milk protein is gradually reintroduced.
- Most children with non-IgE-mediated cows' milk allergy will be milk tolerant by 3 years of age.

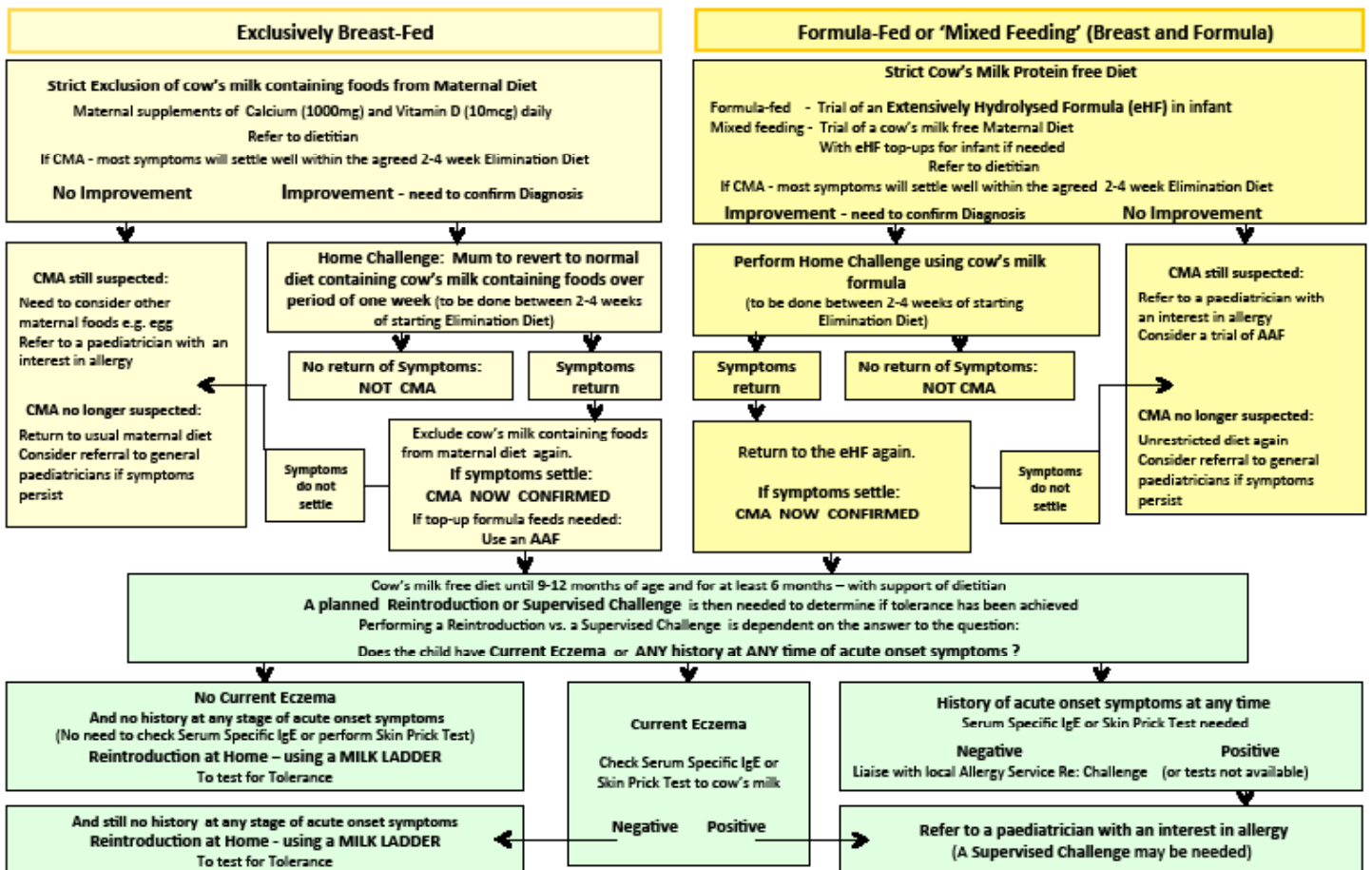
When should I refer?

1. All children with IgE-mediated CMA
2. All children with Non-IgE mediated (Severe) CMA
3. Faltering growth
4. Any acute systemic reaction
5. Any severe delayed reaction
6. Suspicion of multiple food allergies
7. Severe eczema potentially worsened by food allergies
8. Parental concerns of food allergy despite a lack of supporting history
9. Symptoms not improving despite strict adherence to the elimination diet

Suspected Cow's Milk Allergy (CMA) in the 1st Year of Life



Primary Care Management of Mild to Moderate Non-IgE CMA (No initial IgE Skin Prick Tests or Serum Specific IgE Assays necessary)



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Practice points

Differential diagnoses:

- Lactose intolerance
- Coeliac disease
- Other food allergies

Investigations:

- No investigations are routinely indicated in Non-IgE mediated (mild and moderate) CMA.
- A diagnostic withdrawal diet is the gold standard test in Non-IgE mediated CMA.
- Ensure the family understand that re-exposure after the initial exclusion trial is crucial, to rule out false-positive responses.

Substitute milks to replace cow's milk: (Refer to APC formulary)

A. Children below 6 months of age:

- **Breast milk:** is suitable for almost all children with IgE-mediated (Immediate) CMA and most children with non-IgE mediated (delayed) CMA.
If the child is symptomatic on breast feeding, most will respond to mother adopting a cow's milk-free diet. (symptoms may take up to four weeks to improve, after mother goes on the elimination diet).
- **Extensively hydrolysed milk formulas (EHFs):** will be effective for almost all children with IgE-mediated (Immediate) CMA and around 90% of children with non-IgE mediated (delayed) CMA.
- **Amino Acid Formulas (AAFs):** will be effective for all forms of milk allergy; but are more expensive and less palatable.

B. Children over 6 months of age

- Soya formula: can be given after six months; but 10-20% of children with milk allergy will be cross-reactive to soya milk. It is not therefore an adequate choice for a diagnostic withdrawal diet.
- Other mammalian milks (goats, sheep, etc): have high rates of cross-reactivity in milk allergy and are best avoided.
- Rice milk: is nutritionally worthless and should be avoided.
- Other vegetable 'milks' (oat, hemp, coconut, almond): are nutritionally inadequate as staple foods. (However, they may have value in cooking family meals, as EHFs and AAFs will render food unpalatable to most adults).

Resources:

- MAP guideline (Milk Allergy in Primary Care) at cowsmilkallergyguidelines.co.uk
- BSACI milk allergy guideline at <http://www.bsaci.org/Guidelines/paediatric-guidelines>
- www.allergyuk.org: is a patient-orientated website with good resources about allergies in general.
- www.anaphylaxis.org.uk: is specifically aimed at families at risk of severe IgE-mediated (Immediate) allergies.
- British Dietetic Association <https://www.bda.uk.com/foodfacts/Allergy.pdf>