MANAGEMENT FLOW CHART OF SUSPECTED CMPA IN AN INFANT < 12 MONTHS IN PRIMARY CARE

Adapted from the MAP (milk allergy in primary care) guideline. For full details see http://cowsmilkallergyguidelines.co.uk/the-map-guideline/

Also refer to NICE guideline CG116 'Food Allergy in Children and Young People' Feb 2011: http://www.nice.org.uk/guidance/CG116 Approved by Camden Medicines Management

Committee (CMMC) 27th July 2016 & Camden Clinical Cabinet 7th September 2016

To be reviewed July 2019

Take an allergy focused clinical history and family history of atopy



Non IgE-mediated CMPA 'DELAYED' onset symptoms
(2-72 hours after ingestion of CMP –
formula fed, exclusively breast fed or at onset of mixed feeding)

MILD TO MODERATE SYMPTOMS -

One, or often, more than one of:

<u>GI</u>

- 'Colic'
- Vomiting
- 'Reflux'
- Abdominal discomfort
- Constipation
- Loose or frequent stools
- Food refusal/aversion
- Perianal redness
- Blood and/or mucus in stools (in an otherwise well infant)

Skin

- Pruritus
- Erythema
- Significant atopic eczema

Respiratory

'Catarrhal' airway symptoms (usually with one or more of the above symptoms)

Can be managed in Primary Care

See Management Flow Chart for Mild to Moderate Non IgE-mediated CMPA

<u>SEVERE SYMPTOMS</u> – one or more persisting severe symptoms:

- Diarrhoea and vomiting
- Significant blood and/or mucus in stools
- Irregular/uncomfortable stools
- Food refusal/aversion
- Faltering growth

Skin

-Severe atopic eczema

If formula fed: - initiate trial of amino acid formula (AAF)

SMA Alfamino® (Birth - 3yrs†)

Only prescribe 1-2 tins initially to assess tolerance/acceptance and until infant seen by secondary care and paediatric dietitians. Provide tips on improving palatability of feed.

Ensure URGENT referral to secondary care paediatrician

Ensure URGENT referral to paediatric dietitian

IgE-mediated CMPA 'ACUTE' onset symptoms (mostly within minutes of ingestion of CMP and mostly formula fed or at onset of mixed feeding)

SEVERE

IgE-mediated CMPA ANAPHYLAXIS

Immediate reaction with severe respiratory and/or CVS signs and symptoms.

(Rarely a severe GI presentation)

Emergency treatment and hospital admission

If breast fed: — advise breast feeding mother to exclude all cow's milk from maternal diet and to take daily calcium (1000mg) and vitamin D (10mcg/400 IU) supplements

Ŧ or until the infant grows out of allergy

MILD TO MODERATE SYMPTOMS -

Immediate onset of one or more symptoms:

<u>GI</u>

Respiratory

- Diarrhoea

- Acute rhinitisConjunctivitis
- VomitingAbdominal pain/'*colic

Skin

-Acute pruritus, erythema, urticaria, angioedema, acute 'flaring' of atopic eczema

<u>If formula fed:</u> – initiate trial of extensively hydrolysed formula (eHF)

- 1) Similac Alimentum® (Birth -2yrs†) or
- 2) Althera® (Birth 3yrs†)

Only prescribe 1-2 tins initially to assess tolerance/acceptance and until infant seen by secondary care and paediatric dietitians. Provide tips on improving palatability of feed.

IgE testing needed to confirm diagnosis

Referral to secondary care paediatrician required

If diagnosis confirmed (which may require a Supervised Challenge) – follow-up with serial IgE testing and later a planned and Supervised Challenge to test for acquired tolerance Consider referral to paediatric dietitian if required.

This pathway is currently under review – as some of the content may be out of date, it should be viewed as an archive document for information only. Please contact Camden MMT for up-to-date information/advice.

MANAGEMENT FLOW CHART FOR MILD TO MODERATE NON IGE-MEDIATED CMPA IN PRIMARY CARE:

No initial IgE Skin Prick Tests or Serum Specific IgE Assays necessary.

Adapted from the MAP (milk allergy in primary care) guideline. For full details see http://cowsmilkallergyguidelines.co.uk/the-map-guideline/

Camden
Clinical Commissioning Group

Milk choices in CMPA

Milk Free food fact sheet

Formula-Fed or 'Mixed Feeding' (Breast and Formula)
Strict Cow's milk protein free diet for 2-4 weeks

Formula fed: Initiate trial of eHF

1) <u>Similac Alimentum</u>[®] (Birth – 2yrs[†]) or

2) SMA Althera® (Birth - 3yrs†)

<u>Mixed feeding:</u> Trial of a cow's milk free maternal diet with <u>eHF</u> top-ups if needed Consider referral for dietetic support

Soya formula (Wysoy®) is NOT routinely recommended. Do not use in infants <6months due to high phyto-oestrogen content. Risk of developing soya allergy

Exclusively Breast-Fed

Strict exclusion of cow's milk from maternal diet for 2-4 weeks

- Daily calcium (1000mg) and vitamin D (10mcg/400 IU) supplements
- Consider referral for dietetic support

If CMPA, most symptoms will settle well within the 2-4 weeks exclusion period

No improvement or symptoms do not settle

CMPA still suspected:

Need to consider other maternal foods e.g. egg. Refer to secondary care paediatrician

CMPA no longer

suspected: Return to usual maternal diet. Refer to secondary care general paediatrician if symptoms persist

Improvement of symptoms - if still need to confirm diagnosis

<u>Diagnostic Home Milk Challenge</u> (to be done between 2-4 weeks of starting cow's milk exclusion diet)

If breast fed: Re-try cow's milk in maternal diet gradually over one week} Refer to home challenge information

If formula fed: Re-try standard cow's milk formula gradually over one week} Consider referral for dietetic support

No return of symptoms - NOT CMPA

SYMPTOMS RETURN

If breast fed: Exclude cow's milk from maternal diet again (consider dietitian referral if required)

If symptoms settle: CMPA NOW CONFIRMED

- Continue with maternal cow's milk free diet and daily calcium (1000mg) & vitamin D (10mcg/400 IU) supplementation
- Use an AAF if top-up formula feeds needed consider dietitian advice first: SMA Alfamino® (Birth 3 years*)

SYMPTOMS RETURN

If formula fed: Return to the eHF again.

(consider dietitian referral if required)

If symptoms settle:

CMPA NOW CONFIRMED

 Continue to prescribe the eHF until infant has grown out of allergy or they are 2 years old

No improvement or symptoms do not settle CMPA still suspected:

- Consider a trial of an AAF: SMA <u>Alfamino</u>® (0-3 years†)
- consider dietitian referral if required
- Refer to secondary care paediatrician, if Sx not settling

CMPA no longer suspected:

Stop eHF and return to standard formula. - Refer to secondary care paediatrician if symptoms persist

Continue with cow's milk free diet until 9-12 months of age and for at least 6 months with the support of dietitian A planned REINTRODUCTION or SUPERVISED CHALLENGE is then needed to determine if tolerance is achieved. Which one will depend on: Does the child have CURRENT ECZEMA or ANY history at ANY time of acute onset symptoms?

or until the infant grows out of allergy

No current eczema

(and no history at any stage of acute onset symptoms)

No need to check Serum Specific IgE or perform Skin Prick Test

REINTRODUCTION at home – using a MILK LADDER

to test for tolerance (consider dietitian referral if required)

Current eczema

Refer to secondary care paediatrician

Check Serum Specific IgE or Skin Prick Test to cow's milk

NEGATIVE

POSITIVE

History of acute onset symptoms at ANY time

Refer to secondary care paediatrician for management

Serum Specific IgE or Skin Prick Test needed

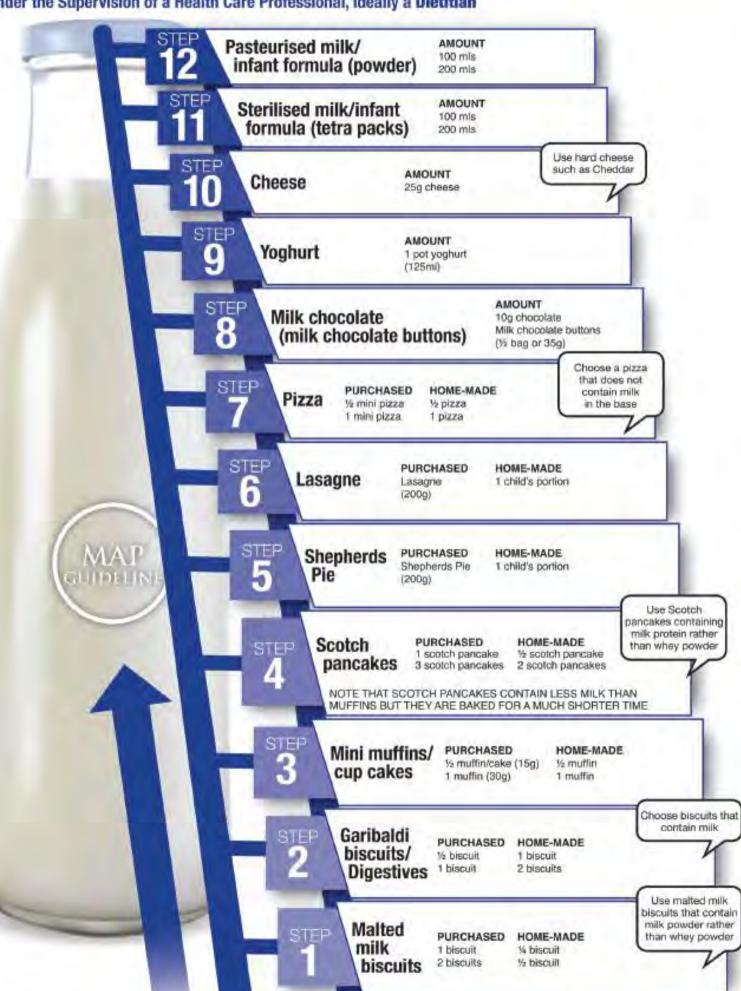
NEGATIVE (liaise with allergy clinic) POSITIVE or tests not available

A SUPERVISED CHALLENGE may be needed (managed by secondary care paediatrician)

THE MAP MILK LADDER®



For Children with Mild to Moderate Non-IgE Cow's Milk Allergy Under the Supervision of a Health Care Professional, ideally a Dietitian



Feb 2014 UK Version

PLEASE SEE OVERLEAF FOR LINK TO ALL HOME-MADE RECIPES



Practical Pointers on using THE MAP MILK LADDER® for Parents

The following 'Pointers' should make it easier for you to understand how best to use this Ladder. We advise that you are supported by a Health Care Professional (HCP) until the Ladder has been successfully climbed. This may be your doctor, nurse or ideally your dietitian.

- Before starting the Ladder and progressing to each further Step, please ensure that your child is
 well at the time and also that any gastrointestinal symptoms or eczema are settled.
- Most children will start on Step 1. Some may already eat one or more of the foods on the Ladder.
 If that is the case, you need to be advised which Step of the Ladder you should start on.
- + The Ladder has 12 Steps, but your HCP may adjust the number of Steps to suit your child best.
- The time spent on each Step will vary from one child to another (e.g. one day or I week) and this should also be discussed and agreed with you.
- The amounts in the Ladder are given as a guide occasionally smaller or larger amounts may
 be recommended.
- + The Ladder includes commercially available and home-made options.

Recipe ideas are available at:

http://www.ctajournal.com/content/3/1/23

Scroll down and click on 'Additional file 3, Recipes to go with milk ladder'

Each of the recipes has an egg and wheat free option (they are all soya free) to make the Ludder suitable for those children who may have other co-existing allergies.

- If the food on any Step of the Ladder is tolerated, your child should continue to consume this
 (as well as all the foods in the previous Steps) and then try the food suggested on the next
 agreed Step.
- If your child does not tolerate the food in a particular Step, simply go back to the previous one.
 You should then be advised when that next Step can be tried again.

In a few of the more severe cases of CMA a more cautious start to the Milk Ladder may be recommended, beginning with smaller amounts in Step 1, e.g. a ¼ or ½ of a malted milk biscuit.

Carina Venter, Trevor Brown, Neil Shah, Joanne Walsh, Adam T. Fox. Clin Transl Allergy. DOI 10, 1186/2045-7022-3-23 (additional file 1 and 3)

Feb 2014

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Practical Pointers for Parents/Carers on carrying out the MAP HOME CHALLENGE

To **CONFIRM THE DIAGNOSIS** of Mild to Moderate Non-IgE Cow's Milk Allergy After an agreed period of milk exclusion, usually 2 to 4 weeks

A Challenge is needed to confirm that any noted improvement in symptoms was really due to cow's milk allergy and not due to other possible factors.

- 1. DO NOT start the Challenge if your child is unwell e.g:
 - Any respiratory or breathing problems (this includes common colds).
 - Any tummy or bowell symptoms.
 - Any 'teething' symptoms which are thought to be unsettling your child
 - Eczema is flared up
- DO NOT start the Challenge if your child is receiving any medication that may upset the bowels, such as a course of antibiotics.
- 3.DO NOT introduce any other new foods during the Challenge.
- 4.Keep a record of what your child eats and drinks during the Challenge and record any possible symptoms such as, vomiting, bowel changes, rashes or changes in their eczema.

The Home Challenge

How you carry out the Challenge depends on whether you are giving any formula milk or are fully breast feeding.

Formula Fed Child (those taking only formula feeds or taking formula as well as breast feeds).

- Each day increase, as set out in the example in the right-hand column, the amount of cow's milk formula in just the FIRST bottle of the day.
- If symptoms are obvious, STOP the Challenge. Give only the prescribed formula again and inform your dietitian or GP.
- If no symptoms occur after day 7, when you have replaced the 1st bottle of the day completely with cow's milk formula, give your child cow's milk formula in all bottles.
- If you were also breast feeding and on a milk free diet yourself, start eating products containing milk again, e.g milk, cheese and yoghurt.
- If no symptoms occur within 2 weeks of your child having more than 200mls of cow's milk formula penday, he/she does not have cow's milk allergy.

A Practical Example of a Challenge in a Formula Fed Child

	Volume (mls.) of Boiled Water	Hypoallergenic Formula No. of Scoops	Cow's Milk Formula No. of Scoops
Day 1	210 mls.	6 in 1* bottle	1 in 🏞 bottle
Day 2	210 mls.	5 in 14 bottle	2 in 1ª bottle
Day 3	210 mls.	4 in 1ª bottle	3 in 14 bottle
Day 4	210 mls.	3 in 1ª bottle	4 in 1ª bottle
Day 5	210 mls.	2 in 14 bottle	5 in 1ª bottle
Day 6	210 mls.	1 in 1 st bottle	6 in 1 st bottle
Day 7	210 mls.	0	7 in 🏞 bottle

Fully Breast Fed Child

- Simply reintroduce cow's milk and cow's milk containing foods into your own diet over a 1 week period.
- If symptoms are obvious, STOP the Challenge, return to your full milk exclusion diet and inform your dietitian or GP.
- If no symptoms occur, you can continue to drink cow's milk and eat cow's milk containing products, e.g. cheese and yoghurt.
- In a few children possible symptoms of cow's milk allergy may appear later, either when formula milk is introduced or on weaning when milk containing products or plain milk is introduced into your child's diet. Should this happen contact your dietitian or GP.



For Older Children

If your child is in an olderage group, your dietitian or GP may simply advise you to gradually replace his/her hypoallergenic milk with plain milk.

a Practical Example

The Days	Total Volume of Feed in mls.	Volume of Hypoallergenic Formula in mls.	Volume of Plain Milk in mls.
Day 1	210 mls.	180mls. In 14 bottle orcup	30 m/s. In 1× bottle orcup
Day 2	210 mls.	150mls. In 14 bottle orcup	60mls. In # bottle or cup
Day3	210 mls.	120mls. In 1 ^e bottle orcup	90mls. In 1 ^{et} bottle or cup
Day 4	210 mls.	90mls. In 1 ^e bottle orcup	t20 mls. In 1 st bottle or cup
Day 5	210 mls.	60mls. In 1⁴ bottle orcup	150 mls. In 1 st bottle or cup
Day 6	210 mls	30 mls. In 14 bottle or cup	180mls. In 14 bottle or cup
Day 7	210 mls.	Omls,	210 mls. In 14 bottle or cup

- Each day increase, as set out in the example in the left-hand column, the amount of plain milk in just the HRST bottle or cup of the day.
- If symptoms are obvious, STOP the Challenge, Give only the prescribed formula again and inform your dietitian or GP.
- If no symptoms occur after day 7, when you have replaced the 1st bottle or cup of the day completely with plain milk, give your child plain milk in all bottles or cups.
- If no symptoms occur within 2 weeks of your child having more than 200 mls of plain milk perday, he/she does not have cow's milk allergy.

Back to Pathway