



Guidance for prescribers in Primary Care:

Pathway for the Management and Treatment of infants with Cows' Milk Protein Allergy (CMA) and Lactose Intolerance (LI)

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This document has been produced by the Paediatric Dietetic service Shrewsbury and Telford Hospital NHS Trust in conjunction with NHS Shropshire Clinical Commissioning Group Medicines Optimisation Team

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1.0 Cows' Milk Protein Allergy

Introduction:

The intention of this document is to aid primary care prescribers and other members of the primary healthcare team in the diagnosis and management of infants and young children with mild to moderate non-IgE cows' milk protein allergies (CMPA).

Aims and objectives:

- To provide a consistent approach to the management of mild to moderate non IgE CMPA in Shropshire and to provide evidence based support for diagnosis and management using the MAP Guidelines.
- To provide a clear and concise description of formula milks that are suitable for the treatment of infants with mild to moderate non IgE CMPA that are in line with the milks prescribed by the paediatric consultants at the Women's and Children's Centre at Princess Royal Hospital.
- To provide a pathway to assist in the diagnosis of CMPA that incorporates the resources from the MAP Guidelines.
- To provide a clear pathway and available literature for GPs and health care providers to support parents/carers at the time of diagnosis of CMPA.

Core knowledge documents used in the development of this pathway:

Koletzko, S., Niggemann, B., Atato, A. (2012) 'Diagnostic Approach and management of Cows' milk Protein Allergy in Infants and Children: ESPGHAN GI Committee Practical Guidelines', JPGN, vol. 55, no.2, pp. 221-229

NICE (2011) Food Allergy in children and young people: Diagnosis and assessment of food allergy in children and

young people in primary care and community settings [online], https://www.nice.org.uk/guidance/CG116, (last accessed 1 June 2017)

Please refer to the reference list at the back of this document for additional supporting documentation.

1.1 Diagnosis of Cows' Milk Protein Allergy

It is recommended to carry out an allergy focussed assessment of the child based on the NICE Clinical Guideline CG116 (2011), in order to determine the allergy and if it is IgE or non IgE mediated (see Appendix A for definitions of non IgE and IgE allergies).

The following documents are recommended for use to support with diagnosis and treatment options:

- <u>www.cowsmilkallergyguidelines.co.uk</u> (accessed May 2017)
- NICE, Cows' Milk Allergy in Children (summary) <u>https://cks.nice.org.uk/cows-milk-protein-allergy-in-children#!topicsummary (accessed May 2017)</u>

The following table and algorithm summarise the signs and symptoms and treatment pathways for the two allergy types.

1.1.1 <u>Table 1: Summary of common signs and symptoms of possible food allergies</u>

Common signs and symptoms of possible food allergy		
IgE mediated allergy Non IgE mediated allergy		
Reaction time and available testing diagnosis		
 Reaction typically occurs within minutes of ingestion of a small amount of food. Can be confirmed by RAST and skin prick test (SPT). 	 Reaction may be delayed by up to several days. Larger and repeated doses may be required Difficult to define both clinically and medically as no specific testing available. 	
Skin syr	nptoms	
 Pruritus Erythema Acute urticarial – localised or generalised. Acute angioedema – most commonly of the lips, face and around the eyes. 	PruritusErythemaAtopic eczema	
Gastrointestinal symptoms		
 Angioedema of the lips, tongue and palate Oral pruritus Nausea Colicky abdominal pain Vomiting Diarrhoea. 	 Gastro – oesophageal reflux disease Loose or frequent stools Blood and /or mucus in stools Abdominal pain Infantile colic Food refusal or aversion Constipation Perianal redness Pallor and tiredness Faltering growth in conjunction with at least one of more gastrointestinal symptoms above (with or without significant atopic eczema). 	
piratory symptoms (usually in combination with skin	and/or gastrointestinal symptoms)	
 Lower respiratory tract symptoms (cough, chest tightness, wheezing, or shortness of breath). Upper respiratory tract symptoms (nasal itching, sneezing, rhinorrhoea, or congestion (with or without conjunctivitis). 	 Lower respiratory tract symptoms (cough, chest tightness, wheezing, or shortness of breath) 	
Other sy	mptoms	
 Symptoms and signs of anaphylaxis or other systemic allergic reactions 		
Note that the list in this table is not exhaustive, and the absence of these symptoms does not exclude food allergy. Adapted from NICE (2011) CG116		

1.1.2 Algorithm summary to support appropriate diagnosis of suspected CMA allergy from MAP guidelines

MAP Guideline for Primary and Secondary Care use

Suspected Cow's Milk Allergy (CMA) in the <u>1st Year</u> of Life - having taken an Allergy-focused Clinical History

March 2015

Mild to Moderate Non-IgE-mediated CMA	Severe Non-IgE-mediated CMA		Mild to Moderate
Mostly 2-72 hrs. after ingestion of Cow's Milk Protein	Mostly 2-72 hrs. after ingestion of Cow's Milk Protein		Mostly within minutes of ingestion of Cow's Milk Protein
Formula fed, exclusively breast fed or at onset of mixed feeding	Formula fed, exclusiv or at onset of mix		Mostly formula fed or at onset of mixed feeding One or more of these signs or symptoms:
One, or often, more than one of these signs or symptoms:	One or more of these Sev signs or sympt		Skin
Gastrointestinal 'Colic'	Gastrointestinal Diarrhoea, vomiting, abdominal pain, food refusal		Acute pruritus, erythema, <u>urticaria</u> , angioedema Acute 'flaring' of atopic eczema
Vomiting- 'Reflux' - GORD Food refusal or aversion Loose or frequent stools	or food aversion, significant blood and/or mucus in stools, irregular or uncomfortable stools. +/- Faltering growth		Gastrointestinal Vomiting, diarrhoea, abdominal pain/colic
Perianal redness Constipation – especially soft stools,	Skin Severe Atopic <u>Eczema</u> +/- Faltering Growth		Respiratory Acute rhinitis and/or conjunctivitis
with excessive straining Abdominal discomfort, painful flatus	\downarrow		
Blood and/or mucus in stools in an otherwise well infant	Cow's Milk Free Diet Amino Acid Formula AAF	Severe IgE CMA	Cow's Milk Free Diet Extensively <u>Hydrolysed Formula - eHF</u>
Skin Pruritus, erythema	Or-Advise exclusively breast feeding mother	ANAPHYLAXIS	(Initial choice, but some infants may then need an Amino Acid Formula - AAF trial if not settling) Or-Advise exclusively breast feeding mother to
Significant atopic eczema Respiratory	to exclude all <u>Cows</u> Milk Protein from her own diet and to take daily	with severe respiratory and/or CVS signs and	exclude all Cow's Milk Protein from her own diet and to take daily Calcium (1000mg) and <u>Vit</u> D (10mcg) supplements
'Catarrhal' airway signs (usually in combination with one or more of the above signs or symptoms)	Calcium (1000mg) and Vitamin D (10mcg)	symptoms. (Rarely a severe	JgE testing needed. If diagnosis confirmed (which may require a
Ų	supplements gastrointestinal presentation)		Supervised Challenge) – Follow-up with serial IgE testing and later planned and Supervised Challenge
Extensively Hydrolysed Formula - eHF Or – Advise exclusively breast feeding	Ensure: Urgent referral to a paediatrician with an	Emergency Treatment	to test for acquired tolerance Dietetic referral required
mother to exclude all Cow's Milk Protein (CMP) from her own diet	interest in allergy and Urgent dietetic referral Admission		If competencies to arrange and interpret testing are not in place - early referral to a <u>paediatrician</u> with an interest in allergy - advised
See Management Algorithm			with an interest in allergy - advised

Full guidelines can be found at www.cowsmilkallergyguidelines.co.uk

2.0 Recommendations for breastfeeding and hypoallergenic milks in the treatment of CMPA

The formula milks recommended in this document have been evaluated and selected by the SaTH paediatric dietitians as suitable alternative milks for the treatment of CMPA. They are also in line with products within Shrewsbury and Telford Hospital NHS Trust on diagnosis of CMPA.

2.1 Definitions of Milk alternatives

• Extensively Hydrolysed Formula (eHF)

This type of formula is based on cows' milk protein and is either whey or casein based. **The proteins have been extensively hydrolysed** so that they are not recognised by the immune system and therefore will not trigger an allergic reaction in **most** infants. **These milks are recommended as a first line treatment in the majority of cases.**

• Amino Acid based Formula (AAF)

This type of formula contains 100% free amino acids and is considered to be non-allergenic. <u>These milks are</u> <u>recommended as second line treatment but may be used as a first line treatment in a small number of clinical</u> <u>cases if there are multiple allergies and if symptoms are severe</u>.

Refer to the MAP algorithm on page 3.

FEED TYPE	Summary of Advice	
Exclusively Breast fed infants	Always encourage continuation of breastfeeding.	
	If symptoms are present with exclusively breast fed infants then advise the mother to eliminate dairy from her diet. She may require an OTC supplement that contains 1000mg calcium and 10ug (micrograms) of vitamin D.	
	If a formula top up is required consider eHF as a trial for 1 month No improvement of symptoms then consider an AAF for 1 month.	
	If symptoms are severe (as per MAP guidelines) use the AAF as a first line treatment.	
Mixed feeding/ Formula feeding	 If child is breastfed, it is not recommended to eliminate dairy products from mothers' diet if symptoms have presented on introduction of formula feed. eHF – trial for 1 month. If no improvement of symptoms then consider an AAF for 1 month. If symptoms severe (as per MAP guidelines) use the AAF as a first line treatment. 	
All patients should be referred to the paediatric dietetic service and if required, the Consultant Paediatricians. If the child is not tolerating the first line treatment this will usually be changed by a member of the paediatric team.		

Table 2: Summary of advice for breastfed infants and cows' milk formula fed infants

2.3 Hypoallergenic Milks for use in Cows' Milk Protein Allergy

Table 4: Hypoallergenic Formulas recommended for use within Shropshire CCG

First line treatment* Extensively Hydrolysed For	<u>nula (eHF)</u>	
*In a small number of clinical cases where multiple allergies present or symptoms are sev treatment	vere, consider AAF as first line	
Suggested products		
Similac [®] Alimentum [®] (Abbott Nutrition) Suitable from birth*		
Lactose free, hydrolysed casein, contains 33% MCTs.		
SMA [®] Althera [®] (Nestle Health Science)		
Suitable from birth*	Lactose containing	
Extensively hydrolysed whey, contains lactose (3.8g per 100ml), LCPs	formulas are more	
Nutramigen [™] 1 with LGG [®] (Mead-Johnson Nutrition) 0 – 6 months	therefore transition	
Nutramigen [™] 2 with LGG [®] (Mead Johnson Nutrition) 6 months plus*	onto eHF milk can be	
Lactose free, hydrolysed Casein, LCPs, Contains probiotic Lactobacillus rhamnosus GG	more successful wit infants > 6 months	
Cow & Gate Pepti Junior ®		
Suitable from birth*		
Hydrolysed whey. Clinically nil lactose. Contains 50% MCTs		
Second line treatment Amino Acid Formula	(AAF)	
Not to be used as first line treatment for CMPA unless multiple allergies present or sever	e IgE mediated allergy diagnosed	
Suggested products		
CDAA® Alfamina® (Neatle Llealth Caianae)		
SMA® Alfamino® (Nestle Health Science) Suitable from birth*		
Suitable from pirth*		
Contains free amino acids, 24.4% MCT	*Prescribed milks from	
	each section should	
Contains free amino acids, 24.4% MCT	each section should not routinely be	
Contains free amino acids, 24.4% MCT Nutramigen™ Puramino® (Mead-Johnson Nutrition) Suitable from birth*	each section should not routinely be prescribed for children	
Contains free amino acids, 24.4% MCT Nutramigen™ Puramino® (Mead-Johnson Nutrition)	each section should not routinely be prescribed for children over 2 years' old unless	
Contains free amino acids, 24.4% MCT Nutramigen™ Puramino® (Mead-Johnson Nutrition) Suitable from birth* Contains free amino acids. 33% MCTs	each section should not routinely be prescribed for children	
Contains free amino acids, 24.4% MCT Nutramigen™ Puramino® (Mead-Johnson Nutrition) Suitable from birth* Contains free amino acids. 33% MCTs Neocate® LCP (Nutricia)	each section should not routinely be prescribed for children over 2 years' old unless requested and	
Contains free amino acids, 24.4% MCT Nutramigen™ Puramino® (Mead-Johnson Nutrition) Suitable from birth* Contains free amino acids. 33% MCTs Neocate® LCP (Nutricia) Suitable from birth*	each section should not routinely be prescribed for children over 2 years' old unless requested and monitored via	
Contains free amino acids, 24.4% MCT Nutramigen™ Puramino® (Mead-Johnson Nutrition) Suitable from birth* Contains free amino acids. 33% MCTs Neocate® LCP (Nutricia)	each section should not routinely be prescribed for children over 2 years' old unless requested and monitored via	

2.4 Introduction of Hypoallergenic Formula Milks

The formulas may be found to have an unpleasant taste and it may take several days for the infant / child to accept them. Please use the following table to support the introduction of hypoallergenic milks.

	Adjust to infants usual quantity	Expressed breast milk/formula	eHF or AAF
Day 1	5oz bottle	4oz	1oz
Day 2	5oz bottle	3oz	2oz
Day 3		2oz	3oz
Day 4		1oz	4oz
Day 5		0	5oz
If there is resistance from the infant to progress through the stages the mother can increase the increments on a 2 daily basis/every other day to promote better acceptance of the formula by the infant.			

Table 3: Example introduction of eHF and AAF from expressed breast milk or cows' milk formula milk

2.5 Quantity recommendations

These are approximate requirements. If an infant is requiring substantially fewer tins or is requiring substantially more tins of formula for their age refer to the dietitian to review the patients' dietary/allergy status.

Guide to quantities of formula required		
0 – 3 months	7 – 9 x 400g tins/month	
4 – 6 months	11 – 13 x 400g tins/per month	
7 – 12 months	7 – 13 x 400g tins/ month	
1 – 2 years	7 x 400g tins/month	
Up to 10 years	For Neocate Active/Advance and Neocate Junior see Appendix C These are products which should be initiated by a specialist only. Quantities to be set and reviewed by specialist teams.	

60 – 75% of children outgrow their CMPA by the age of 2 years.

Ongoing prescriptions for children over 2 years old should only be issued if specifically requested and regularly monitored via paediatric dietitians or consultants.

3.0 Referral and monitoring recommendations

3.1 <u>Non IgE mediated Cows' Milk Protein Allergy initial management and referral process</u> Mild to moderate non IgE CMPA can be managed within the primary care setting under the guidance of a paediatric dietitian.

For a suspected non IgE mediated CMPA:

- Commence infants on the appropriate milk (if child is not exclusively breast fed). An eHF will be suitable for most infants from this group see table 4 on page 6 for recommendations.
- Prescription volumes will depend on the child's age. Refer to table 5 on page 7 for further information.
- Refer to the SaTH Paediatric Dietetic Service. Patients will either be seen as a one to one in a clinic setting or offered a place on one of the CMPA group talks.

Refer the child to SaTH Consultant Paediatricians if any of the following apply:

- Faltering growth in combination with one or more gastrointestinal symptoms (loose stools/vomiting)
- One or more severe delayed reactions
- Significant atopic eczema where multiple or if cross-reactive food allergies are suspected by the parent or carer
- Persisting parental suspicion of food allergy (especially in children with difficult or perplexing symptoms) despite a lack of supporting history
- A clinical suspicion of multiple food allergies

NICE (2015) Cows' Milk Protein Allergy – summary

If you require further assistance with diagnosis and medical management please contact the paediatricians.

3.2 IgE mediated Cows' Milk Protein Allergy initial management and referral process

For a suspected IgE mediated CMPA you need to:

- Commence infant on the appropriate milk (if child is not breastfed). Use the MAP algorithm to determine if an eHF or AAF is required (refer to table 3 for recommendations).
- Prescription volumes will depend on the child's age. Refer to table 5 on page 9 for further information.
- Refer to Consultant Paediatricians at SATH for further allergy tests.
- Refer to the SATH Paediatric dietetic service for further dietary support.
- Reintroduction of dairy in this group should be managed in a clinical environment where emergency treatment can be carried out if necessary.

Contact details for SaTH services can be found on page 13. Dietetic treatment plans are explained in Appendix B.

3.3 Information for Health Visitors

If you suspect CMPA advise referral to the GP for an allergy focused assessment. If CMPA has been diagnosed by the GP, ensure that a referral has been made to the paediatric dietetic service and that the mother is following a dairy and mammalian milk free diet with appropriate supplementation (if breastfeeding) or that the infant has been commenced on the appropriate milk (see table 4 page 6).

3.4 Monitoring and review recommendations

See dietetic intervention in Appendix 1:

Consider if the patient meets any of the following:

- Patient is more than 2 years old.
- Formula been prescribed for more than 1 year.
- Products supplied in tins in 28 days are more than suggested in table 5.
- Patient drinking or eating any cows' milk or eating cows' milk products.
- Patient is not being managed by a dietitian.

Action: If any of the above apply, a referral is required to the paediatric dietitians at SaTH to check the adequacy of the child's diet and to initiate weaning onto a diet containing cows' milk where appropriate.

4.0 Milk alternatives

4.1 Soya infant formula

Soya infant formulas are not routinely recommended for use in CMPA due to the following:

- Soya formulas are not recommended for the treatment of CMPA in infants < 6 months due to the content of phyto oestrogens.
- The Department of Health's Chief Medical Officer advised doctors that soya-based infant formulas should not be the first choice in the management of infants with proven cows' milk sensitivity, lactose intolerance, galactokinase deficiency or galactosemia, and that they should only be used in exceptional circumstances to ensure adequate nutrition (DH, 2004). Visit COT statements and position papers at <u>https://cot.food.gov.uk/committee/committee-on-toxicity/cotstatements#s</u> (accessed May 2017) for additional information.
- There is also potential risk of cross reactivity to soya protein when used in the treatment of Cow's Milk Protein Allergy:

IgE mediated CMPA	Non IgE mediated CMPA	
Approximately 18%	Approximately 40%	
There are concerns regarding the concentration of phytates, aluminium and phyto – oestrogens in soya milk.		

If parents wish to use soya formula they can purchase the following brands at most supermarkets/pharmacies or online. Parents need to be made aware that soya formulas are sweeter and therefore good dental hygiene should be exercised. **Ensure that the potential risks of use of soya products as outlined above have been discussed with parents.**

Soya Formulas to purchase OTC or from supermarkets (do not issue on FP10 prescription)		
6 – 12 months	SMA Wysoy	
	Cow and Gate Infasoy: due to be discontinued.	
1 years – 3 years+	Alpro Growing up milk – ready made milk fortified with key nutrients for children aged 1-3	
	years.	
1+ years	Any branded or supermarket equivalent that is unsweetened.	
	Choose non organic as organic versions are not fortified with calcium. These products are	
	not routinely fortified with nutrients as per the specifically formulated 'Growing Up Milk'	
	option.	

4.2 Rice milk

There are particular concerns about rice milks which can contain high levels of arsenic. The current recommendation from the Food Standards Agency (2009) state:

"The agency advises against the substitute of breast milk, infant formula or cows' milk by rice drinks for toddlers and young children. This is both on nutritional grounds and because such substitution can increase their intake of inorganic arsenic, which should be kept as low as possible. If toddlers and young children (1 – 4.5 years) consume rice drinks instead of breast milk infant formula or cows' milk the agency estimates that their intake of inorganic arsenic could be increased by up to four fold." Visit Committee on Toxicity statement and position papers at https://cot.food.gov.uk/sites/default/files/cot/ArsenicStatement.PDF (accessed May 2017).

4.3 Other alternative milks

There are a range of other alternative milks that are available such as: almond milk, coconut milk, oat milks etc. These milks are not suitable for infants or toddlers as a milk substitute because of the low calorific content. They are suitable as an alternative for cooking only along with an eHF or AA or Soya formula as a drinkable substitute.

5.0 Lactose intolerance

5.1 Introduction

True lactose intolerance is due to a deficiency of the enzyme lactase. It is not an allergy and is a separate condition to Cows' Milk Protein allergy.

Confusion between the two conditions likely occurs due to treatment involving the removal of dairy products from the diet.

Lactose is a disaccharide sugar found exclusively in milk and milk products. Absorption is dependent on lactase, which is an enzyme found in the small intestine.

2.1.2 Signs and symptoms of lactose intolerance

Symptoms are transient and usually secondary to GI insult (e.g. rotavirus infection). Symptoms can include;

Diarrohea	Abdominal bloating
	Excessive flatulence
 Colic which persisting >2 weeks 	 Perianal redness and irritation
Vomiting	 Possible damage to perianal tissue

5.2 Types of lactose intolerance

5.2.1 Secondary Lactose Intolerance

This occurs following insult or injury to intestinal mucosa (for example, acute gastroenteritis). It is a temporary condition that will resolve once the intestinal mucosa heals. It is the most common form of lactose intolerance in the UK, particularly in babies and young children.

Secondary lactose intolerance may also occur secondary to other enteropathies (e.g. Coeliac Disease) where intestinal damage has resulted in reduced levels of lactase in the duodenum.

5.2.2 Primary Lactose Intolerance

This occurs due to a reduced ability to produce the enzyme lactase and does not usually present until later childhood or adulthood.

Other reasons for lactose intolerance include;

- Congenital lactase deficiency; an extremely rare autosomal recessive disorder where there is minimal, no nil lactase activity. Symptoms emerge (usually intractable diarrhoea) once milk or lactose formula has been introduced (typically intractable diarrhoea).
- Developmental lactase deficiency; may occur in babies who are born prematurely (<34 weeks gestation). This improves naturally once the intestine matures.

Table 6: Spectrum of Conditions Associated with Lactose Intolerance

Condition	Key Points	Recommended Plan
Congenital lactase deficiency*	Extremely rare, characterised by faltering growth and intractable diarrhoea as soon as milk is introduced. Life threatening due to dehydration & electrolyte losses.	Strict lifelong lactose free diet required. Urgent referral to secondary care if condition suspected.
Primary Lactose intolerance (lactase non-persistence)*	Rare in children under 2 -3 years of age. Common worldwide but significant differences linked to ethnic origin. Gradual loss of lactase with age.	Reduced lactose containing diet necessary, based on individual levels of tolerance.
Secondary Lactose Intolerance (post injury to intestinal muscosa) <u>Most likely diagnosis in primary care</u>	Following an acute gastroenteritis infection due temporary intestinal injury with loss of lactase. At risk infants are under 3 months or children that are malnourished.	6 – 8 week exclusion of lactose, using an over the counter (OTC) LF formula (see list) then introduce normal formula in graduated amounts.
Secondary LI due to CMPA and other enteropathies (chronic acquired lactase deficiency i.e. coeliac disease)*	If no recent episode of gastroenteritis, or unable to regrade onto normal infant formula post GI illness, immune –related enteropathy most likely cause, e.g. Cows' Milk Allergy (CMA), coeliac disease.	Take an allergy focused clinical history. If CMA is likely, undertake a 4 week exclusion trial of cows' milk using a hypoallergenic formula

Table adapted from: What do we know about Lactose? Dr Lisa Wadell, 2015.

*Conditions most likely to be managed by a Consultant Paediatrician and/or Paediatric Dietitian.

5.3 Recommendations for the treatment of Secondary Lactose Intolerance in Primary Care

Recommendations for treatment of secondary lactose intolerance in Primary Care:			
 If infant breast fed: Advise mother to purchase Lactase enzyme drops (e.g. Colief). Suggested dose 4 drops per feed for 4-8 weeks or until can be gradually withdrawn without return of symptoms 	 If infant formula fed: Advise parent/guardian to purchase Low Lactose Formula from supermarket/pharmacies or online: Aptamil Lactose Free 	 If infant has been weaned: Avoid solids and liquids containing lactose. If child >12 months old, readily available Lactose Free milks (e.g. Arla Lactofree) are suitable as a milk replacement. 	
	• SMA LF (SMA Nutrition)	 Offer referral to paediatric dietitian for further support 	
	 Enfamil O'Lac (Mead - Johnson) 	if required.	

Lactose Free formulas are included as part of the Shropshire CCG 'Self Care' policy and should not be provided on FP10 prescription

Vouchers as part of the 'Healthy Start' Scheme are redeemable against the suggested lactose free infant formulas

Duration of treatment

- Lactose should be reintroduced after an avoidance diet of 4-8 weeks: gradually reintroduce usual formula or weaning of lactase enzymes with breastfeeding.
- In some cases, symptoms may last between 3-6 months
- If symptoms ongoing longer term, refer to Consultant Paediatrician and/or paediatric dietitian

6.0 Gastro Oesophageal Reflux Disease

Gastro-oesophageal reflux (GORD) is when the gastric contents of the stomach migrates into the oesophagus. Recommended guidelines for the diagnosis and management: NICE - Gastro-oesophageal reflux disease in children and young people: diagnosis and management. <u>https://www.nice.org.uk/guidance/ng1</u>

7.0 Vitamin D Recommendations

All adults and children over the age of 1 year should consider taking a daily supplement containing 10 micrograms (400IU) of Vitamin D.

All babies under 1 year should be given a daily supplement of 8.5 – 10 micrograms (340 – 400IU) unless they have more than 500mls of fortified formula milk per day. This is advised to be purchased OTC or via Healthy Start schemes.

When advising on a vitamin supplement be aware of any pre - existing allergies, seek advice from a paediatric dietitian if necessary.

For further information visit:

www.bda.uk.com/foodfacts/vitaminD.pdf https://cks.nice.org.uk/vitamin-d-deficiency-in-children

8.0 Contact details

8.1 Shrewsbury and Telford Hospital Paediatric Dietetic Service:

Please make referrals to the paediatric dietitians at

Shrewsbury and Telford NHS Trust Apley Castle Apley Telford TF1 6TF Phone: 01952 641222 To speak to a paediatric dietitian 01952641222 Ext 5677

8.2 Shrewsbury and Telford Hospital Consultant Paediatricians

Please make referrals to the following address, or via TRAQs Consultant Paediatricians Shrewsbury and Telford NHS Trust Apley Castle Apley Telford TF1 6TF

References

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With acknowledgement to NHS Cumbria Clinical Commissioning Group

This document has been approved and verified by the Consultant Paediatricians at Shrewsbury and Telford NHS Hospital Trust.

Appendices

Appendix A - Definition of IgE and non IgE mediated reactions

IgE – immunoglobulin E (IgE) mediated reactions are caused by the release of histamine and other mediators. The reactions are usually acute and frequent and have a rapid onset (up to 2 hours after the ingestion of milk). It will usually only take a small amount of food to cause the reaction.

Non IgE mediated reactions are thought to be caused by T-cells. These reactions are non-acute and are generally delayed. It usually takes a larger volume or portion of the food for a reaction to occur.

Appendix B - Paediatric dietetic treatment plan:

On referral to the paediatric dietitians the patients will be allocated an appointment. Those infants with uncomplicated CMPA will be offered places on our dairy free weaning talks and invited back to attend dairy reintroduction talks. For infants with complex CMPA i.e. ones that are failing to thrive or have other allergies they will be offered one to one appointments and given the same advice tailored individually to the child.

It is the aim to begin reintroduction of dairy at 1 year of age using the MAP milk ladder. Once this has been discussed the patients will be discharged from the dietetic service, a letter will be sent to the GP practice following discharge. Parents will have 12 months from the date of advice for reintroduction to contact the dietetic department for further support should they require further support. It is the parents' responsibility to contact the department for another appointment and to wean their child off the prescription milks. If parents have not contacted the dietitians within the 12 months they will be automatically discharged. If you would like the patient to see the dietitian for further support after the 12 months you will need to send the Sath dietitian's another referral. If you suspect that a child has been on a milk unnecessarily then please re - refer the patient to the SaTH dietitians.

A 'late diagnosis' refers to a diagnosis towards the end of 1 year and after the first year of life. For these infants the current practice is to continue dairy free for 6 months before reintroduction, reintroduction will be the same process for the infants under 1. These infants will usually be managed on a one to one basis by the paediatric dietitians. A letter will be sent to the child's GP on discharge from the paediatric dietetic service.

Appendix C – Neocate Products

Neocate Active and Neocate Advance are being discontinued by Nutricia. A new product, Neocate Junior, is replacing the two discontinued products.