Wessex Infant Feeding Guidelines and Appropriate Prescribing of Infant Formulae

A guide to the most common conditions requiring prescribable formulae and currently available products

These guidelines were written by the Prescribing Support Dietitian for North Hampshire and West Hampshire CCGs in collaboration with Paediatricians and Paediatric Dietitians in Wessex, Health Visiting teams from Southern Health, Solent and Dorset, and the 10 CCGs across Wessex

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North Hampshire Clinical Commissioning Group
Portsmouth Clinical Commissioning Group
Southampton City Clinical Commissioning Group
South Eastern Hampshire Clinical Commissioning Group
West Hampshire Clinical Commissioning Group

Contents

Colour key for prescribing used in these guidelines:

Prescribe as first line	Should not routinely be commenced in primary care	Over the counter (OTC) products – Do not prescribe
Prescribe as second line	Should not routinely be prescribed	

Introduction

Breastfeeding is the healthiest way to feed a baby. This should be promoted and supported. Giving formula to a breastfed baby will reduce breastmilk supply.

Purpose of the guidelines

The total annual spend in England and Wales for Cow's Milk Protein Allergy (CMPA) products is £59.9Million. If a review of these products for continued need and wastage led to a 20% reduction in prescribing, then savings would be over £11.9 Million. This equates to £19,679 per 100,000 patients (PRESCQIPP nov2016).

The **quantity** of hypo-allergenic infant formulae prescribed has increased by 30% in 4 years whereas the **cost** has increased by 47% in that time (ePact data).

A North Hampshire CCG GPs audit has shown that 25% of infant formulae are prescribed inappropriately: either the wrong formula is used for the condition or age, or the wrong quantity.

The audit also revealed the variety of health professionals initially consulted for the conditions mentioned in these guidelines. Babies present indiscriminately to Health Visitors, GPs, Community Paediatric Nurses, Out of Hours GP Services, Paediatric specialists (Consultants, Registrars, Dietitians) or Emergency Services.

Therefore these guidelines aim to assist Health Professionals with diagnosing, signposting and managing common conditions and when to recommend or prescribe a specific infant formula.

Each condition has a stand-alone section and is laid out for easy printing, with a flow chart on page one and additional notes at the back. However they are presented together in this document as some infants can present with one or more conditions simultaneously. The different sections are available on the Wessex Healthier Together website (www.what0-18.nhs.uk) for easy navigation and live links.

The links can be sent directly by text message (SMS) to parents and carers during a consultation from the above website

The guidelines are targeted at infants 0-12 months. However, some of the prescribable items mentioned here can be used past this age, usually under the recommendation of a Paediatric Dietitian or Paediatrician.

Limitations of the guidelines:

The guidelines represent current standards developed with the best evidence available at this time (see reference list). They will be updated as new evidence, resources and products arise.

The recommended level of onward referrals to Paediatricians and Paediatric Dietitians in these guidelines may vary locally because of local services provision and different levels of experience within primary care. Please check with your local providers.

No pharmaceutical sponsorship or rebate were received during the writing of these guidelines

Dietitians' contacts in Wessex:

Area	NHS Trusts	Address	Switchboard	Dietitians	Website
Southampton	University Hospital Southampton	Tremona Road, Southampton SO16 6YD	023 8077 7222	02381206072	
Andover, Basingstoke Winchester **Hampshire Hospitals**	Basingstoke and North Hampshire Hospital	Aldermaston Road, Basingstoke RG24 9NA	01256 473202	01256 852644	
	Royal Hampshire County Hospital	Romsey Road, Winchester SO22 5DG	01962 863535	01962 824731	
Portsmouth Portsmouth Hospitals	Queen Alexandra Hospital	Cosham, Portsmouth PO6 3LY	023 9228 6000	extensions 4348/4349	
	Community: Rodney Rd centre	Rodney Road, Southsea PO4 8SY		02392 681798	
Frimley Frimley Health	Frimley Park Hospital	Portsmouth Rd, Frimley Surrey GU16 7UJ	01276 604604	01276 604053	
Isle of Wight Isle of Wight NHS Trust	St Mary's Hospital	Parkhurst Road, Newport, Isle of Wight, PO30 5TG	01983 822099	01983 534790	
North & West Dorset, Dorchester, Weymouth	Dorset County Hospital	Williams Avenue, Dorchester, DT1 2JY	01305 251150	01305 253466 01305 255535	
East Dorset, Poole, Bournemouth, Christchurch &Purbeck	Poole Hospital	52 Longfleet Road, Poole, BH15 2JB	01202 665511	01202 442840	
	Dorset HealthCare NHS Trust	Parkstone Health Centre, Mansfield Road, Poole, BH14 0DJ		01202 733323	

Really useful websites

www.what0-18.nhs.uk/

"The Healthier Together initiative aims to support you when you're worried about the health of your child and provides you with information about what you should do and where you should go. It also provides information to healthcare professionals in order to ensure that your child receives the same quality of care irrespective of where they are seen"

www.firststepsnutrition.org/

"Wants to ensure that everyone working to support mums-to-be and young families has access to independent, expert and practical 'eating well' resources. Provides up-to-date information on infant milks for sale in the UK and promote better regulation and marketing of breastmilk substitutes"

www.healthystart.nhs.uk/

Healthy Start is a UK-wide government scheme to improve the health of low-income pregnant women and families on benefits and tax credits

www.unicef.org.uk/babyfriendly/

www.nhs.uk/

www.nice.org.uk

Healthier Together App provides a mobile friendly version of the website What0-18

Apps

Breast Start: App will give you evidence based information from NHS professionals about all aspects of breastfeeding

Baby Buddy: Award-winning app for parents and parents-to-be who will guide you through your pregnancy and the first six months of your baby's life

Note on Breastfeeding

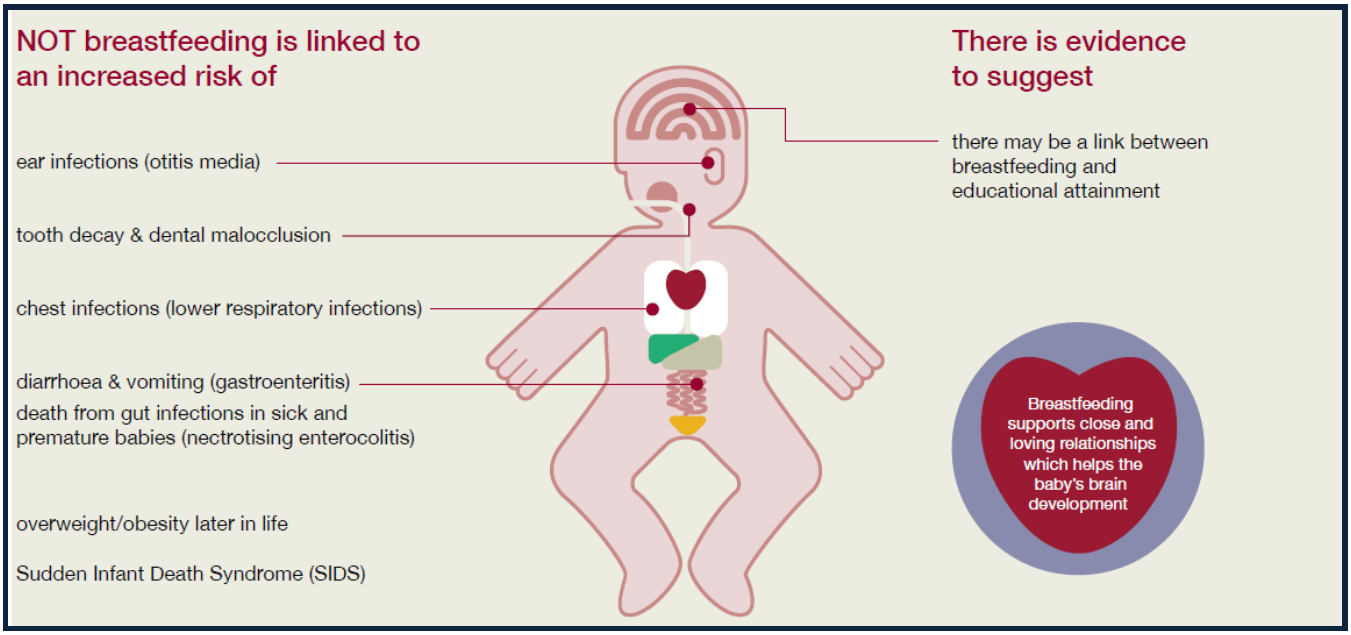
> "*Breastfeeding has profoundly beneficial effects on the lives of infants, children and their mothers, and is an arena where the interests of mothers and babies align with those of the health service and wider society*" Professor Mike Kelly, Director of the Centre for Public Health Excellence. The National Institute for Health and Clinical Excellence (NICE)

Breastfeeding is the healthiest way to feed babies but almost everyone needs **help and support** to achieve this.

The language we use and the way we present information is vitally important:

'Breast is best' can be seen as idealistic, and for many mothers, choosing a formula is simply good enough. Moreover if breastfeeding is not achieved/not possible, mothers may feel a sense of failure.

So, rather than listing the benefits of breastfeeding, here is an infographic showing the risks associated with **not** breastfeeding:



Source: Public Health England, July 2016 Commissioning Infant feeding services: Infographics

In the UK, the Millennium Cohort Study suggests that each month, an estimated 53% of hospitalisation for diarrhoea and 27% for lower respiratory tract infections could have been prevented by exclusive breastfeeding (Quigley et al., 2007).

Advice on the correct preparation method and storage of infant formula is therefore essential to prevent some contamination.

The incidence of food allergy is increased if the duration of concurrent breastfeeding at the introduction of other food proteins (including milk) is decreased (Grimshaw et al., 2013). The prevalence of cow's milk allergy in formula fed babies is 2-3% vs 0.5% in breastfed babies (i.e. a fourfold increase risk) (Høst, 2002).

Only 17% of UK women manage to exclusively breastfeed to 17 weeks (HSCI, 2010). In Wessex the breastfeeding initiation rate remains stable at just below 80%. However, only around 40% of babies are fully or partially breastfeed at 6-8 weeks (Government statistics, 2017 data).

All Health Visitors in Wessex are BFI accredited but further work is needed to encourage, support and promote breastfeeding.

GPs' quick prescribing reference guide

Breastfeeding is best for baby & mother and is free. So support, encourage and promote at any opportunity

Prescribe as first line	**Should not routinely be commenced in primary care**	**Over the counter (OTC) products: Do not prescribe**
Prescribe as second line	**Should not routinely be prescribed**	

➔ **Emphasize the need to strictly follow manufacturer's instructions when making up formula milk**

Cow's Milk Protein Allergy (CMPA)	Similac Alimentum®	**Extensively Hydrolysed formula (EHF)**	• Take an allergy focused clinical history • Confirm diagnosis for mild-moderate symptoms by re-challenging • Diet sheets available for parents
	SMA Althéra®		
	Aptamil Pepti 1 & 2®		
	Nutramigen LGG 1 & 2®		
	SMA Alfamino®	**Amino Acid formula (AAF)**	First line for anaphylactic reaction/severe reactions / reaction to breastmilk. These should be referred to secondary care
	Nutramigen Puramino®		
	Neocate LCP® and Syneo		
	SMA Wysoy®	**Soya formula**	For >6 months only and if no allergy to Soy
Gastro-Oesophageal Reflux Disease (GORD)	Enfamil AR®	**Thickening formula** (reacts with stomach acid)	• Try non-medical intervention first (see flowchart), check especially for overfeeding • Follow preparation instructions carefully • Limited evidence of efficacy for GORD • Review regularly and consider CMPA
	SMA Pro Anti-reflux®		
	Aptamil Anti-reflux®	**Pre-thickened formula**	
	Cow&Gate Anti Reflux®		
	HiPP Organic Anti-Reflux		
	Instant Carobel®	**Thickener**	If anti-reflux formula not practical/possible (e.g. using pre-term or specialised formula)
GORD if breastfed / anti-reflux formula not working	*Infant Gaviscon*	**Alginate**	• Never use with anti-reflux formulae • Review regularly and consider CMPA • Limited evidence of efficacy for GORD
Secondary lactose intolerance	Enfamil O-Lac®	**Lactose-free formula**	• Only if symptoms cause significant distress • Recommend for up to 8 weeks at a time • Lactose needs to be re-introduced slowly to
	SMA LF®		
	Aptamil LF®		
	SMA Wysoy®	**Soya formula**	For>6months only
Faltering growth	Similac High Energy®	**Energy dense ready-to-use formula**	• Ensure regular weight/length monitoring • Diet sheet available for parents
	Infatrini®		
	SMA Pro High Energy®		
Faltering growth, Malabsorption, CMPA	Infatrini Peptisorb®	**Energy dense EHF with Medium Chain Triglycerides (MCT)**	Under expert recommendation only
Malabsorption +/- CMPA	Aptamil Pepti-Junior®	**EHF with MCT**	
	Pregestimil Lipil®		
Pre-term or IUGR (post discharge from hospital)	Nutriprem 2 Powder®	**Powdered formula**	• Follow hospital discharge instruction • Ensure review at 6 months corrected age
	SMA Pro Gold Prem 2®		
	Nutriprem 2 liquid®	**Ready to use formula**	Only for exceptional circumstances as expensive convenience product
	SMA Pro Gold Prem 2 liquid		
Infantile Colic	Infacol® / Dentinox® Colief / CareCo lactase drop	**Simeticone Lactase**	• If parents not coping with crying, mostly for the placebo effect

➔ **Quantity to prescribe for 28 days (approximate guide)**

Birth to 6 months		
Weight (kg)	**400g tin**	**800g tin**
3.5 - 5	7	$3^{1/2}$
5.5 - 6.5	9	$4^{1/2}$
7 - 7.5	11	$5^{1/2}$
8 - 8.5	12	6
9 - 10	14	7

> 6 months to 1 year		
Weight (kg)	**400g tin**	**800g tin**
Once food intake is established		
5-13	6-12	3-6

Infant Formulae are for age 0-12months unless advised by a Paediatrician/Paediatric Dietitian. **Review all prescriptions for children over 2years**

➔ **Direct parents/carers towards websites, resources and support groups (see full guideline), especially the Wessex Healthier Together website: www.what0-18.nhs.uk. Use "text page to patient" tab**

➔ **Promote the use of the allergy focused history sheet and formula request form (see full guideline)**

Produced by Prescribing Support Dietitians

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Managing the unsettled baby

Baby presenting with repeated episodes of excessive and inconsolable crying

History and Examination

- Onset and length of crying
- Factors which lessen or worsen the crying
- Parent's response to the baby's crying
- Antenatal and perinatal history
- General health of the baby including growth
- Allergy focused history
- Feeding assessment
- Mother's diet if breastfeeding
- Nature of the stools

Red flags

- Seizures, cerebral palsy, chromosomal abnormality
- Unwell child / fever / altered responsiveness
- Unexplained faltering growth
- Severe atopic eczema
- Frequent forceful (projectile) vomiting
- Blood in vomit or stool
- Bile-stained vomit
- Abdominal distention / chronic diarrhoea
- Late onset vomiting (after 6 months)
- Bulging fontanel/rapidly increasing head circumference
- Immediate allergic reaction / anaphylaxis
- Collapse

Best fit cluster of symptoms (with no red flags)

- Crying for more than 3 hours a day, 3 days a week for 3 weeks
- Crying most often occurs in late pm / evening
- Growing normally
- No overt vomiting
- No constipation/diarrhoea
- No skin symptoms
- No suspected underlying condition such as infection

Most likely diagnosis

Infantile colic

Reassure and Support:
Provide strategies that may help (see pathway)
Safety netting advice
Never shake a baby
Only consider advising simeticone / lactase drops if parents not coping

- Family history of atopy
- 1 or 2 systems involved:
  - GI (usually present in 50-60% of CMPA)
  - Skin (50-70%)
  - Respiratory (20-30%)
- 2 or more symptoms (e.g. reflux AND constipation)
- Symptoms started with infant formula use

Most likely diagnosis

Cow's Milk Protein Allergy (CMPA)

Breastfed

Trial of Maternal strict milk free diet

Formula fed

Trial of Extensively Hydrolysed Formula (EHF)
e.g. Similac Alimentum
(should be prescribed)

And milk free diet if started solids

- Lower GI symptoms **only**:
  - Persistent diarrhoea (Occ. green)
  - Wind
- Recent gastroenteritis
- No atopy / family history of atopy

Most likely diagnosis

Transient lactose intolerance

Formula fed

Trial of Lactose free formula
e.g. **Aptamil LF, SMA LF Or Enfamil 0-Lac**

And lactose free diet if started solids

- Upper GI symptoms **only** (vomiting)
- Feeding-associated distress
- Worse when lying down/at night
- Happier upright
- No lower GI symptoms
- Recurrent otitis media or pneumonia

Most likely diagnosis

Gastro-Oesophageal Reflux Disease (GORD)

NB: Lactose intolerance and vomiting (GOR) do not always warrant medical intervention if the baby is not particularly distressed

Breastfed

Breastfeeding assessment by trained professional

Formula fed

Review feeding history, making up of formula, positioning…

Reduce feed volumes if excessive for weight (>150mls/kg/day)

Offer trial of smaller, more frequent feeds (6-7 feeds/24hrs is the norm)

Trial of pre-thickened formula (Need large hole/fast flow teat):
Anti-reflux Cow&Gate/HiPP Organic/Aptamil (carob bean gum)

Or thickening formula (Needs to be made up with cool water)
SMA Pro Anti-reflux (potato starch) **/ Enfamil AR** (rice starch)

Or Thickening agent to add to usual formula
Instant Carobel (carob bean gum) **(can be prescribed)**

→ Follow clinical pathways from the Wessex Infant Feeding Guidelines
→ Provide relevant literature / weblinks
www.what0-18.nhs.uk

Healthier Together

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Guide quantities of formula to prescribe

For powdered formula, approximate number of tins for 28 days:

Birth to 6 months		
Weight (kg)	**400g tin**	**800g tin**
3.5 - 5	7	$3^{1/2}$
5.5 -6.5	9	$4^{1/2}$
7 - 7.5	11	$5^{1/2}$
8 - 8.5	12	6
9 - 10	14	7

> 6 months to 1 year		
Weight (kg)	**400g tin**	**800g tin**
Once food intake is established		
5-13	6-12	3-6

These amounts are based on:

- Infants under 6 months being exclusively **formula** fed and drinking 150ml/kg/day of a normal concentration formula.

  N.B.: Some infants may require more than 150mls/kg/day, e.g. those with faltering growth.

- Infants 6-12 months requiring less formula as solid food intake increases. 600mls of milk per day once food intake is established is recommended, mostly to meet calcium requirements.

There is a considerable variation between individuals and wastage can be significant: Formula milk is advised to be discarded soon after being made up (always follow manufacturers' instructions).

Preparation methods need to be strictly followed to prevent contamination of milk.

Manufacturers' instructions regarding safe storage once opened and expiry of ready to drink formulae should be adhered to – this may differ from manufacturer to manufacturer.

Formulae should not be used as a sole source of nutrition for infants over 6 months unless under dietetic or medical supervision.

For ready-to-use energy dense formula:

- Follow recommendations made by a Paediatrician or Paediatric Dietitian.

For babies fed via feeding tubes:

Where nutrition is provided via NG/NJ/PEG tubes, the Paediatric Dietitian will be involved. Depending on the area, the GP may need to prescribe appropriate monthly amounts of formula required as advised by the Dietitian (this may exceed the guideline amounts for other infants). However some areas have contracts and agreements with the company providing infant formula, which means that the GP does not need to issue a regular prescription ("off FP10" model). Check with your local Paediatric Dietitians (see contact list)

Dos and Don'ts of Prescribing Specialist Infant Formulae

Do:

- ☑ Promote & encourage breastfeeding if clinically safe / mother is in agreement.
- ☑ Refer where appropriate to secondary or specialist care - see advice for each condition.
- ☑ **Seek prescribing advice if needed in primary care from the health professional involved in the child's care, or Paediatric Dietitians (see contacts page 4).**
- ☑ Prescribe only 2 tins initially until compliance/tolerance is established.
- ☑ Advise to follow the manufacturer's advice on safe storage once mixed or opened.
- ☑ Check any formula prescribed is appropriate for the age of the infant.
- ☑ Check the amount of formula prescribed is appropriate for the age of the infant and /or refer to the most recent correspondence from the Paediatric Dietitian.
- ☑ Review prescriptions regularly to ensure quantity is still age and weight appropriate.
- ☑ Review any prescription (and seek guidance from a Paediatric Dietitian if appropriate) where:
  - The child is over 2 years old
  - The formula has been prescribed for more than 1 year
  - Greater amounts of formula are being prescribed than would be expected
  - The patient is prescribed a formula for CMPA* but able to drink cow's milk

Don't:

- ☒ **Recommend lactose free formula** (Aptamil LF®, SMA LF®, Enfamil O-Lac®) **for infants with CMPA***.
- ☒ Recommend low lactose /lactose free formula in children with secondary lactose intolerance over 1 year who previously tolerated cow's milk (they can use Lactofree whole® or Alpro growing up drink® from supermarkets).
- ☒ Recommend soya formula (SMA Wysoy®) for those **under 6 months** with CMPA* or secondary lactose intolerance due to high phyto-oestrogen content.
- ☒ Suggest other mammalian milks (goat's, sheep's…) for those with CMPA* or secondary lactose intolerance.
- ☒ Suggest rice milk for those under 5 years due to high arsenic content.
- ☒ Prescribe Infant Gaviscon® if the infant is taking anti-reflux- formulae or separate thickeners.
- ☒ Suggest Infant Gaviscon® > 6 times/24 hours or if the infant has diarrhoea/fever, (due to Sodium content).
- ☒ Prescribe Nutriprem 2 Liquid® or SMA Pro Gold Prem 2 Liquid® unless there is a clinical need, and don't prescribe after 6 months of corrected age **unless** advised by a specialist.

***CMPA: Cow's Milk Protein Allergy**

Common Specialised Infant formulae available

(Excluding non ACBS approved and highly specialised formulae)

	Product	Presentation	Cost*	Cost per 100Kcal	Cost per 100mls
Formulae for some pre-term or Intra Uterine Growth Retardation baby post discharge from hospital					
	Nutriprem 2 Powder®	800g tin	£10.37	£0.26	£ 0.20
	SMA Pro Gold Prem 2®	400g tin	£4.92	£0.24	**£0.18**
	Nutriprem 2 liquid®	200mls	£1.74	£1.16	£0.87
	SMA Pro Gold Prem 2 liquid®	200mls	£1.64	£1.12	£0.82
Energy dense Formulae – Indication: faltering growth					
	Similac High Energy®	60mls	£0.71	£1.17	£1.18
		200mls	£2.38	£1.18	£1.19
	Infatrini®	200mls	£2.40	£1.20	£1.20
		125mls	£1.51	£1.21	£1.21
	SMA Pro High Energy	200mls	£1.96	£0.99	**£0.98**
Extensively hydrolysed, energy dense formula – Indication: faltering growth, malabsorption, CMPA					
	Infatrini Peptisorb®	200mls	£3.67	£1.84	£1.84
Extensively Hydrolysed Formulae (EHF) - Indication: Cow's Milk Protein Allergy (CMPA) 1st line					
1st line	Similac Alimentum®	400g tin	£9.10	£0.43	**£0.29**
	SMA Althéra®	450g tin	£10.68	£0.47	£0.31
	Aptamil Pepti 1®	400g tin	£9.87	£0.50	£0.34
		800g tin	£19.73	£0.50	£0.34
	Aptamil Pepti 2®	400g tin	£9.41	£0.50	£0.34
		800g tin	£18.82	£0.50	£0.34
	Nutramigen LGG 1®	400g tin	£11.21	£0.56	£0.38
	NutramigenLGG 2®	400g tin	£11.21	£0.58	£0.41
Amino Acid Formulae – Indication: CMPA 2nd line unless anaphylactic reaction/reaction to breastmilk					
2nd Line	SMA Alfamino®	400g tin	£23.81	£1.18	**£0.82**
	Nutramigen Puramino®	400g tin	£27.63	£1.38	£0.94
	Neocate LCP® and Neocate Syneo	400g tin	£29.56	£1.56	£1.02
EHF with Medium Chain Triglycerides (MCT)-Indication: CMPA + malabsorption					
	Aptamil Pepti-Junior®	450g tin	£13.36	£0.57	£0.38
	Pregestimil Lipil®	400g tin	£12.43	£0.62	£0.42
Lactose-free formulae – Indication: secondary lactose intolerance (1ary lactose intolerance rare)					
Available OTC	Enfamil O-Lac®	400g tin	£5.08	Retail price may vary Do not prescribe	
	SMA LF®	430g tin	≈£6.00		
	Aptamil LF®	400g tin	≈£6.00		
	SMA Wysoy®	*860g tin*	*≈£12.00*	***See special notes***	
Pre-thickened and Thickening formula – Indication: Gastro-Oesophageal Reflux Disease (GORD)					
Available OTC	Enfamil AR®	400g tin	£3.80	Retail price may vary Do not prescribe	
	SMA Pro Anti-Reflux®	800g tin	≈£10.00		
	Aptamil Anti-reflux®	900g tin	≈£13.00		
	Cow&Gate Anti Reflux®	900g tin	≈£11.50		
	HiPP Organic Anti-Reflux	800g tin	≈11.00		

*Prices correct as of MIMS July 2018

Prescribe as first line	Should not routinely be commenced in primary care	Over the counter (OTC) products – Do not prescribe
Prescribe as second line	Should not routinely be prescribed	

Flowchart for managing Cow's Milk Protein Allergy (CMPA)

Symptoms suggest CMPA (see diagnosis page) - Commonly:
- History / Family history of atopy
- Symptoms involving 2 or more systems

Mild to moderate Symptoms
- No immediate reactions *(usually non-IgE mediated)*

Severe Symptoms And /or
- Acute reaction *(Usually IgE mediated)*

Referral to secondary care
Include Allergy Focused History
Appendix J

Secondary Care led
1. Maternal milk free diet And/Or
2. Suitable formula, e.g.
SMA Alfamino or Wysoy if >6m
3. Milk free diet if started solids
4. Clear communication and f/up plans

Exclusively breastfed

If at all possible, encourage exclusive breastfeeding

Formula Fed or mixed feeding

Trial of Maternal strict milk free diet (Appendix A)

Trial of Extensively Hydrolysed Formula (EHF)
1. Prescribe 2 tins, e.g. Similac Alimentum or Nutramigen, Aptamil Pepti, Althera initially (more tins may be needed before the 2 weeks review if quickly accepted)
2. Advise milk free diet if started solids (Appendix B1)

Review after minimum 2 weeks

EHF not accepted
Consider alternative EHF (see formulary)
Or
Trial of soya formula if >6months
Advise **Wysoy** OTC

Some Improvement
Consider extending trial for a further 2 weeks **Or**
Consider excluding Soya as well if started solids **Or**
Consider trial of Amino Acid formula

Improvement
Confirm diagnosis with Home Milk Challenge
(See appendix C)

No improvement
Consider alternative diagnosis **Or**
Consider referring to, or seek advice from secondary care

Symptoms return
- YES → **CMPA diagnosed**
- NO → **Not CMPA Stop milk free diet**

CMPA diagnosed

Formula fed:
- Prescribe suitable formula (Or advise **Wysoy** OTC)

Breastfed:
- Advise mother to take daily 1000 mg Calcium + 10 µg (400IU) Vit D OTC

- Provide with resources/signpost to websites
- Refer to trained Professional or Paediatric Dietitian

- Continue strict milk free diet until about 1 year of age, or for 6 months after diagnosis (NICE, 2011)
- Advise on re-introduction of milk proteins using the Milk Ladder (Appendix D)

Diagnosing CMPA (from NICE Guideline 116 , iMAP and BSACI)

Cow's Milk Protein Allergy (CMPA or CMA) is the most clinically complex individual food allergy and therefore causes significant challenges in both recognising the many different clinical presentation and also the varying approaches to management, both at primary care and specialist level.

Allergy-focused clinical history (adapted from Skypala et al. 2015) – See form in Appendix I

- Personal/family history of atopic disease (asthma/atopic dermatitis/allergic rhinitis) & food allergy
- Presenting symptoms and other symptoms that may be associated with CMPA (see below)
  - Age at first onset and speed of onset
  - Duration, severity and frequency
  - Setting of reaction (home, outside…)
  - Reproducibility of symptoms on repeated exposure
- Feeding history
  - Breast fed/formula fed (if breastfed, consider mother's diet)
  - Age of introduction to solids
  - If relevant, details of any foods avoided and why
- Details of previous treatment, including medication for presenting symptoms and response to this
- Any response to the elimination and reintroduction of foods

	Acute symptoms (minutes) ➔Refer to secondary care	Delayed symptoms (2-72hrs) ➔Refer to secondary care only if symptoms severe
Gut (Range of symptoms & severity)	•Abdominal pain / Colic / excessive crying •Vomiting (repeated or profuse) •Diarrhoea (Rarely a severe presentation)	•'Colic' / excessive crying •'Reflux' - GORD •Blood in stool and/or mucus in otherwise well child •Vomiting in irritable child with back arching & screaming •Feed refusal or aversion •Diarrhoea: often protracted + propensity to faltering growth •Constipation: straining with defecation but producing soft stools, irregular or uncomfortable stools +/- faltering growth •Unwell child: delayed onset protracted D&V *Wide range of severity, from well child with bloody stool to shocked child after profuse D&V (FPIES)*
Skin (Range of symptoms & severity)	•Urticaria •Acute pruritus •Angioedema •Erythema •Acute 'flaring of atopic dermatitis	•Significant to severe atopic dermatitis+/- faltering growth
Respiratory (Usually with other symptoms)	•Red/itchy eyes •Blocked/runny nose, sneezing •Cough, wheeze, breathlessness	•'Catarrhal' airway symptoms (Usually in combination with 1 or more other symptoms)
Systemic	•Drowsiness, dizziness, pallor, collapse •Anaphylaxis	

Red Flags (urgent referral to secondary care):
- *Faltering growth*
- *Severe atopic dermatitis*
- *FPIES, Anaphylaxis, collapse*

Cow's Milk Protein Allergy additional notes

Breastfeeding is the optimal way to feed a baby with CMPA, with, if required, individualised maternal elimination of all cow's milk protein foods (+ Calcium and vitamin D supplementation).

For more detailed directions to diagnose and manage CMA, use the **'Managing Allergy in Primary care'** (iMAP) guidelines (developed by a team of specialists in the field of paediatric milk allergy but published by Nutricia).

- CMPA commonly appear when a formula is introduced in a usually breastfed baby. Therefore returning to exclusive breastfeeding should be discussed and encouraged at the earliest opportunity.
- In the UK, 2-3% of 1-3year olds have confirmed CMPA (the highest prevalence in Europe).
- Only about 10% of babies with CMPA will require an AAF (Murano et al., 2014). The remainder should tolerate an EHF.
- 10-14% of infant with CMPA will also react to soya proteins (and up to 50% of those with non-IgE mediated CMPA). But because of better palatability soya formula is worth considering in babies>6months.

Hypoallergenic Infant Formulae (Prices correct as of MIMS July 2018)

	Product	Calcium RNI (525mg/d) met in:	Lactose	Tin size	Cost per tin	Cost per 100Kcal	Average requirement / 28d**	
							0-6months	6-12months
Extensively Hydrolysed Formulae (EHF) Indication: Mild to moderate symptoms/reactions (IgE or non IgE mediated allergies)								
1st line	Similac Alimentum®	740mls	no	400g	£9.10	£0.43	7-12 tins (800g: 6 tins)	7-12 tins (800g: 6 tins)
	SMA Althéra®	800mls	yes	450g	£10.68	£0.47		
	Aptamil Pepti 1®	1120mls	yes	400g	£9.87	£0.50		
				800g	£19.73	£0.50		
	Nutramigen LGG 1®	680mls	no	400g	£11.21	£0.56		
	Aptamil Pepti 2®	830mls	yes	400g	£9.41	£0.50		7-12 tins (800g: 6 tins)
				800g	£18.82	£0.50		
	Nutramigen LGG 2®	600mls	no	400g	£11.21	£0.58		
NB: Instruction for making up Nutramigen LGG includes the use of cold water, which goes against current DoH guidelines.								
Amino Acid formulae (AAF) Indication: Severe symptoms / reactions to breastmilk (IgE or non IgE mediated allergies) and if EHF tried initially but still experiencing symptoms								
2nd Line	Alfamino®	920mls	no	400g	£23.81	£1.18	7-12 tins	7-12 tins
	Nutramigen Puramino®	820mls	no	400g	£27.63	£1.38		
	Neocate LCP® or Syneo	800mls	no	400g	£29.56	£1.56		
NB: Instruction for making up Neocate Syneo includes the use of cold water, which goes against current DoH guidelines.								
Neocate Spoon® is a weaning convenience product usually for children with severe multiple allergies. **Neocate Junior**® is not suitable for the under 1 and will not automatically be needed. These should only be prescribed under the supervision of a Paediatric Dietitian or Paediatrician with a clear rationale.								
Soy formula Indication: CMPA in infants over 6 months of age, not reacting to soya								
OTC	**Wysoy**®	780mls	no	860g	£10.54	£0.24	**Not for ≤6months**	Not for prescribing

** Based on meeting Calcium requirement. However, there is a **considerable variation** of intake between individuals and wastage can be significant

Top Tips

- **EHF and AAF have an unpleasant taste and smell,** which is better tolerated by younger babies. Unless there is anaphylaxis, advise to introduce the new formula **gradually** by mixing with the usual formula in increasing quantities until the transition is complete. Serving in a closed cup or bottle or with a straw (depending on age) may improve tolerance.
- **Warn parents** that it is quite common for babies to develop green stools on these formulae.
- **Prescribe only 2 tins initially** until compliance/tolerance is established. Only then give additional prescription.

Review and discontinuation of treatment (and challenge with cow's milk)

60-75% of children outgrow CMPA by 2 years of age, rising to 85-90% of children at 3 years of age (EuroPrevall study, 2012).

- **Trial of reintroduction of cow's milk** – Use the Milk Ladder (see appendix D). This should be supervised by a suitably trained health professional if symptoms are severe.
- **Review prescriptions regularly** to check that the formula is appropriate for the child's age.
- **Quantities of formula** required will change with age – see guide to quantities required. Refer to the most recent correspondence from the Paediatric Dietitian, or contact your local paediatric dietetic department for clarification.
- **Prescriptions can be stopped** when the child has outgrown the allergy, or on advice of the Dietitian/Paediatrician.
- **Review the need for the prescription if:**
  - The patient is over 2 years of age
  - The formula been prescribed for more than 1 year
  - The patient is prescribed more than the suggested formula quantities according to their age/weight
  - The patient is able to drink cow's milk or eats yoghurts/cheese
- **Children with multiple and/or severe allergies or faltering growth may require prescriptions beyond 2 years.** This should always be on the advice of the Paediatric Dietitian.

Useful resources for parents and health professionals

- **Breastfeeding**

  For breastfeeding and bottle feeding advice, visit the UNICEF baby friendly pages:
  www.unicef.org.uk/BabyFriendly/
  http://www.nhs.uk/start4life
  First Steps Nutrition: https://www.firststepsnutrition.org/eating-well-infants-new-mums

- **Local Breastfeeding Support Services**

  www.southernhealth.nhs.uk/services/childrens-services/breastfeeding-service/

- **Cow's Milk Protein Allergy**

  CMPA Support (www.cmpasupport.org.uk)

- **For Health Professionals**

  Managing Allergy in Primary care**:** https://www.allergyuk.org/health-professionals/mapguideline

  NICE Clinical Guideline 116 Food Allergy in Children and Young People. 2011 www.nice.org.uk

  Luyt et al. British Society for Allergy and Clinical Immunology (BSCACI) guideline for the diagnosis and management of cow's milk allergy, July 2014 www.bsaci.org

NICE NG1: Flow Chart for managing GASTRO-OESOPHAGEAL REFLUX (GOR) and GORD

Infant presents with Gastro-Oesophageal Reflux

Are Red flag symptoms present?

NO → Is infant showing marked distress?

YES → **Investigate or refer to secondary care using clinical judgement**

Red Flags:
- Bile-stained vomit: Same day referral
- Frequent forceful (projectile) vomiting
- Blood in vomit or stool
- Faltering growth
- Abdominal distention / chronic diarrhoea
- Unwell child / fever / altered responsiveness
- Bulging fontanelle / rapidly increasing head circumference
- Late onset (after 6 months)

Is infant showing marked distress?

NO → **Reassure:**
- GOR very common
- Usually begins before 8 weeks
- May be frequent
- Usually becomes less frequent with time
- Does not usually need further investigation or treatment

YES →

Breastfed

Breastfeeding assessment by trained professional

Formula fed

1. Review feeding history, making up of formula, positioning… **Then**
2. Reduce feed volumes if excessive for infant's weight (>150mls/kg/day) **Then**
3. Offer trial of smaller, more frequent feeds (6-7 feeds/24hrs is the norm) **Then**
4. Advise parent to purchase pre-thickened formula (need large hole/fast flow teat): Cow&Gate Anti-reflux®, HiPP Organic Anti-reflux, Aptamil Anti-reflux® (carob bean gum)
   Or thickening agent to add to usual formula: Instant Carobel®
   Or thickening formula (made up with cool water): SMA Pro Anti-reflux® (potato starch) Or Enfamil AR® (rice starch)

If **not** successful after 2 weeks

➔**If using, STOP pre-thickened / thickening formulae or thickener**

2 weeks trial of Infant Gaviscon®

Bottle fed: 1-2 doses* into 115mls (4oz) of feed
Breastfed: 1-2 doses* mixed up into a liquid (with cooled boiled water or expressed breastmilk) and given with a spoon

Infant Gaviscon®:
*1 dual sachet = 2 doses

If < 4.5kg, 1 dose
If > 4.5kg, 2 doses

- Prescribe with directions in terms of 'dose' to avoid errors
- Maximum 6 doses a day
- Omit if fever or diarrhoea

PPi /H_2RA can be initiated in primary care if alginate therapy is not working but it is best reserved if overt regurgitation **AND** Unexplained feeding difficulties **or** distressed behaviour **or** faltering growth

If successful after 2 weeks → Try stopping it at regular interval for recovery assessment as GOR usually resolves spontaneously

If **not** successful after 2 weeks → Consider CMPA and/or Refer to Paediatrician for further investigation if GORD or alternative diagnosis suspected

GOR and GORD additional notes

Full NICE guidance: www.nice.org.uk/guidance/ng1

Background

- Passive regurgitation of stomach contents into the oesophagus is a **normal** finding in infancy. Most is swallowed back into the stomach but occasionally it appears in the mouth or comes out as non forceful regurgitation. At least 40% of infants will have symptoms of reflux at some time.
- Reflux will often improve by 6-8 months but it is not unusual for an otherwise well child to continue to have intermittent effortless regurgitation up to 18 months.
- Parents/carers should seek urgent medical attention if :
  - regurgitation becomes persistently projectile
  - There is bile-stained (green or yellow-green) or blood in vomit
  - There are new concerns (marked distressed, feeding difficulties, faltering growth)
- Possible complications of GOR are:
  - Reflux oesophagitis
  - Recurrent aspiration pneumonia
  - Frequent otitis media

GORD (Gastro-Oesophageal Reflux Disease) is a diagnosis reserved for those infants who present with significant symptoms and/or faltering growth.

- Prematurity, neurodisability, family history of heartburn, hiatus hernia, congenital oesophageal atresia are associated with an increased prevalence of GORD.
- Forceful vomiting should not be ascribed to reflux without closer review of the child's symptoms. Bilious (green) vomiting is always pathological and warrant urgent same day medical attention.
- GORD can sometimes be a sign of CMPA. The presence of atopic dermatitis, a family history of allergy / atopy and additional gastrointestinal symptoms should prompt consideration of a cow's milk protein allergy. CMPA can occur in breastfed infants (see CMPA section).
- Consider UTI especially if faltering growth or late onset, or frequent regurgitation + marked distress.
- Do not routinely treat or investigate for GORD in infant with or without overt regurgitation if they only exhibit **one** of the following: distressed behaviour / unexplained feeding difficulties / faltering growth / chronic cough / hoarseness / single episode of pneumonia.

Onward referrals

Referrals	Indications
Same day to Secondary Care	Worsening or forceful vomiting in infant <2months Unexplained bile-stained vomiting Haematemesis or Malaena or Dysphagia
Secondary Care	No improvement in regurgitation >1year old Persistent faltering growth secondary to regurgitation, Feeding aversion + regurgitation, Suspected recurrent aspiration pneumonia, Frequent otitis media, Suspected Sandifer's syndrome Unexplained apnoea, Unexplained non-epileptic seizure-like events, Unexplained upper airway inflammation If thought necessary to ensure acid suppression

Management of GORD

- Sleeping infants should be placed on their back but bed can be raised at an angle.
- Starch-based thickeners (Thick&Easy®, Nutilis®, Resource thicken up®…) are not suitable for children under 1 year (unless faltering growth/recommended by Paediatric specialist).
- Pro-motility agents such as domperidone should not be initiated in primary care. There is no evidence of benefit when treating infantile GOR. They can cause paradoxical vomiting and have been associated with a risk of cardiac side effects.

Products available

Instant thickener **Not to be used with thickening formula or Infant Gaviscon®**		
Carobel Instant - Add to specialised formula (or expressed breastmilk) if anti-reflux formula not practical or possible	From birth £2.91 per 135g	Contains carob seed flour *May cause loose stools*
OTC pre-thickened formulae **Not to be used with thickener or Infant Gaviscon®**		
Cow & Gate® Anti-reflux (Danone)	Birth to 1 year	Contains carob gum
Aptamil® Anti-reflux (Danone)	Birth to 1 year	
HiPP Organic Anti-reflux (HiPP)	Birth to 1 year	
OTC thickening formulae **Not to be used with thickener or Infant Gaviscon® or PPIs/H2 antagonists**		
SMA Pro Anti-reflux® (SMA)	Birth to 18 months	Contains potato starch
Enfamil AR® (Mead Johnson)	Birth to 18 months	Contains rice starch

- Over the counter thickeners / thickened formulae contain carob gum. This produces a thickened formula and will require the use of a large hole (fast-flow) teat.
- Thickening formulae react with stomach acids, thickening in the stomach rather than the bottle so there is no need to use a large hole (fast-flow) teat. However thickening formula need to be prepared with **cooled** pre-boiled water, which is **against** recommendation of using boiled water cooled to 70°C. There is therefore an **increased risk** of bacteria being present in the milk. This risk should be assessed by a medical practitioner.
- **Thickening formulae should not be used in conjunction with separate thickeners or with medication** such as antacids (e.g. Infant Gaviscon®), H_2 antagonists (e.g. Ranitidine), or with proton pump inhibitors (e.g. Omeprazole).

Gaviscon

May cause a change in the baby's stool, and commonly constipation.

Resources for parents and health professionals

- NICE guidelines NG1: GORD in children and young people. January 2015
- Living with reflux website: www.livingwithreflux.org/ includes a Facebook support page
- For breastfeeding and bottle feeding advice, visit the UNICEF baby friendly pages: https://www.unicef.org.uk/babyfriendly/baby-friendly-resources/
  - Bottle feeding leaflet www.unicef.org.uk/BabyFriendly/Parents/Resources/Resources-for-parents/Department-of-Health-bottle-feeding-leaflet/
  - Breastfeeding leaflet www.unicef.org.uk/Documents/Baby_Friendly/Leaflets/otbs_leaflet.pdf
  - Breastfeeding counsellors directory provided by the NCT, or Southern Health NHS Foundation Trust: www.nct.org.uk/branches or www.southernhealth.nhs.uk/services/childrens-services/breastfeeding-service/

Flow chart for managing PRE-TERM INFANTS

Breastmilk is the preferred milk for these babies but if needed, infants will have pre-term formula commenced in hospital before discharge
These formulae should not be used in primary care to promote weight gain in babies other than those born prematurely

Babies born <34 weeks gestation, weighing <2kg at birth may be initiated on:

Nutriprem 2® powder
OR
SMA Pro Gold Prem 2® powder

Secondary care initiation only
Prescribing to be continued by GP in primary care until infant reaches 6 months corrected age*

NOTE:
Prescribe POWDER formula
Nutriprem 2® liquid or
SMA Pro Gold Prem 2® liquid
should NOT BE prescribed except in rare instances where there is a clinical need in e.g. immunocompromised infant

Rationale and duration should be clearly indicated by secondary care and communicated to the GP

Growth (weight, length & head circumference) should be monitored by the Health Visitor on a monthly basis using UK WHO growth charts

Is there a concern with growth?
(See faltering growth flowchart)

*** 6 months corrected age = Expected Date of Delivery + 26 weeks**

NO

Use up to 6 months corrected age
Then change to a standard OTC formula thereafter

YES

Refer to/Alert the paediatric team
They may recommend the use of the pre-term formula until sufficient catch up growth is achieved

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Pre-term additional notes

- Pre-term formulae are usually started for babies born before 34 weeks gestation, weighing less than 2kg at birth, and IUGR (intra uterine growth retardation).
- These infants should already be under regular review by the Paediatricians. Check correspondence for more details.
- Pre-term and low birthweight infants are particularly vulnerable to over and underfeeding. Therefore, the Health Visitor should monitor growth monthly while the baby is on these formulae:
  - Weight and centile
  - Length and centile
  - Head circumference and centile
- Not all babies need these formulae for the full 26 weeks from expected date of delivery (EDD).
- These products should be discontinued by 6 months **corrected** age (unless advised by the paediatric team).

6 months corrected age = Expected Date of Delivery + 26 weeks

- If there is excessive weight gain (e.g. weight centile over 2 centiles above length centile) at any stage up to 6 months corrected age, **stop** the formula and change to standard OTC formula. Also notify the Paediatric Dietitian/Paediatrician if still under their care.
- The introduction of solids should start no later than 6 months actual age (rather than corrected age) as the gut matures from birth.

Formulae

Formula	Presentation	Cost*	£/Kcal	Notes
Nutriprem 2 Powder® (Cow&Gate)	800g tin	£10.37	£0.26	Birth up to a maximum of 6 months corrected age
SMA Pro Gold Prem 2® (SMA)	400g tin	£4.92	£0.24	
Nutriprem 2 liquid® (Cow&Gate)	200mls	£1.74	£1.16	Should not be routinely prescribed unless there is a clinical need e.g. immunocompromised infant
SMA Pro Gold Prem 2 liquid® (SMA)	200mls	£1.64	£1.12	

*MIMS July 2018

Useful resources for parents and health professionals

- Bliss website and helpline number: www.bliss.org.uk/ helpline: 0808 8010322
- Tommys website, free App “my premature baby” www.tommys.org/page.aspx?pid=962
- Unicef baby friendly resources: www.unicef.org.uk/BabyFriendly/Parents/
- Royal college of Paediatric and Child health website for WHO growth charts and tutorials: https://www.rcpch.ac.uk/resources/uk-world-health-organisation-growth-charts-guidance-health-professionals

Flow Chart for managing Faltering Growth

Full NICE guidance available: NG75 Recognition and management of faltering growth in children September 2017

Using WHO UK Growth charts

Early days

- >10% weight loss from birthweight, and/or
- birthweight not regained after 3 weeks

>3 weeks

- A fall across **1** or more centile if birthweight <9th centile
- A fall across **2** or more centiles if birthweight between 9th & 91st centile
- A fall across **3** or more centiles if birthweight >91st centile
- Current weight is <2nd centile

Use clinical judgement

- Measure length, determine mid-parental height centile if possible
- Plot growth on WHO UK growth chart

Clinical, developmental and social assessment

Is there a concern? e.g. medical/physical condition or illness (or dehydration)

NO

Detailed feeding / eating history:

Breast attachment/ bottle preparation

Frequency, duration, quantity and tolerance

Solid foods intake, type, timing, quantity and frequency

Environment

Parent-infant interactions

Physical disorder (cleft palate, tongue-tie, inverted nipples)

Consider direct observation by suitably trained professional

And/or parents/carer to keep feeding or food diary

Provide feeding support

- Establish **plan**, goals and review with parents/carers
- **Give simple advice** around managing any behavioural aspects (see appendix E 'What can I do if my child won't eat' leaflet)
- Ensure parents/carers are given **advice on high calorie foods** (see appendix F 'High energy diet for babies)

Review: goals met?

NO

YES

To ensure catch up growth and minimise excessive weight gain, monitor weight/length but no more than:

- Daily if <1month
- Fortnightly if 6-12 months
- Weekly if 1-6months
- Monthly if >1year

YES

Consider investigating e.g. for UTI or coeliac disease (if solids started) or as indicated by clinical assessment

Referral to Paediatrician / specialist services

- Support continuation of breastfeeding
- Consider high calorie infant formula:

  Suitable for infants up to 18months or 8-9kg

  SMA PRO High Energy®

  Infatrini®

  Similac High Energy®
- Clear communication of goals, action and follow up plans

Faltering growth additional notes

Symptoms and diagnosis

- It is not a condition in itself – there are lots of different possible explanations, with feeding problems being the most common.
- UK WHO growth charts should be used to plot weight, length and head circumference.
- The weight / length of an infant need to be measured properly to interpret changes in pattern:
    - Use only appropriate scales/equipment that are regularly serviced and/or calibrated
    - Remove clothing and nappies before weighing
    - Ensure staff is skilled and practiced
- Pre-term birth, neurodevelopmental concerns and maternal postnatal depression/anxiety are factors associated with faltering growth.
- If a child is not growing at the expected rate, it is important that this is picked up at an early stage and the reasons investigated. E.g. dehydration, acute illness, iron deficiency anaemia, CMPA, Coeliac disease, GORD or a child safeguarding issue.
- In the majority of cases, there isn't an underlying medical problem and a baby can be successfully treated at home. However recognise that a range of factors may contribute to the problem and it may not be possible to identify a clear cause.
- There may be difficulties in the interaction between an infant and the parents or carers that may contribute to the problem (but this may not be the primary cause).

Treatment

- **Early days:** provide feeding support as per NICE guideline CG37 "postnatal care up to 8w after birth".
- **Under 6 months**: Check frequency and timing/volume of feeds, as well as breastfeeding and/or bottle preparation technique. An infant's requirements are around 150mls/kg/day and most will need one or more feeds during the night.
- **6 months and over:** Ensure appropriate solids are offered at regular intervals; ask about volume and frequency of milk and solids food. Once a food routine is established, milk intake should be around 500-600mls a day. More than that may compromise appetite for solids.

Review and discontinuation of treatment

- All infants on high energy formula will need growth (weight and length) monitored to ensure catch up growth occurs but also prevent excessive weight gain.
- Paediatric Dietitians or Paediatricians should advise if/when the formula should be stopped.

Formula	Presentation	Cost*	Cost / 100Kcal	Details
SMA Pro High Energy (SMA)	200mls	£1.96	£0.99	100Kcal /100mls From birth up to 8kg
Similac High Energy® (Abbott Nutrition)	60 / 200mls	£0.71 / 2.38	£1.18	
Infatrini® (Nutricia)	125 / 200mls	£1.51 / 2.40	£1.21	
Infatrini Peptisorb® (Nutricia)	200mls	£3.67	£1.84	+ malabsorption

*MIMS July 2018

Useful resources for parents and health professionals

- NHS choice website: www.nhs.uk/Conditions/pregnancy-and-baby/Pages/help-baby-enjoy-foods.aspx
- Royal college of Paediatric and Child health website for WHO growth charts and tutorial: https://www.rcpch.ac.uk/resources/uk-world-health-organisation-growth-charts-guidance-health-professionals

Flowchart for managing SECONDARY LACTOSE INTOLERANCE

Infant presenting with the following symptoms for 2 weeks or longer, and significantly distressed (If not suffering and growing well advise that symptoms will resolve once gut is healed)

- Loose and frequent (occ. green) stools
- Increased (explosive) wind
- Abdominal bloating

Usually following an infectious gastrointestinal illness

NOTE: *Lactose intolerance in young infants is* ***rare***

Cow's milk protein allergy (CMPA) should always be considered as an alternative diagnosis

>12 months

Advise

①**Lactose free** milk (available from supermarkets e.g. Lactofree whole®, Alpro Growing Up Drink®)

②**Lactose free diet** (see diet sheet in appendix B3)

0 - 12 months

Bottle Fed

If baby is distressed advise

Lactose free formula can be purchased from supermarket or pharmacy e.g.:
Aptamil LF®, SMA LF®
Or Enfamil 0-Lac®

And a lactose free diet if weaned (see diet sheet in appendix B3)

Breastfed

- Lactose intolerance in exclusively breastfed infants is rare
- Consider cow's milk protein allergy (CMPA)
- **Encourage breastfeeding** Mother may benefit from referral to Breastfeeding Specialist, Health Visitor or Breastfeeding Counsellor

Review after 2 days of exclusion - symptoms improved?

NO → Consider **alternative** diagnosis e.g. cow's milk protein allergy

YES

Lactose intolerance confirmed

- Continue lactose free formula / milk for **up to 8 weeks** to allow resolution of symptoms
- Then advise parents to **slowly re-introduce** standard formula/milk into the diet. (Lactase production needs to be re-build after a period of exclusion)

Have symptoms returned on commencement of standard infant formula/milk?

YES → If baby distressed, return to lactose free formula / milk if ≤ 12m
And re-introduce lactose more slowly
Refer to Dietitian/seek dietetic advice if concerned

NO → No further action needed

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Secondary Lactose Intolerance additional notes

Primary lactose intolerance is very rare and does not usually present until later childhood/adulthood.

Secondary lactose intolerance does not involve the immune system. It is caused by damage to the gut which results in an insufficient production of the enzyme lactase. Gastroenteritis or Cow's Milk Protein Allergy can cause such damage. Restored gut function will resolve secondary lactose intolerance.

Resolution of symptoms within 48 hours of withdrawal of lactose from the diet confirms diagnosis*.
**The medical tests ('hydrogen breath test' and tests for 'reducing sugars' in the stools) would be expected to be positive. However they are also positive in most normal breastfed babies under 3 months. Their use in diagnosing lactose intolerance in young babies is therefore open to question.*

Common myths about lactose intolerance

- There is no relationship between lactose intolerance in adult family members, including in the mother, and in babies. Lactose intolerance may develop around 6 years of age if there is a strong family history.
- Breastmilk contains lactose (as does any mammalian milk) and decreasing dairy intake in maternal diet **does not** alter the amount of lactose in breastmilk.
- A baby with symptoms of lactose intolerance should not necessarily be taken off the breast and fed on special lactose-free infant formula (especially if the child is under 6 months old).
- Lactose intolerance **does not** cause vomiting or GORD.

Treatment

- Secondary lactose intolerance is **temporary**, as long as the gut damage can heal. When the cause of the damage to the gut is removed, the gut will heal, even if the baby is still fed breastmilk, or their usual formula.
- Continuing to breastfeed (or their usual formula) will not cause any harm **as long as** the baby is otherwise well and growing normally.
- Lactase drops such as Colief®, Care-Co Lactase infant drops® can be added (as per manufacturers' instruction) to the baby's feed to make digesting the lactose easier. Using lactase drops for more than a week if symptoms do not improve isn't usually recommended.
- Lactose-free formulae have a greater potential to cause dental caries because the non-cariogenic sugar lactose is replaced with cariogenic glucose. Therefore parents must follow good dental hygiene.

Formulae

- Low lactose/lactose free formula should **not** be used for longer than 8 weeks without review and trial of discontinuation of treatment.

Enfamil O-Lac®	Lactose, sucrose and fructose free	400g tin	≈£5.08	Retail price may vary
SMA LF®	Low lactose	430g tin	≈£5.34	
Aptamil LF®	Lactose and sucrose free	400g tin	≈£5.50	
SMA Wysoy®	Soya based formula ***NOT for <6months***	860g tin	≈£12.00	

Soya formula is not recommended for those under 6 months due to high phyto-oestrogen content. It can be advised in infants over 6 months who do not accept the lactose free formula suggested here.

Flowchart for managing Colic in Infants

Infant presenting with Colic (repeated episodes of excessive and inconsolable crying)

- Started in the first weeks of life
- Crying most often occurs in the late afternoon or evening
- The baby draws its knees up to its abdomen or arches its back when crying

Consider differential diagnosis if sudden onset

Take history and examine:

- General health of the baby including growth
- Antenatal and perinatal history
- Onset and length of crying
- Nature of the stools
- Feeding assessment
- Mother's diet if breastfeeding
- Family history of allergy (see Allergy Focused History appendix J)
- Parent's response to the baby's crying
- Factors which lessen or worsen the crying

Treatable causes:

- Hunger or thirst
- Too hot / too cold / too itchy
- Nappy rash
- Poor feeding technique
- Wind (Ensure infant is upright if bottle feeding)
- Constipation if bottle fed
- Gastro-oesophageal reflux disease (See GORD section)
- Cow's milk protein allergy (See CMPA section)
- Transient lactose intolerance (see section)
- Parental depression or anxiety
- Mother's intake if breastfeeding (anecdotal, e.g. medication, high intake of caffeine/ alcohol/certain foods)
- Rare serious causes (seizures, cerebral palsy, chromosomal abnormality)

Treatable causes excluded

Management:

Reassure and acknowledge (do not ignore/dismiss concerns) colic usually resolves by 4 months
Offer ongoing support and review
Advise strategies one at a time, e.g.:
Holding baby through crying (although putting the baby somewhere safe is sometimes needed)
Gentle motion
White noise
Bathing in warm water
Encourage parents to look after their own health

Only consider medical treatment if parents unable to cope (see notes overleaf):

- 1 week trial of OTC simeticone drops (e.g. Infacol®, Dentinox®) OR
- 1 week trial of OTC lactase drop (e.g. Colief®, Care-Co Lactase infant drops®)

Only continue if improvement. **Simeticone can be prescribed if strong rationale present** but Lactase drops are not licensed for colic even if some small trials have shown some effects. Low lactose and /or lactose free formula are NOT recommended.

Colic in Infants additional notes

Although infantile colic is considered to be a self-limiting and benign condition, it is often a frustrating problem for parents and caregivers. It is a frequent source of consultation with healthcare professionals and is associated with high levels of parental stress and anxiety.

Infantile colic is defined for clinical purposes as repeated episodes of excessive and inconsolable crying in an infant that otherwise appears to be healthy and thriving [National Collaborating Centre for Primary Care, 2006].

Researchers use more specific definitions, often that of Wessel and colleagues: 'paroxysms of irritability, fussing or crying lasting for a total of three hours a day and occurring on more than three days in any one week for a period of three weeks in an infant who is otherwise healthy and well-fed' [Wessel et al, 1954].

Estimates of prevalence range from 5–20% of infants, depending on the definition used for colic (NICE CKS 2014).

The underlying cause of infantile colic is unknown.

- Suggested underlying causes include:
  - Parenting factors (for example overstimulating the baby and misinterpreting cries)
  - Gastrointestinal causes (for example gastro-oesophageal reflux and constipation)
  - Cow's milk protein allergy
  - Transient intolerance to lactose (rare)
- Others have suggested that colic is just the extreme end of normal crying, or that it is due to the baby's temperament (for example a baby with a sensitive temperament).

Possible complications

- Infantile colic can cause significant distress and suffering to the parents.
- Stress on the parents may affect their relationships with the child.
- Breastfeeding might be stopped earlier, or introduction to solid foods begun sooner, than would otherwise have happened.
- Infantile colic usually resolves by 3–4 months of age, and by 6 months at the latest, although it may persist for longer if it is associated with other conditions such as constipation, gastro-oesophageal reflux disease, and cow's milk protein allergy.

Note on simeticone and lactase drops

- Although studies of simeticone have not provided evidence of benefit in infantile colic, a 1-week trial as a placebo may still be worth a try because simeticone is easily available, cheap, licensed for this indication and has no reported side effects.
- Lactase drop has been shown to be moderately effective but the studies are small. However, these are not licensed for prescribing for colic under ACBS rules, so advise to buy over-the-counter.

The simple act of being able to give their babies something may help parents cope better with the crying

Useful resources for parents and health professionals

- CRY-SIS support group: www.cry-sis.org.uk Helpline number : 08451 228 669 (9.00-22.00 daily)
- NICE Clinical Knowledge Summary, November 2014 cks.nice.org.uk/colic-infantile

Appendices

Information sheets for parents / carers

A- Milk free diet for breastfeeding mums

B1- Milk-free diet for babies

B2- Milk and Soya free diet for babies

B3- Lactose free diet for babies

B4- Milk free recipes

C- Home milk challenge to confirm diagnosis of CMPA

D- Has my baby grown out milk allergy? The Milk Ladder

E- What can I do if my child won't eat?

F- High energy diet for babies

Forms for Health Professionals

H- Infant formula request form for Health Visitors

I- Infant formula request form for secondary care

J- Allergy focused clinical history for Health Visitors and GPs

Milk Free Diet
For breastfeeding mothers

Breastfeeding provides the best source of nutrition for babies. Occasionally breastfed babies can react to cow's milk proteins in breastmilk from the mother's diet. This dietary advice sheet gives some general information to help you make the recommended changes to your diet and should only be followed for 4 weeks.

If you have any other allergies or medical conditions, please seek further advice.

It is important for you to have a **milk free diet, and to avoid major sources of soya**. This is because many babies who cannot tolerate cow's milk also react to soya proteins
Soya can often be tried later to see if your baby reacts to it or not, but it is best not to include it for the first 4-6 weeks. However, do not worry about "soya lecithin" or "soya flour" in products such as bread and sausages.

You will need to avoid cows' milk, soya milk, dairy and soya yoghurts, dairy and soya custard, cheese and any product that contains these. Other mammal milks such as goat and sheep are **not** suitable alternatives as your baby is likely to react to these.
Suitable alternatives to cows' milk and soya milk: Calcium enriched oat milk, calcium enriched hemp milk, calcium enriched coconut/almond/hazelnut/cashew milks.

	milk and soya free foods	Foods to Avoid / check labels
Fruit & vegetables	All plain fruit and vegetables Fresh, dried, frozen or tinned	Vegetables mixed with sauces made from cows' milk Fruit mixed with ordinary yoghurt, custard, cream, ice-cream or soya alternatives
Meat, fish, eggs, quorn, pulses	Plain meat, fish, eggs, nuts and pulses Plain Quorn products (but check labels)	Meat, fish, eggs and pulses in a sauce made from cows' milk Processed/prepared meat/fish (check labels) Tofu
Dairy products	Calcium enriched milk alternatives can be used in cooking as well as in cereals E.g. Oat milk, nut milks, coconut based yoghurts	Cows', goats' and sheep's, Soya milk and all products made from these All cheeses, including cheese spreads, cream cheese, soya cheese Dairy or soya Ice cream, cream and desserts
Starchy food and cereals	Bread/rolls/wraps/bagels/pitta/crackers if no **milk** in ingredients (**soya** in the ingredients is fine) Flour, plain pasta and rice Plain potatoes Plain breakfast cereals (oats, cornflakes, Weetabix, shredded wheat (check labels)	Bread/rolls/wraps/bagels/pitta/crackers with **milk** in ingredients list. Filled pasta/ravioli or rice in cows' milk based sauces Processed potato products (check labels) Breakfast cereals which contain **milk**
Other foods	Any oils, lard, suet, dripping Dairy-free margarine e.g. Pure™, Vitalite™, Tomor™, Flora dairy-free, supermarket own dairy-free brand, Kosher and some vegan spreads Milk free chocolate and spread	Standard butter, ordinary margarine or spread Biscuits and cakes that contain **milk** Milk chocolate, most chocolate spread Large quantity of soya spreads

This sheet was written by Dietitians working in Dorset, Hampshire and the Isle of Wight - 2018

Ingredients to watch out for on labels

Milk and milk products will be indicated as '**Milk**' in bold on the ingredient list, so check the labels. Most supermarkets will provide a list of their milk-free foods on request

No need to avoid all products with '**soya**' in the ingredients. Only avoid the main source of soya such as soya milk and yogurts, soya desserts and cream, soya cheese and tofu.

When eating out, check with the restaurant or food outlets as they have to provide allergen information by law.

As a breastfeeding mum your daily calcium requirements are 1250mg. If this is not met from your diet, then you should take a supplement that provides 1000mg of calcium per day.

Use the following chart to check your calcium intake:

Food	Average Portion	Calcium (mg)
Alternative milk (calcium enriched)	100ml	120mg
Sardines	60g (1/2 small tin)	550
Pilchards	60g	300
Salmon (tinned with bones)	52g (1/2 tin)	47
Prawns	60g	90
Whitebait	50g	130
Lentils, boiled	100g	19
Cooked chickpeas	50g	25
Peanuts	20g	18
Tahini	15g (1 tablespoon)	100
Quorn mince	100g	30
White bread	100g (2 large slices)	100
Wholemeal bread	100g (2 large slices)	54
Calcium fortified bread	40g (1 slice)	191
Pitta bread/chapatti	65g (1)	60
Calcium fortified cereals	30g	137
Calcium fortified hot oat cereals	15d (1 tablespoon dry cereals)	200
Broccoli, boiled	85g (2 spears)	34
Spring greens	75g (1 serving)	56
Curly kale	67g	100
Medium orange	120g (1 medium)	75
Dried apricot	5 apricots	20

From the British Dietetic Association Food Fact Sheet on Calcium www.bda.uk.com

What about Vitamin D?

Vitamin D is needed by the body to absorb calcium and the best source is from the action of sunlight on the skin. Vitamin D is only found in a few foods so a supplement is recommended for everyone.

Target group	Recommended supplement (*SACN 2016*)	Do not exceed
Breastfeeding mothers	Equivalent to 10 micrograms /day or 400IU	100 micrograms /day

NB micrograms (mcg) can also be written as µg. IU stands for International Unit.

If your baby requires a cows' milk free diet then you should be referred to a Paediatric Dietitian or a trained Health Professional for advice on introducing solids and to ensure you are achieving a nutritionally adequate diet.

Milk Free Diet
For babies

Why a milk free diet?
Around 3% of children develop Cow's Milk Protein Allergy (CMPA). In most cases a strict cow's milk free diet is needed to treat the allergy. This information will help you avoid cow's milk whilst making sure your child gets all the nutrition they need to grow and develop well.

Which milk should be excluded?
All cow's milk including fresh, UHT, sterilised and dried milk should be avoided. The diet should be free of cow's milk protein (casein and whey) and milk sugar (lactose). Other mammalian milks are not suitable alternatives to cow's milk as their protein structure is similar and may still cause an allergic response. Therefore, do not use milks such as goats, sheep, camel and buffalo milk.

Replacing cow's milk
Milk is an important source of nutrition for babies and children. If you are breastfeeding, ideally continue to do so alongside introducing cow's milk protein free solids. This is because breastmilk can protect against developing other food allergies. Breastfeeding mothers should also follow a milk free diet (see 'Milk free diet for breastfeeding mothers').
If your baby is taking an infant formula, it needs to be a milk free formula.

Suitable infant formula free of cow's milk proteins
Your baby may have been prescribed an allergy formula such as Similac Alimentum, Althera, Nutramigen LGG, Aptamil Pepti, (or more rarely Alfamino, Puramino, Neocate or Pepti-Junior). They should continue this until 12 months or as advised by your Health Care Professional.

For babies over 6 months, Wysoy is a soya based infant formula to consider. This does not need to be prescribed as it is available to buy from pharmacies and larger supermarkets at a similar price to standard infant formula.

Most babies aged 6-12 months need approximately 600ml (20oz) each day to ensure they are meeting their nutritional needs, especially Calcium. Over 1 year this amount reduces to around 350ml (12oz). These amounts do vary according to the child and their diet. Check with your Health Visitor or Dietitian if you have concerns about their calcium needs.

Other alternatives to cow's milk for cooking
Alternatives to milk that are fortified with calcium are available to buy from most supermarkets. They can be used in cooking from six months of age or as a main drink after one year old.
Examples include: Soya, Nuts (Almond, Coconut, Cashew, Hazelnut), Oat or Hemp milks. Brands include Supermarket's own range, Alpro range, Oatly range. Rice milk should **not** be given to children under 4.5 years old.
Always choose a milk alternative that is fortified or enriched with calcium – they should provide at least 120mg of calcium /100mls. Organic versions do not usually have calcium added – check the label.

Please be aware that some milk alternatives may not be suitable for other allergies and some may be low in calories, protein, calcium and/or other vitamins and minerals. Discuss with your Health Visitor or Dietitian if unsure.

Foods to avoid
Some of the foods to avoid are obvious. However, many other foods may contain cow's milk proteins and these should be avoided too. Look for the list of ingredients printed on the package and avoid foods which have '**milk**' in bold on the label. When eating out, food outlets need to provide you allergy information by law, so always ask.

Check with your Pharmacist about tablets or medicines which may contain milk proteins and/or lactose.

Introducing solids (Weaning)
Starting solids for a baby who has Cow's Milk Protein Allergy should be the same as for non-allergic baby, except of course you must not give any foods that contain cow's milk or dairy products (see list). Aim to start around six months, but not before four months (17 weeks). For general information on introducing solids, check the NHS choice website (www.nhs.uk) and type in 'weaning' into the search box.

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Adapting Recipes

Many ordinary recipes can be adapted by using your milk alternative. Use a milk free margarine instead of butter, milk alternatives in place of milk, and soya/vegan cheese in place of ordinary cheese. Try making up batches of milk free meals/puddings and freezing them in ice-cube trays to allow you to serve small portions with less waste.

What about Calcium?

Calcium is needed for strong teeth and bones. Babies under 1 need 525mg/day, 1-3 year olds need 350mg/day.

Sources of Calcium (portion sizes are not necessarily baby size!)

Best source - Foods providing 250mg of Calcium	Portion Size
Sardines/pilchards – canned (including boned)	60g or half a tin
Soya cheese	55g
Tofu	50g
Calcium-enriched milk alternatives	200mls
Foods providing 150mg of Calcium	**Portion Size**
Curly Kale/spring greens	90g
Tahini paste (sesame seed paste)	20g (1 tsp)
Fortified milk free breakfast cereal	35g
Soya yoghurt/dessert	125ml pot
Foods providing 100mg of Calcium	**Portion Size**
Tinned salmon	115g or half a tin
Broccoli	90g
Baked beans / kidney beans	200g or half a tin
Foods providing 50mg of Calcium	**Portion Size**
White bread	60g (2 slices)
White flour products e.g. milk free hot cross buns	1
Cabbage	90g
Dried figs	20g or 1 dried
Foods providing 25mg of Calcium	**Portion Size**
Dried apricots	50g or small handful
Chapatti x 1	55g
Egg	1 medium
Hummus	50g
Dried fruit e.g. sultanas	50g or 2 tablespoons
White fish poached in water	170g
Wholemeal bread x 2 slices	60g

What about Vitamin D?

Vitamin D is needed by the body to absorb calcium and the best source is from the action of sunlight on the skin, however young children should not be exposed to the sun for long. Vitamin D is only found in a few foods so a supplement is recommended for everyone.

Target group	Recommended supplement (*SACN 2016*)	Do not exceed
Breastfeeding mothers	Equivalent to 10 micrograms /day or 400IU	100 micrograms /day
Breastfed babies up to 12 months	Equivalent to 8.5-10 micrograms or 350-400IU	25 micrograms /day
Formula fed babies up to 12 months	Only if less than 500mls formula/day	25 micrograms /day
Ages 1-4 years	Equivalent to 10 micrograms /day 400IU	50 micrograms /day

NB micrograms (mcg) can also be written as µg.

A supplement containing vitamins A, C and D can be given from 6 months, rather than Vitamin D alone (Department of Health advice). This is a precaution because growing children may not get enough of these vitamins, especially those not eating a varied diet, such as fussy eaters. Supplements are available to purchase in pharmacies and supermarkets, or may be available on prescription. Ask your Health Visitor or Dietitian for advice.
Vitamins are also available from the Healthy Start Scheme.

Useful website for further help and practical tips: http://www.cmpasupport.org.uk/

Milk and Soya Free Diet
For babies

Why a milk and soya free diet?
Around 3% of children develop Cow's Milk Protein Allergy. Some children who are allergic to cow's milk protein are also allergic to soya protein so this may need to be excluded from the diet too. It can take longer for children to recover, but many 'grow out' of cow's milk and soya protein allergy. This information will help you avoid cow's milk and soya whilst making sure your baby gets all the nutrition they need to grow and develop well.

Which milks should be excluded?
All cow's milk and Soya milk including fresh, UHT, sterilised and dried milk should be avoided. The diet should be free of cow's milk protein (casein and whey), milk sugar (lactose) and soya proteins. Other mammalian milks are not **suitable alternatives to cow's milk as their protein structure is similar and may still cause an allergic response. Therefore, do not use milks such as goats, sheep, camel and buffalo milk.**

Replacing cow's and soya milk
Milk is an important source of nutrition for babies and children. If you breastfeed you baby, ideally continue to do so when introducing cow's milk and soya protein free solids. This is because breastmilk can protect against developing other food allergies. Breastfeeding mothers should also follow a milk and soya free diet (see 'milk free diet when you are breastfeeding').
If your baby is taking an infant formula, it needs to be a milk and soya fee formula.

Suitable infant formula free of cow's milk and soya proteins
Your baby may have been prescribed an allergy formula such as Similac Alimentum, Althera, Nutramigen LGG, Aptamil Pepti (or more rarely Alfamino, Puramino, Neocate or Pepti-Junior). They should continue this until 12 months or as advised by your Health Care Professional.

Most babies aged 6-12 months need approximately 600ml (20oz) each day to ensure they are meeting their nutritional needs, especially Calcium. Over 1 year this amount reduces to around 350ml (12oz). These amounts do vary according to the baby and their diet. Check with your Health Visitor or Dietitian if you have concerns about their calcium needs.

Other alternatives to cow's milk and soya milk for cooking
Alternatives to milk that are fortified with calcium are available to buy from most supermarkets. They can be used in cooking from six months of age or as a main drink after one year old.
Examples include: Nuts (Almond, Coconut, Cashew, Hazelnut), Oat or Hemp milks. Brands include Supermarket's own range, Alpro range or Oatly range. Rice milk should **not** be given to children under 4.5 years old.
Always choose a milk alternative that is fortified or enriched with calcium – they should provide at least 120mg of calcium /100mls. Organic versions do not usually have calcium added – check the label

Please be aware that some milk alternatives may not be suitable for other allergies and some may be low in calories, protein, calcium and/or other vitamins and minerals. Discuss with your Health Visitor or Dietitian if unsure.

Foods to Avoid
Some of the foods to avoid are obvious. However, many other foods may contain cow's milk and/or soya proteins and these should be avoided too. Look for the list of ingredients printed on the package and avoid foods which have '**milk**' and/or '**soya**' in bold on the label. When eating out, food outlets need to provide you allergy information by law, so always ask.

Check with your Pharmacist about tablets or medicines which may contain milk or soya proteins and/or lactose.

Introducing solids (Weaning)
Starting solids for a baby who has Cow's Milk and Soya Protein Allergy should be the same as for non-allergic baby, except of course you must not give any foods that contain cow's milk, soya or dairy products. Aim to start around six months, but not before four months (17 weeks). For general information on introducing solids, check the NHS choice website (www.nhs.uk) and type in 'weaning' into the search box.

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Adapting Recipes

Many ordinary recipes can be adapted by using your milk alternative. Use a milk and soya free margarine instead of butter and milk alternatives in place of milk. Try making up batches of milk and soya free meals/puddings and freezing them in ice-cube trays to allow you to serve small portions with less waste.

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Calcium is needed for strong teeth and bones. Babies under 1 need 525mg/day, 1-3 year olds need 350mg/day.

Sources of Calcium (portion sizes are not necessarily baby size!)

Best source - Foods providing 250mg of Calcium	Portion Size
Sardines – canned (including boned)	60g or half a tin
Calcium-enriched milk alternatives	200mls
Foods providing 150mg of Calcium	**Portion Size**
Curly Kale/spring greens/spinach	90g
Tahini paste (sesame seed paste)	20g (1 tsp)
Fortified breakfast cereal (check label for 'soya' and 'milk')	35g
Pilchards	60g or half a tin
Foods providing 100mg of Calcium	**Portion Size**
Tinned salmon	115g or half a tin
Broccoli	90g
Baked beans / kidney beans	200g or half a tin
Foods providing 50mg of Calcium	**Portion Size**
Cabbage	90g
Dried figs	20g or 1 dried
Foods providing 25mg of Calcium	**Portion Size**
Dried apricots	50g or small handful
Chapatti x 1	55g
Egg	1 medium
Hummus	50g
Dried fruit e.g. sultanas	50g or 2 tablespoons
White fish poached in water	170g

What about Vitamin D?

Vitamin D is needed by the body to absorb calcium and the best source is from the action of sunlight on the skin, however young children should not be exposed to the sun for long. Vitamin D is only found in a few foods so a supplement is recommended for everyone.

Target group	Recommended supplement (*SACN 2016*)	Do not exceed
Breastfeeding mothers	Equivalent to 10 micrograms /day or 400IU	100 micrograms /day
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Formula fed babies up to 12 months	Only if less than 500mls formula/day	25 micrograms /day
Ages 1-4 years	Equivalent to 10 micrograms /day 400IU	50 micrograms /day

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A supplement containing vitamins A, C and D can be given from 6 months, rather than Vitamin D alone (Department of Health advice). This is a precaution because growing children may not get enough of these vitamins, especially those not eating a varied diet, such as fussy eaters.

Supplements are available to purchase in pharmacies and supermarkets, or may be available on the Healthy start Scheme. Ask your Health Visitor or Dietitian for advice

Useful website for further help and practical tips: http://www.cmpasupport.org.uk/

Lactose Free Diet
For babies

Some babies **temporarily** do not tolerate the natural milk sugar 'lactose' which is found in breastmilk and ordinary infant formula (made from cow's milk, and also in goat's and sheep's milk).
Lactose intolerance in infants is usually a short-term problem. It occurs most often following a bad bout of gastroenteritis (stomach bug) and can lasts for up to 2 - 4 months. Lactose should only be avoided if the symptoms cause significant distress to the baby (e.g. crying, pain, nappy rash etc.)

Lactose-free infant formulas are available such as SMA LF, Aptamil Lactose Free or Enfamil 0-Lac
These taste similar to ordinary formulas and are available from pharmacies to buy.
Until the age of 1, it is important your baby drinks at least 600ml (20 ounces) a day of a lactose-free formula to receive sufficient nutrients, especially calcium.

General advice for introducing solids (Although this will not be dairy free specific, more detailed information available at http://www.nhs.uk/start4life/documents/pdfs/introducing_solid_foods.pdf)

- Solid food should be introduced at **around** 6 months of age, when your baby shows signs that he/she is ready (sitting up, holding head, reaching for food…).
- First foods can include a wide range of simple, unprocessed foods (rice, oats, barley, semolina, peas, beans, lentils, meat, fish, eggs, ground nuts, fruit and vegetables).
- Babies progress at different paces. You can offer different consistencies: smooth, soft, mashed foods, or finger foods.
- Gradually increase the amount and range of foods to include foods from the 'allowed' list overleaf.
- Never add sugar or salt to your baby's food, and avoid processed foods (foods with more than a handful of ingredients on the label).
- Wheat, nuts, seeds, fish, shellfish, eggs and soya should not be introduced until 6 months of age.
- Never leave a baby unsupervised with foods.
- By 1 year of age, most babies can manage to eat chopped up family meals.

Can I give other drinks?
The main drink for your baby needs to be breastmilk and/or lactose-free formula. If other drinks are needed, cooled boiled water is the best drink to give. Baby juices are not necessary and they would just encourage your baby to have a sweet tooth. Tea should not be given to babies and small children as it reduces iron absorption from your child's diet.

Milk substitutes to be used in cooking
If your baby is having a Lactose Free formula, these can be used in cooking. The Lacto-free brand milk and products can also be used. Alternatively soya, oat, hemp or nut milks can be used in cooking (as long as they are calcium enriched and not used as a main drink until 1 year of age). Please note rice milk is **not** recommended for babies and children under 5 years.

Lactose and cheese
Lactose is found in soft cheeses e.g. cream cheese and cheese spreads, mozzarella, feta. However, due to the maturing process of hard cheese, most of the lactose has been removed. Therefore, hard cheeses such as cheddar and Edam are usually tolerated on a lactose-free diet.

Check labels: **All milk-containing products must now clearly state 'milk' in the ingredient panel on the label. Most supermarkets will provide a list of milk free foods.**

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	Lactose free Foods	Foods to avoid or check labels for 'milk' in the ingredient list
Fruit and Vegetables	All plain vegetables and fruit – puréed, mashed and finger foods Fruit mixed with dairy-free alternative to custard, cream	Vegetables mixed with sauces made from cow's milk Fruit mixed with ordinary yogurt/custard/cream/ice-cream
Meat/fish/ eggs/pulses/ nuts*	Plain meat/fish/eggs/pulses/nuts/quorn/tofu	Processed Meat/ fish/ eggs/ pulses/ nuts products Or in sauces made from cow's milk Some meat alternative (Vegetarian) products
Dairy Products	Lactose-free infant formula Lacto-free brand products (can be used in cooking from 6 months) Dairy-free yogurts and desserts Hard cheese e.g. Cheddar, Edam	Cow's, goat's and sheep's milk and all products made from these Ordinary yogurts Soft cheese e.g. cheese spreads, cream cheese, mozzarella, feta
Starchy Foods	Bread and Flour Potatoes, sweet potatoes Pasta, Rice Breakfast cereals (check label)	Milk breads, brioche Pasta in cow's milk based sauces Breakfast cereals which contain milk/ chocolate
Others	Any oils, lard, dripping Dairy-free margarine e.g. Pure™, Vitalite™, Tomor™, Flora dairy-free, supermarket own dairy-free brand Biscuits/cakes if milk-free	Butter, ordinary margarine Ice-cream, cream Milk chocolate, chocolate spread Biscuits/cakes that contain milk
Baby Jars/ Packets	All baby jars/packets/rusks which do not have '**milk**' in the ingredient list	All baby jars/packets/rusks which Have '**milk**' in the ingredient list

*consistency given appropriate to age

How long does my baby need a lactose-free diet?

Most babies grow out of lactose intolerance once their gut has recovered.
To test this, try giving **small** amounts of dairy products e.g. ordinary yogurt or food made from cow's milk.
If your baby has loose nappies **and** is unsettled, stop lactose-containing foods and try again in 1 - 2 weeks.
It will take a bit of time for your baby to regain his/her ability to digest lactose, so increase the amount **gradually.**
If your child is still lactose intolerant at 1 year of age, please ask your Health Visitor/GP to refer her/him to a registered Dietitian.

What about Vitamin D?

Vitamin D is needed by the body to absorb calcium and the best source is from the action of sunlight on the skin, however young children should not be exposed to the sun for long. Vitamin D is only found in a few foods so a supplement is recommended for everyone.

Target group	Recommended supplement (*SACN 2016*)	Do not exceed
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Ages 1-4 years	Equivalent to 10 micrograms /day 400IU	50 micrograms /day

NB micrograms (mcg) can also be written as µg.

Milk free recipes

Many items that usually contain cows' milk protein can be adapted by using a suitable milk alternative and a dairy free margarine. All the family can then eat the same foods helping you to provide a range of healthy meals. Recipes can easily be adapted for soya free diets too – avoiding soya cheese alternatives and using a non-soya alternative to milk and a non-dairy spread that is soya free.

Helpful hints

- Many meals do not need to contain milk - such as roast dinners or casseroles served with potatoes and plain vegetables.
- Use a calcium fortified milk alternative (e.g. soya, oat, coconut…) to make sauces, pancakes, batter and desserts. Do not use rice milk for children Under 4.5 years old.
- Use cornflour mixed with water to thicken sauces, or make a roux with a milk free margarine and your child's milk alternative.
- Allow hot drinks to cool a little before adding soya milk as it may curdle.
- Grate soya/vegan hard cheeses on the fine part of the grater if they are not melting very well.
- Use a dairy free melting cheese (Cheezly super-melting mozzarella™) on pizza, cheese on toast and on lasagne.
- Use a hard dairy free cheese (Sheese™) to make cheese sauces. Grate on the fine part of the grater so that it melts more easily. Using a microwave will save it sticking to the bottom of the saucepan (which also works for dairy free custard & porridge).
- Use plain dairy free yogurts or coconut milk alternative to make curries, raita, stroganoffs, creamy sauces and dips.
- Try Soyatoo™ whipping cream (spraycan), or Oatly cream as an alternative to cream.
- Use dairy free/vegan cream cheese/sour cream or dairy free plain yogurt in dips, cheesecakes, quiches and savoury and sweet sauces.

Recipes

Savoury	Sweets and Desserts	
Basic white sauce	Custard	Sponge cake
Fish Pie	Rice pudding	Cherry muffins
Shepherd's Pie	Pancakes	Flapjacks
	Ice cream	Ginger biscuits

Some recipes taken from 'Cow's milk free diet for infants and children' Produced by FAISG of the BDA (2012)

Milk free recipes

Basic White Sauce

Ingredients:
20g (¾oz, 1tbsp) dairy free margarine
20g (¾oz, 1tbsp) plain flour or corn flour
300ml (½pint) milk alternative
Salt and pepper to taste

Hob Method:
Place all ingredients in a pan and heat gently, whisking continuously until the sauce thickens.

Microwave Method:
Place all ingredients in a bowl. Whisk to remove lumps. Microwave it for 30 seconds and then whisk. Repeat this until it makes a smooth sauce. Flavour with cooked mushrooms, vegetables or parsley.

Custard (Hob or microwave)

Ingredients:
150ml (¼pint) milk alternative
15g (½oz, ½tbsp) milk free custard powder

Method:
Mix the custard powder with 2 tablespoons of the milk alternative. Gently warm the remaining milk alternative on the hob or in the microwave until almost boiling. Remove from the hob/ microwave and pour over the custard paste, stirring continuously. Return to the hob/ microwave and heat for 2-3 minutes stirring regularly.

Ginger biscuits

Ingredients:
75 g (3oz) golden syrup
150 g (6oz) self-raising flour
100g (4 oz) milk free margarine
10ml (2 level tsp) ground ginger
75 g (3 oz) caster sugar
Large pinch of bicarbonate of soda

Oven temperature: 375°F / 190°C / Gas Mark 5

Method:
Grease two baking sheets
Sieve flour, ginger and bicarbonate of soda into a bowl
Melt syrup, margarine and sugar in a pan
Stir and leave to cool for 5 minutes
Form into balls, place on baking sheet and flatten slightly
Bake for 10 minutes. Transfer to wire rack to cool whilst still warm

Fish Pie (for family of 4)

Ingredients:
300 g (12oz) fillet of haddock or cod
300g (12oz) potatoes
1 hard-boiled egg
2 tomatoes
50ml (2 fl oz) milk alternative
15 g (1/2 oz) milk free spread
300ml parsley sauce (use white sauce recipe and add 2 tbsp parsley)

Oven temperature: 350°F / 180°C / Gas Mark 4

Method:
Bake fish for 20 minutes. Boil potatoes and make parsley sauce. Flake cooked fish and add to sauce, season and place in ovenproof casserole dish. Skin and slice tomatoes, slice hard-boiled egg and place on top of fish. Cream potatoes with milk free spread and alternative milk, season and place on top of fish mixture. Bake in the oven for 20 minutes.

Shepherd's Pie (for family of 4)

Ingredients:
450g minced lamb
1 large onion
½ courgette
4 medium mushrooms
Tin of chopped tomatoes
2 tbsp tomato puree
Beef stock cube (milk free)
1 garlic clove
2 large potatoes
1 dessertspoon of milk free spread
1 tbsp milk alternative

Method:
Fry the mince in the frying or saucepan with oil if needed. When brown, drain off excess fat. Add chopped onion and garlic, cook for 2 minutes then add chopped courgette and mushrooms. Cook for 5 minutes. Add chopped tomatoes, tomato puree, season with salt and pepper. Mix well. Leave to simmer for 20 minutes. Meanwhile peel, slice and boil the potatoes for 15 minutes. Once cooked mash with milk alternative and milk free spread. Place meat sauce in an ovenproof dish and spread the mashed potato on top. Cook in the oven at 350°F / 180°C / Gas Mark 4 for 10 minutes.

Milk free recipes

Rice Pudding

Ingredients:
50g (2oz) pudding rice
600ml (1 pint) milk alternative
25g (1oz) caster sugar

Method:
Put rice and milk into a pan. Heat gently for 2 hours, stirring occasionally. Add sugar and serve.

Or, put rice, milk and sugar into a greased ovenproof dish and bake in an oven at 150ºC (300ºF, gas mark 2) for 2 hours, stirring occasionally.

Muffins – orange & cherry

Ingredients:
1 orange
125ml (4 fl oz) orange juice
1 egg
185 g (6 oz) plain flour
170 g castor sugar
125 g milk free spread
1 tsp bicarbonate of soda
1 tsp baking powder
¼ tsp salt
125 g cherries (washed)

Preheat oven to 220°C (400°F, gas mark 6)

Method:
Peel rind from orange, remove all pith, cut rind into small pieces. Remove membrane and seeds from orange and cut into small segments.
In a food processor, place orange rind, segments and orange juice, milk free spread and egg and process until combined and mixture has curdled. Transfer into a large bowl. Sift in flour, bicarbonate of soda, baking powder and salt and mix lightly to combine. Batter should be lumpy. Fold in cherries. Divide batter between 12-16 greased muffin tins or cases, filling two thirds full. Bake for 18-20 minutes and cool on a wire rack.

Easy Ice-Cream

Use soya ready-made custard (e.g. Alpro™, Provamel™), put in ice-cream machine (according to volume specified by the manufacturer) and select the standard ice cream setting. Alternatively, put the custard in the freezer and stir or whisk once an hour until almost frozen.

Sponge Cake

Ingredients:
120g (4oz) dairy free margarine
120g (4oz) caster sugar
120g (4oz) plain sifted flour
1 teaspoon baking powder
2 eggs

Method:
Blend the margarine and sugar together until light and fluffy. Beat in the eggs slowly. Stir in the flour and baking powder, place in a greased and floured 18cm/7inch cake tin and bake at 180ºC (360ºF, gas mark 4) for 30 –40 minutes.

Adaption for chocolate cake - replace 2 dessertspoons of flour with cocoa (milk free).

Flapjacks

Ingredients:
100 g (4oz) milk free margarine
200g (8oz) rolled oats
4 level tbsp golden syrup
Pinch of salt
75g (3oz) granulated sugar

Oven temperature: 335°F / 170°C / Gas mark 3

Method:
Grease a square shallow tin (approx 18cm/7inch)
Melt margarine and syrup in a pan over a gentle heat
Remove from heat; add sugar, oats and salt
Mix thoroughly, turn into prepared tin
Bake for 30-40 mins until golden brown
Leave to cool in the tin for 5 minutes then cut into

Pancakes

Ingredients:
300ml milk alternative
1 egg
125 g plain flour
4tsp sunflower oil

Method:
Sieve the flour, make a well and crack the egg into it. Mix together and gradually add the milk alternative until smooth.
Heat the oil in a non-stick frying pan, add a ladle of mixture, tip the pan so its just enough to cover the base, cook for 30 seconds. Use a spatula to flip the pancake over and cook for another 30 seconds. Repeat until used up the batter. Serve with sugar and lemon juice.

Home Milk Challenge

To confirm Cow's Milk Protein Allergy

For children with mild to moderate symptoms

It is important to try your baby with milk now. This is to make sure that any improvement in their symptoms is due to cutting out milk (and they have a cow's milk protein allergy) rather than for any other reason.

- **Do NOT start this challenge if your child has had a positive blood or skin test (Specific IgE or Skin Prick Test) to cow's milk.**
- **Do NOT start this challenge if your child is unwell, e.g.**
  - Has a cold or any other lung infections or breathing problems
  - Any tummy/bowel problems e.g. tummy ache or loose nappies
  - Any 'teething' signs that are upsetting your child
  - Atopic dermatitis (eczema) has flared up
- **Do NOT start this challenge if your child is having any medication which may upset their tummy, e.g. antibiotics.**
- **Do NOT try any other new foods during this challenge.**

Try to write down what your child eats and drinks during the challenge. Also note any symptoms e.g. sickness, loose nappies, rashes or any changes in their atopic dermatitis.

Home challenge for a formula fed baby (Those taking formula with or without some breastfeeds):

Follow the advice in the adjacent table: each day, increase the amount of cow's milk formula given in baby's **FIRST** bottle of the day. Use the scoop provided in each

Day	Volume of boiled water	Cow's milk formula No. of scoops	Hypoallergenic formula No. of scoops
1	150mls	1 in the 1st bottle of day	4 in the 1st bottle of day
2	150mls	2 in the 1st bottle of day	3 in the 1st bottle of day
3	150mls	3 in the 1st bottle of day	2 in the 1st bottle of day
4	150mls	4 in the 1st bottle of day	1 in the 1st bottle of day
5	150mls	5 in the 1st bottle of day	0 in the 1st bottle of day

If you have not seen any symptoms in your child by day 5 (when you have completely replaced one bottle a day with cow's milk formula) you can try giving cow's milk formula for each feed they would usually have from a bottle.

Home challenge for an exclusively breastfed baby:

Simply start eating dairy products to the same levels as before starting on the diet.

All babies:

If you see any obvious symptoms e.g. sickness, tummy pains, a rash, itching, STOP the challenge. Go back to the previous formula baby was taking or to a milk free diet if you are breastfeeding, and inform your GP.

If you do not see any symptoms within 2 weeks of your baby having more than 150mls cow's milk formula per day, or you having resumed your normal diet containing milk, then your baby does not have a cow's milk protein allergy.

This sheet was written by Dietitians working in Dorset, Hampshire and the Isle of Wight - 2018

The Milk Ladder

Has my baby grown out of Cow's Milk Protein Allergy?

An assessment of your child's allergy, medical history and/or results indicate that it is time to see if they have outgrown their food allergy. This can be done by adding milk into the diet gradually at home.

Milk is introduced into the diet by following a 'milk ladder' where each food contains increasing levels of milk protein. It is important to start with well-cooked/processed milk first before progressing to 'raw' dairy products. This 'milk ladder' is based on scientific research. Some of the foods may seem unusual to include in an infant's diet, but it is because the type and amount of protein is suitable for the reintroduction process.

Remember, these foods are part of a mixed diet and are not expected to be a significant part of the child's diet.

The Milk Ladder should only be used in children with Mild to Moderate Non-IgE cow's milk protein allergy under the supervision of a healthcare professional.

- **Do NOT start this challenge if your child has had a positive blood or skin test (Specific IgE or Skin Prick Test) to cow's milk.**
- **Do NOT start this challenge if your child is unwell, e.g.**
  - Has a cold or any other lung infections or breathing problems
  - Any tummy/bowel problems e.g. tummy ache or loose nappies
  - Any 'teething' signs that are upsetting your child
  - Atopic dermatitis (eczema) has flared up
- **Do NOT start this challenge if your child is having any medication which may upset their tummy, e.g. antibiotics.**
- **Do NOT start this challenge if your child is taking antihistamin (e.g. Piriton, Zirtek...)**
- **Do NOT try any other new foods during this challenge.**

Throughout the challenge, it is useful to keep a record of the foods tried/the amounts eaten and any reaction (including how long after the food was eaten did the reaction occur).

Before starting the Milk Ladder

Make sure you have a suitable antihistamine at hand (ask your pharmacist)

Start the challenge by testing some cow's milk on your child's skin (on the cheek or where eczema may flare up).

Wait a couple of hours, if no reaction (e.g. rash/itchy skin) progress to the Milk Ladder. Each of the foods listed contain progressively more milk protein in them. Try each food for a few days (up to a week) before moving onto the next food.

This sheet was written by Dietitians working in Dorset, Hampshire and the Isle of Wight - 2018

The Milk Ladder (available here on the web)

This Milk Ladder is designed to be used with homemade recipes to ensure that each step has the appropriate milk intake. You can ask your health professional for the recipes if you wish. If you prefer to use store-bought alternatives seek further advice from your healthcare professional if necessary.

1. One malted milk biscuit, build up to three. If using store-bought biscuits rather than homemade look for a biscuit that contains milk powder rather than whey powder.
2. Half a muffin and build up to one muffin.
3. Half a pancake and build up to one. If using store-bought pancakes, they should contain milk protein rather than whey powder. (Pancakes contain less milk than muffins but are cooked for a shorter time).
4. Half an ounce (15g) of hard cheese such as cheddar or parmesan. Once tolerated introduce 15g baked cheese e.g. on a pizza or lasagne
5. Try 125mls (4.5oz) yogurt. Once your child tolerates yogurt you can include butter, chocolate buttons and cream cheese.
6. Pasteurised milk (or suitable infant formula). Introduce 100mls pasteurised cow's milk or infant formula (powder) and mix with current milk replacement. If this is tolerated switch all current milk replacements to pasteurised milk or suitable infant formula. UHT and sterilised milk will be tolerated as well.

Some children may be able to tolerate a certain amount of cow's milk in their diet e.g. include milk in foods, have ordinary butter/margarine and cheese but are unable to tolerate drinks of milk. If they have more than the amount that they are able to tolerate then they may develop symptoms (up to 48 hours later). If this is the case it is sensible to include dairy products and cow's milk up to the certain amounts they can tolerate while remaining symptom free.

If at any time your child has a reaction then you should STOP THE TEST but re-try in 6 months.

Symptoms of a reaction are usually similar to the reaction your child first presented with.

These include:

- Tingling, itching in mouth
- Developing rash
- Dry/red patches of skin appearing
- Nausea/vomiting
- Abdominal pain
- Diarrhoea / constipation
- Wheezing (give inhaler if available)

If any of these occur at any stage in the reintroduction, give your child some antihistamine and monitor their condition.

You and/or your child may feel quite nervous about trying this milk challenge, this is quite normal but you can help them by allowing adequate time and doing the challenge at home under your supervision in a calm environment.

They may also find cow's milk products have a different taste/smell to the foods they are used to. Give your child time to accept the new tastes and flavours during the challenge period.

High Energy Diet
For babies

All children need to eat a variety of foods to achieve a balanced diet that is essential for growth and good health. Some children who are not growing well or who have certain medical conditions may need extra calories and protein in their diet.

General advice

- Aim to give 3 meals and 2-3 small snacks daily. Spread the meals and snacks evenly throughout the day.
- Avoid foods labelled as 'low fat' or 'diet'.
- Avoid offering drinks 1 hour before meals as they can reduce their appetite.
- Measure & record your child's weight regularly: once every 2 month is usually recommended.
- All babies under 1 should take an over the counter childrens' multivitamin supplements each day which includes vitamin D, unless they drink 500mls of infant formula.

The 5 Food Groups	Do	Best choices	Top tips
Milk, cheese, yogurt Give your child breast or formula milk until they are at least 1 year old.	Use full fat dairy products or alternatives (the fat content should be **at least** 4grams / 100grams)	Cheddar / cream cheese Greek style yogurt, full fat yogurt or fromage frais or thick & creamy yogurts	Add to sauces, omelettes, scrambled eggs, jacket potatoes, mashed potato, vegetables, baked beans etc.
Fats & Oils Fats are the richest source of calories	Avoid low fats spreads Use an oil high in mono-unsaturated fats	Butter or margarine Olive, sunflower, rapeseed or corn oil Full fat mayonnaise Double or whipping creams	Spread generously and add to potatoes/ vegetables Fry or roast foods with added fat Drizzle foods with oil before serving Use cream for puddings, drinks, sauces and soups
Protein rich foods	Aim for 2 portions daily	Meat and meat alternatives (quorn, soya mince etc.) Eggs, pulses (lentils, beans) Salmon and mackerel Ground almonds, peanut butter	Add fat/cook in fat to boost their calorie value Avoid removing the fat from meat, and avoid 'lean' meats Choose oily fish instead of white fish, fish tinned in oil rather than brine Add to cereals, yoghurts & desserts
Starchy foods	Include at least one portion at each meal	Cereals, breads, potatoes, pasta, rice	Add a generous serving of butter, cream, margarine or oil
Fruit & vegetables These are low in calories but are an important source of vitamins and minerals	Aim to give up to 5 small portions per day. One portion is about half an adult handful or a tablespoon	Avocados Dried fruit Smoothies and fruit juices Vegetables	Try mashed as a dip or in sandwiches Limit dried fruit /smoothies to one serving a day as they are high in sugar Serve with oil, butter, margarine, cream or cheese to boost the calories

Sugary foods such as biscuits, cakes, sweets & chocolate, ice cream **should be limited** to after meals rather than snacks. Choose no added sugar drinks such as milk or water and **avoid** fizzy drinks.
Sugar is harmful to your child's teeth — aim to brush their teeth twice a day and visit the dentist regularly.

Between-meal snack ideas

Small energy dense snacks can be useful to boost nutritional intake but avoid within one hour of meals, as they may reduce their appetite:

- Banana, dried fruit (watch the size to avoid choking risk)
- Mashed avocado +mayonnaise, peanut butter or cream cheese on bread/toast (or bagel/ crumpets)
- Cheese pieces
- Greek style Yogurt, plain or with fruit puree

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What can I do if my child won't eat?

- Mealtimes are a time for learning about food and eating and should be an enjoyable experience. Eating together as a family encourages the child to copy eating and drinking behaviour. It is also a social time for families so eating together should be encouraged.
- Make sure your child is sitting in an appropriate chair and is sitting with the rest of the family.
- A calm, relaxed environment for eating and drinking may be helpful for some children, especially if they are easily distracted, however some children may benefit from background noise. Try both approaches to find out what works best for your child.
- Use brightly coloured bowls and plates. These may make the meal look more appealing.
- Try not to show your concern or make negative comments in front of your child.
- Never leave your child unsupervised whilst he or she is eating or drinking.
- Offer regular meals and snacks at set times, as this is better than letting your child 'pick' through the whole day.
- Avoid fluids just before and during meals, as this will reduce your child's appetite. Often children are not hungry because they have had too much juice or milk during the day and night. Try to avoid giving more than 1½ pints of fluid during the day. Children over the age of one year should only be offered milk or water; and not be given drinks during the night.
- Give your child lots of positive praise when he or she does eat and ignore any food refusal; calmly offer the food three times before telling your child the meal is over, then remove the meal without any further comment.
- Limit mealtimes to 20 minutes. Try not to rush a meal, as your child may be slow to eat, but try not to let the meal drag on for too long. Your Dietitian will advise you on how to increase the energy density of your child's meal so the mealtime can be reduced, if necessary.
- Offer new foods in a predictable pattern, e.g. once a week for 8 weeks. Intersperse new meals with old ones. E.g. 3 new teatime/lunches and 4 tolerated teatime/lunches a week.
- Do not worry if they make a mess, this is an important part of your child's development. If your child stops eating at a meal, try once to encourage him or her to take a little more. If this is successful show that you are pleased and give positive verbal reinforcement.
- Never use food as a reward.
- **NEVER force feed your child**.
- **Only check your child's weight once every 8 weeks**. Most fussy eaters maintain good growth despite their apparent lack of intake.

This sheet was written by Dietitians working in Dorset, Hampshire and the Isle of Wight - 2018

Infant Formula – Request Form from Health Visitors

All fields must be completed – incomplete forms will be returned to the Health Visitor

Child Details	
Name	
DOB	
Address	
NHS nber	

Surgery details	
Surgery Name	
Phone	
Fax	
email	

Health Visitors details			
Name		Contact number	
Date		Base	

Assessment (NICE recommendation CG116)

Allergy-Focused Clinical History Completed & attached	☐ **Yes**

Treatment / Advice

Refer to the Infant Formula Guidelines for more detailed information on / help with conditions

Gastro-oesophageal Reflux Disease (GORD) – Thickened Formulas		
Advise parent to purchase OTC *DO NOT PRESCRIBE*	*Aptamil anti-reflux, Cow&Gate anti-reflux®* *SMA Pro anti-reflux or HiPP organic anti-reflux*	*Advise on preparation*
If anti-reflux formula not possible	*Carobel Instant® to add to usual formula*	☐

Secondary Lactose intolerance (Primary lactose intolerance is rare) up to 8 weeks	
Formula-fed / Mixed	
Advise parent to purchase OTC *DO NOT PRESCRIBE*	*SMA LF® Aptamil Lactose- Free®* *Enfamil O-Lac®*

Cows Milk Protein Allergy – Mild-Moderate (Extensively Hydrolysed Formulae or EHF)					
Key	**Product**	**Pack Size**	**Cost per 100Kcal***	**Tick**	**Quantity***
1st Line	Similac Alimentum®	**400g tin**	**£0.43**	☐	
	SMA Althéra®	**450g tin**	**£0.47**	☐	
	Aptamil Pepti 1®	**400g tin**	**£0.50**	☐	
	Aptamil Pepti 2®	**400g tin**	**£0.50**	☐	
	Nutramigen LGG 1®	**400g tin**	**£0.56**	☐	
	Nutramigen LGG 2®	**400g tin**	**£0.58**	☐	

*Prescribe **2 tins initially** until compliance / tolerance is established.

Written information given	Details:
Follow Up Plan	Details

Infant Formula - Request Form from Secondary Care

All fields must be completed – incomplete forms will be returned to the requesting clinician

PATIENT DETAILS	
Name	
DOB	
NHS number	

SURGERY DETAILS	
Name	
Phone	
Fax	

PAEDIATRIC DIETITIAN / PAEDIATRICIAN DETAILS			
Clinician / Dietitian		Direct Dial	
Date of consultation		Location	

DIAGNOSIS

☐ Cow's milk protein allergy	☐ Faltering growth	☐ Secondary lactose intolerance
☐ Pre-Term / IUGR infant	☐ Gastro-Oesophageal Reflux Disease (GORD)	
☐ **Other** – Specify:		
Date of **next** review to **assess** ongoing need for infant formula		

PRESCRIPTION REQUEST DETAILS

Treatment Goals / Duration	
Expected date of Milk Challenge if applicable	

Key	Product	Pack Size	Cost / 100Kcal*	Tick	Quantity** / Direction
Formulae devised for pre-term or IUGR baby post discharge from hospital					
1st Line	**Nutriprem 2 Powder®**	**900g tin**	**£0.26**	☐	
	SMA Pro Gold Prem 2®	**400g tin**	**£0.24**	☐	
Extensively Hydrolysed Formulae (EHF) - Cow's Milk Protein Allergy 1st line					
1st Line	Similac Alimentum	**400g tin**	**£0.43**	☐	
	Althéra	450g tin	£0.47	☐	
	Aptamil Pepti 1®	400g tin	£0.50	☐	
	Aptamil Pepti 2®	400g tin	£0.50	☐	
	Nutramigen LGG Lipil 1®	400g tin	£0.56	☐	
	Nutramigen LGG Lipil 2®	400g tin	£0.58	☐	
Amino Acid Formulae					
2nd Line	**SMA Alfamino**	**400g tin**	**£1.14**	☐	
	Nutramigen Puramino®	400g tin	£1.38	☐	
	Neocate LCP® / Syneo®	400g tin	£1.51	☐	
EHF with Medium Chain Triglycerides (MCT)					
Highly specialised	Aptamil Pepti-Junior®	450g tin	£0.57	☐	
	Pregestimil Lipil®	400g tin	£0.62	☐	
High Energy Formulae					
1st Line	**SMA PRO High Energy**	**90/200mls**	**£0.99**	☐	
	Similac High Energy®	60/200mls	£1.17/£1.18	☐	
	Infatrini®	125/200mls	£1.16	☐	
Highly specialised	Infatrini Peptisorb®	200mls	£1.77	☐	
Lactose-free formulae: Advise to purchase from pharmacy/chemists'					
OTC Formulae must be purchased initially	Aptamil LF / Enfamil O-Lac® / SMA LF®			☐	
Pre-Thickened or thickening formula - Gastro-Oesophageal Reflux Disease (GORD)					
OTC Formulae must be purchased initially	Anti-reflux (e.g. Aptamil/Cow&Gate/HiPP) (pre-thickened)			☐	
	Enfamil AR®/SMA Pro anti-reflux® (thickening in stomach)			☐	
Other please specify with rationale:					

***prices correct as of Mims July2018** **Prescribe 2 tins initially until compliance / tolerance is established. **Maximum of 28 days' supply thereafter**

Allergy Focused Clinical History Form (Adapted from NICE CG116 2011)

Infant Details

Name: ……

NHS number: ……

DoB: …… Age: …… Months / Weeks

Weight (+centile): ……

Length (+centile) ……

Head Circumference (+centile): ……

Form completed by: …… **Date**: …… ……

Feeding History

☐ Exclusively breastfed (until……)
☐ Mixed feeding (from ……)
☐ Exclusively Bottle Fed (from ……)

Medication: ……

Types of infant formula tried:
☐ First milk formula: ……
☐ Lactose free formula: ……
☐ Reflux formula: ……
☐ Soya formula: ……
☐ Comfort formula: ……
☐ Other formula: ……

Name of current formula

……

Started Solids? ☐No ☐ Yes (details): ……

……

……

Last updated July 2018

Personal and Family history of allergy

	Infant	Mother	Father	Sibling
Asthma	☐	☐	☐	☐
Atopic Dermatitis (eczema)	☐	☐	☐	☐
Hayfever / allergic rhinitis	☐	☐	☐	☐
Food Allergy(ies) – not intolerance:	☐	☐	☐	☐

Symptom Checklist and History

*and * Refer directly to secondary care*

	Onset Minutes* (0-120m)	Onset Hours >2hrs	Description (e.g. duration, frequency, severity)
Digestive System Symptoms			
☐ Vomiting	☐	☐	……
☐ Reflux/GORD	☐	☐	……
☐ Diarrhoea	☐	☐	……
☐ Constipation	☐	☐	……
☐ Blood or mucus in stools	☐	☐	……
☐ Feed refusal or aversion	☐	☐	……
Skin Symptoms			
☐ Atopic dermatitis (Eczema)	☐	☐	……
☐ Urticaria / hives	☐	☐	……
☐ Eye, lip or facial swelling	☐	☐	……
Respiratory Symptoms			
☐ Wheezing	☐	☐	……
☐ Cough or Breathing problems	☐	☐	……
☐ Blocked or runny nose	☐	☐	……
Other Symptoms			
☐ Restlessness or poor sleeping	☐	☐	……
☐ Excessive crying	☐	☐	……
☐ Back arching	☐	☐	……
☐ Faltering growth	☐	☐	……
☐ Anaphylaxis	☐	☐	……

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