

ALLERGY AND INTOLERANCE FORMULAS: COUNTING THE COST AND GETTING IT RIGHT



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Specialist infant formulas are available for patients with a variety of conditions and aim to meet their specific dietary and nutritional requirements. The range of specialist infant formulas is ever-expanding and the choice available to health professionals can be baffling. However, with today's austere budgets, the cost of every penny spent by the NHS is counted, which includes the amount spent on specialist infant formulas. This article focuses on the range of commonly prescribed allergy and intolerance formulas that are available and aims to summarise their most appropriate usage.

ALLERGY AND INTOLERANCE FORMULAS

A significant amount of any specialist infant formula budget is spent on cows' milk allergy and lactose intolerance formulas. It is estimated that up to almost five percent of young children are allergic to cows' milk protein (1) and as many as one in five patients will experience symptoms indicating lactose intolerance (2).

For many years, infants with cows' milk protein allergy (CMPA) or lactose intolerance were given soya based formulas, e.g. Infasoy (Cow and Gate) or Wysoy (Wyeth) as first-line treatment; however, they have been superseded by specialist formulas which are better tailored to the infant's diagnosis. Despite this, infants presenting in primary care with cows' milk allergy or intolerance are still prescribed soya formulas. Soya formulas are not recommended for infants who are less than six months old due to the potential risk of developing a secondary sensitivity to soya. Also there is evidence to indicate that the undesirable exposure to phytoestrogens within in soya may cause developmental changes in infants who are less than six month old (3). They may be used in infants with CMPA or lactose intolerance above six months who do not have sensitivity to soya but are not considered to be a first-line choice. However, it is thought that from seven to up to 50 percent of children with CMPA may have a secondary soya allergy (4), which throws a questionable light on whether soya formula is appropriate to use in these patients. Sheep and goat milks are not advised due to their similar allergenicity as cows' milk.

Lactose-free formulas such as SMA LF (SMA Nutrition) or Enfamil O-Lac (Mead Johnson Nutrition), are

cows' milk based, but their carbohydrate source is glucose rather than lactose. Lactose intolerance can be a short-term condition and infants may be prescribed low lactose formula to treat symptoms. Patients should be reviewed regularly and challenged with standard formula. Often, standard formula can be reintroduced after six to eight weeks. Long-term use of lactose-free formula is required if there is a diagnosis of congenital lactase deficiency, which is rare. This is a permanent condition and the infant will need to remain on lactose-free formula until they are over 12 months when Alpro Junior +1 soya milk (Alpro) or adult lactose-free milk can be introduced. Lactose-free formulas are also used where primary lactose intolerance is indicated; however, this condition is rare in children below two years of age. Inappropriate use of lactose-free formulas is a common occurrence in primary care where a child presenting with CMPA is prescribed this type of formula instead of an extensively hydrolysed or amino acid formula due to the striking cost difference (see Table 1).

Extensively hydrolysed protein formulas (see Table 1) are suitable for use in some infants with CMPA. Symptoms such as vomiting, diarrhoea, reflux and eczema can be relieved by introducing these formulas, which contain peptides as opposed to whole proteins. Peptides are less likely to promote an allergic response and they are more palatable than amino acid (AA) based formulas. AA based formulas (see Table 1) are used in infants with CMPA if symptoms are not resolved by introducing the extensively hydrolysed protein formula or the infant's symptoms are considered to be severe at diagnosis. ▶

For article references please email: info@networkhealthgroup.co.uk

Emma has been a Paediatric Dietitian for four years. She works mostly in the community setting with a varied caseload, including children with disability, dysphagia, CF, coeliac disease and PKU. Emma also works with children with ADHD and ASD.



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Table 1 – Allergy and intolerance formulas - composition, indications for use and cost

Product name (manufacturer)	Composition	Indications for use	Cost per 400g tin or 200ml bottle*
Soya formulas:			
Wysoy (Wyeth)	Soya protein, lactose free	Lactose intolerance, galactokinase deficiency, galactosaemia and cows' milk protein allergy	£4.59 (430g tin)
InfaSoy (Cow & Gate)	As above	As above	£7.47 (900g tin only)
Lactose free formulas:			
SMA LF (SMA Nutrition)	Cows' milk protein, residual lactose content	Lactose intolerance	£4.60 (430g tin)
Enfamil O-Lac (Mead Johnson Nutrition)	As above	Lactose intolerance	£4.16
Extensively Hydrolysed Formulas:			
Nutramigen Lipil 1 Nutramigen Lipil 2 (>6 months) (Mead Johnson Nutrition)	Extensively hydrolysed casein protein	Whole protein and/or disaccharide intolerance	£9.29 £8.95
Aptamil Pepti 1 Aptamil Pepti 2 (>6 months) (Aptamil)	100% hydrolysed whey protein. Contains lactose	Cows' milk protein allergy/intolerance	£8.62 £19.39 (900g tin only)
MCT Peptide MCT Peptide 1 + (>12 months) (Nutricia SHS)	Contains small amount of MCT** fat. Protein source from soya and hydrolysed pork collagen	Whole protein and/or disaccharide intolerance, short bowel syndrome, malabsorption	£15.05 £15.81
Pepti-Junior (Cow & Gate)	50% of fat content is MCT. Semi-elemental		£11.01 (450g tin)
Pregestimil Lipil (Mead Johnson Nutrition)	55% of fat content is MCT. Extensively hydrolysed casein		£10.18
Infatrini Peptisorb (Nutricia)	1kcal/ml ready-made feed. Extensively hydrolysed whey protein. Contains lactose	Whole protein intolerance, short bowel syndrome, malabsorption, catch-up growth	£3.22
Althera (Nestle)	Extensively hydrolysed whey protein with LCPs	Suitable from birth Cows' milk protein allergy	£10.68 (450g tin)
Amino acid formulas:			
Neocate LCP (Nutricia)	Free amino acid. No peptide chains.	Whole protein/hydrolysate intolerance, short bowel syndrome, malabsorption	£23.83
Neocate Active (Nutricia)	Contains a small amount of MCT		15 x 63g sachets = £56.04
Nutramigen Lipil AA (Mead Johnson Nutrition)	Free amino acids. No peptide chains		£22.89
Weaning foods:			
Neocate Spoon (Nutricia)	Amino acid based nutritional powder suitable for weaning from 6 months	Cows' milk protein/multiple food protein allergy/intolerance	15 x 37g sachets = £36.38

* - Prices taken from www.medicinescomplete.com/mc/bnfc/current <accessed 01/06/13> MCT** - Medium Chain Triglycerides

Prices may vary depending on whether the product is ordered for hospital use or prescribed to the patient through the GP. In hospital a contracted supplier may provide a discount for some products. In the community (GP prescribing) products may be slightly more expensive if there is a pharmacy handling charge.

These formulas should be discontinued once the child has 'grown out' of the allergy and symptoms have improved. It is important that dietitians are involved in the management of these patients to ensure timely review of specialist formula use and provide appropriate dietary advice. Products such as Neocate LCP and Neocate Active (Nutricia SHS) are advanced formulas to use in the management of severe CMPA; therefore, perhaps it should be recommended that they are only initiated by secondary care services as part of an allergy management pathway. The 2011 NICE guidelines for food allergy in

children and young people (5) recommend that some children with CMPA will require milk challenges within secondary care settings. This highlights the need for appropriate referral of this patient group in to specialist allergy services or dietetic input within the secondary care setting to ensure patient safety and appropriate management.

PRESCRIBING PATHWAYS

The majority of specialist formulas are available on prescription, but some are available over the counter such as



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SMA LF (SMA Nutrition). It is increasingly common that hospital trusts are producing prescribing pathways for many medications and nutritional products. As part of medicines management initiatives, specialist formula prescribing pathways are in place to ensure that patients receive the most appropriate product, to standardise care and to promote the most efficient use of the products. A pathway should include:

- guidance regarding suitable products and indications for their use;
- 'first-line' products to be used and recommendations for alternative products should these fail;
- guidance regarding when to refer into specialist services or to the dietitian;

- clear time frames for reviewing a patient who is prescribed specialist formulas;
- criteria for discontinuing specialist formulas.

Prescribing pathways are useful tools for evaluating our spending, as well as giving great opportunity to reflect on current practice. This allows us to ensure that patients are receiving the most appropriate nutritional products and to provide a more systematic approach to their management as opposed to the less standardised care processes of the past. This is an area where all aspects of nutritional product use can be 'tightened up', allowing us to ensure dietetic intervention is most efficient and effective at a time when proving our worth is under more scrutiny than ever. ■

Questions relating to: *Allergy and intolerance formulas: counting the cost and getting it right.*

Type your answers below and then **print for your records**. Alternatively print and complete answers by hand.

Q.1	Why are soya formulas not recommended for infants with CMPA under the age of six months?
A	
Q.2	Why are soya formulas still prescribed to infants with CMPA in primary care and what are the possible drawbacks?
A	
Q.3	How is lactose intolerance in infants managed?
A	
Q.4	What are extensively hydrolysed protein formulas suitable for?
A	
Q.5	Give an example of why a dietitian is important in overseeing the nutritional management of young CMPA patients.
A	
Q.6	What does NICE guideline 116 recommend and what need does it highlight?
A	
Q.7	What is a prescribing pathway?
Q.8	What should be included in a prescribing pathway?
Q.9	Why are prescribing pathways useful to dietitians?
A	

Please type additional notes here . . .