

Inside the Tin

A Guide on Specialised Formulas for the Management of Cow's Milk Protein Allergy

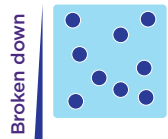


Reviewed and approved by Marianne Tomlin, Paediatric Allergy Dietitian

Nutritional support in early life is an essential part of managing your baby's food allergies, such as cow's milk protein allergy (CMPA). Human milk is the gold standard in infant nutrition.^{1,2} Breastmilk is a living fluid which changes in composition over the course of breastfeeding and varies within and between feeds and between mothers. Breast milk contains live bacteria, prebiotic oligosaccharides and lactose that stimulate the gut microbiota and immune system.³⁻⁶ Breastfeeding is still recommended for babies with a cow's milk protein allergy. Some mothers are advised by their doctors to try an exclusion of cow's milk from their diet.⁷ When breastfeeding is not possible or you would like to introduce formula, several different types of specialised formulas are available to help manage your baby's cow's milk protein allergy.

Q. What are the different types of formula available for managing Cow's Milk Protein Allergy?

A:



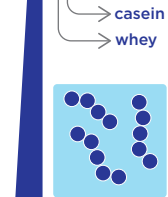
Amino Acid-Based Formula (AAF)

Completely milk-free formulas that are based on simple amino acid proteins.



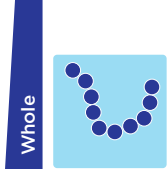
Extensively Hydrolysed Formula (EHF)

Contain small chains of cow's milk protein, which has been broken down to make it easier for your baby to digest and less likely to cause their immune system to react.⁸



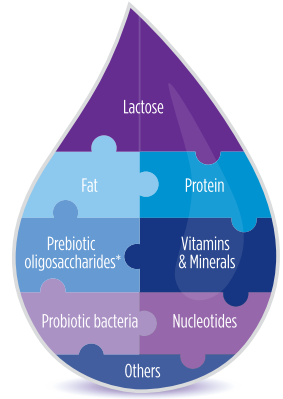
Hydrolysed Rice Protein Formula (HRPF)

Rice protein-based formulas are based on hydrolysed rice, which have been supplemented with essential amino acid and are considered an alternative formula to EHF or soy protein formula.⁹ Rice protein-based formula is not suitable if your baby is allergic to rice.⁹



Intact non-milk proteins

Soy formulas are manufactured from soy proteins. Some CMPA babies may also react to these soy proteins, therefore these formulas are not recommended for babies who are under 6 months of age. If your baby is under 6 months you should discuss alternative formulas with your healthcare professional.^{7,10} After 6 months, soy formula may be considered, speak with your healthcare professional before trialling.¹⁰ Soy protein-based formulas are not suitable if your baby is allergic to soy.



Adapted from Muraro et al. Allergy 69 (2014).

Other plant-based formulas:

There are several new plant-based formulas available. However, please note not all are approved by ASCIA and suitable for the management of CMPA.⁷ Many lack clinical studies on growth and safety in CMPA infants. Some of these formulas may contain traces of cow's milk protein due to their manufacturing processes which may cause a reaction in babies with CMPA.

You should discuss suitable formula options with your healthcare professional who will direct you to a specialised infant formula suitable for cow's milk protein allergy.

Q. What formulas are NOT recommended for my CMPA baby?

A: All formulas listed below are NOT suitable for a baby with a cow's milk protein allergy.⁷ Always ensure you read the label carefully and choose a formula that is clinically indicated for cow's milk protein allergy specifically. It is best to seek assistance from your pharmacist or healthcare professional before trialling.



Cow's milk-based, including anti-reflux, lactose-free, organic, newborn an follow-on.

Partially hydrolysed cow's milk protein (pHP) as they still contain cow's milk protein



Goat milk-based and other mammal-based milks and formulas (e.g. sheep) as the protein in these milks is similar to cow's milk.



Plant-based formulas without a clinical indication for cow's milk protein allergy.

Q. Do specialised formulas for CMPA taste different to standard formulas? Why?

A: Yes. EHF, AAF and HRPF all tend to taste less sweet and more bitter in comparison to breastmilk or standard infant formula, this is due to the manufacturing processes used. The proteins in the specialised formulas have been broken down (hydrolysed) into much smaller chains of peptides (EHF and HRPF) or contain single amino acid molecules (AAF), which is why they smell and taste different and have a thinner consistency.

Q. Does my baby's age affect how they will accept the transition to a specialised formula?

A: Babies who are under four months of age generally accept the change to an AAF, EHF or HRF well. Babies over four months of age may take a little longer to become used to the new taste and may need to be offered the new formula several times before they accept. If your baby is not accepting the new formula remain calm and speak to your healthcare professional who will be able to advise you further during this transition stage.

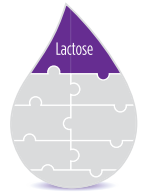
Q. Does my baby have a similar taste and palate to me? Why?

A: No, not necessarily. Infants are born with a natural preference for sweet foods, with their ability to distinguish between different types of flavours becoming more prominent from around four months of age. Your child's taste preferences will continue to grow based on their age. Whether you breastfeed or formula feed, the range of foods you offer when commencing solids and any positive experience with a particular food will make your baby's taste preferences very different to your own.



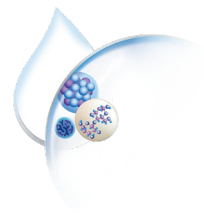
Q. Is lactose in a specialised CMPA formula safe and/or beneficial?

A: Lactose is the main carbohydrate found in breast milk. Some EHF's contain medical-grade lactose which is safe for use in mild-to-moderate CMPA infants. They may improve palatability and your baby may accept them more readily than EHF's without lactose.¹¹ Lactose may also help increase the absorption of calcium and the growth of healthy gut bacteria. Given these potential benefits, your healthcare professional may recommend an EHF that contains lactose.



Q. What are some additional factors I should consider when choosing a specialised formula, for my baby's long-term health?

A: When breastfeeding is not possible, a specialised formula with additional ingredients that have clinical evidence to show safety and efficacy in CMPA infants specifically, may be considered. Prebiotics, probiotics, synbiotics (a combination of pre- and probiotics) and human identical milk oligosaccharides (HiMOs) are all safely tested additional ingredients, and all show potential in supporting the gut microbiota and immune system of CMPA infants.¹²⁻¹⁴



Q. How will my doctor decide what formula is best for my baby?

A: There is not a 'one size fits all' approach. However, your doctor will assess your baby's age, severity, and type of allergy and then recommend the type of hypoallergenic formula they feel is most appropriate.⁷

Q. How long before my baby's symptoms of CMPA will improve?

A: Infants normally start to show improvement in their symptoms a few days after starting an EHF or AAF, however for some, it can take 2 to 4 weeks. If no improvement is seen, speak to your healthcare professional who may recommend trying a different formula.^{15,16}

Q. For how long should my baby stay on a specialised formula?

A: ASCIA recommends that solid food is introduced around six months. If your baby is still mixed feeding they should remain on their specialised formula for up to one and in some cases two years of age.¹⁷ Healthcare professionals also agree that supermarket plant-based milks do not contain sufficient protein or fat to meet the nutritional requirements and are therefore not recommended for children under two years of age.⁷ However, if your baby can tolerate soy, your healthcare professional may recommend changing to calcium-enriched soy milk from 12 months.⁷



The Nutricia Careline is a team of trusted midwives, dietitians and nutritionists who are also able to guide you and answer any questions during formula transitions.

[Call or Live Chat Nutricia Careline team in Australia or NZ.](#)

References: **1.** World Health Organisation. Infant and young child feeding. 2021 June 9. (cited 2022 May 19). **2.** Jeurink P, Bergenhenegouwen J, Jimenez E et al. Human milk a source of more life than we imagine. *Benef microbes*. 2013; Mar 1;4(1):17-30. **3.** Hunt KM et al. *PLoS One*. 2011;6(6):p.e21313. **4.** Bergman H et al. *British J Nutr*. 2014;112(7):119-28. **5.** D'Auria E, Salvatore S, Pozzi E et al. Cow's milk allergy: Immunomodulation by dietary intervention. *Nutrients* 2019 Jun 21;11(6):1399. **6.** Heine RG, Alrefaie F, Bachina et al. Lactose intolerance and gastrointestinal cow's milk allergy in infants and children – common misconceptions revisited. *World Allergy Organisation Journal*. 2017 Dec 12. **7.** ASCIA. Guide for Milk Substitutes in Cow's Milk Allergy. 2022. (Cited 2022 April 7th). Available from: <https://www.allergy.org.au/hp/papers/guide-for-milk-substitutes-cows-milk-allergy>. **8.** Kemp AS, Hill DJ, Allen KJ et al. Guidelines for the use of infant formulas to treat cow's milk allergy: an Australian consensus panel opinion. *Med J Aust*. 2008 Jan 21;188(2):109-12. **9.** Dupont C, Bocquet A, Tome D et al. Hydrolysed rice protein-based formulas, a vegetal alternative in cow's milk allergy. *Nutrients*. 2020;12:2654. **10.** Agostini C, Axelsson I, Goulet O et al. ESPHGAN Committee on Nutrition. Soy protein infant formulae and follow-on formulae: a commentary by the ESPHGAN committee on nutrition. *Journal of Paediatric Gastroenterology and Nutrition*. 2006 42:352-361. **11.** Maslin K, Fox A, Chambault M et al. Palatability of hypoallergenic formulas for cow's milk allergy and healthcare professional recommendation. *Pediatr Allergy Immunol*. 2018;29:857-86. **12.** Sorensen K, Cawood A, Gibson G et al. Amino acid formula containing synbiotics in infants with cow's milk protein allergy: A systematic review and meta-analysis. *Nutrients*. 2021, 13 (3), 935. **13.** Sackesen C, Ufuk Altintas D, Bingol A et al. Current trends in tolerance induction in cow's milk allergy: From passive to proactive strategies. *Front Pediatr* 2019 Sep 18;7:372. **14.** Candy DCA, Van Ampting M, Oude Nijhuis M et al. A synbiotic containing amino acid-based formula improves gut microbiota in non-IgE mediated allergic infants. *Pediatr Res*; 2018 March;83(3):677-86. **15.** ASCIA. Cow's milk (dairy) allergy. 2019 (cited 2022 April 7th). Available from: <https://www.allergy.org.au/patients/food-allergy/cows-milk-dairy-allergy>. **16.** Muraro A, Dubois AE, DunnGalvin A, Hourihane JO, de Jong NW, Meyer R, Panesar SS, Roberts G, Salvilla S, Sheikh A, Worth A, Flokstra-de Blok BM; European Academy of Allergy and Clinical Immunology. EAACI Food Allergy and Anaphylaxis Guidelines. Food allergy health-related quality of life measures. *Allergy*. 2014 Jul;69(7):845-53. doi: 10.1111/all.12405. Epub 2014 May 2. PMID: 24785644. **17.** ASCIA. ASCIA guidelines – Infant feeding and allergy prevention. 2020 (cited 2022 April 7th). Available from <https://www.allergy.org.au/hp/papers/infant-feeding-and-allergy-prevention>.

BREASTMILK IS BEST FOR BABIES: Professional advice should be followed before using an infant formula. Partial bottle feeding could negatively affect breastfeeding. Good maternal nutrition is important for breastfeeding and reversing a decision not to breastfeed may be difficult. Infant formula should be used as directed. Improper use of infant formula may affect the health of the baby. Social and financial implications should be considered.

For Healthcare Professional Use Only – not for distribution to the general public.

This is a guide only. You should not use this information to diagnose a health or medical condition or problem, or alter, commence, or delay any medical treatment.