

Inside the Tin

Part 2: Advancing the Management of Cow's Milk Protein Allergy

In recent years, there has been a paradigm shift in how cow's milk protein allergy (CMPA) is managed. Previously, the goal was to achieve symptom relief with a focus on allergen avoidance. More recently research has focused on additional nutritional factors that support the gut microbiota and immune system, such as prebiotic oligosaccharides, synbiotics and lactose.^{1,2,3}

Breastfeeding is recommended for the multiple benefits it brings to the mother and the child and should be continued where possible.⁴



Human Milk

Human milk is the gold standard of infant nutrition,⁵⁻⁷ it contains live bacteria, prebiotic oligosaccharides and lactose that stimulate the gut microbiota and immune system.⁸⁻¹¹ Most hypoallergenic formulas (extensively hydrolysed, amino acid and rice protein-based formulas) lack these microbiota stimulating factors.

Breast Milk = Ultimate Synbiotic

- Human milk is the gold standard in infant nutrition^{12,13}
- Breast milk contains live bacteria, prebiotic oligosaccharides and lactose that stimulate the gut microbiota and immune system¹⁴⁻¹⁷
- Hypoallergenic formulas used for the management of CMPA traditionally lack these microbiota stimulating factors

Human milk	Traditional extensively hydrolysed formula	Traditional amino acid based formula
Live bacteria	x	x
Human milk oligosaccharides with prebiotic effect	x	x
Lactose as main carbohydrate	Small amount of lactose	No lactose

Rich in factors that stimulate the gut microbiota & immune system

Limited or complete lack of stimulation of the gut microbiota

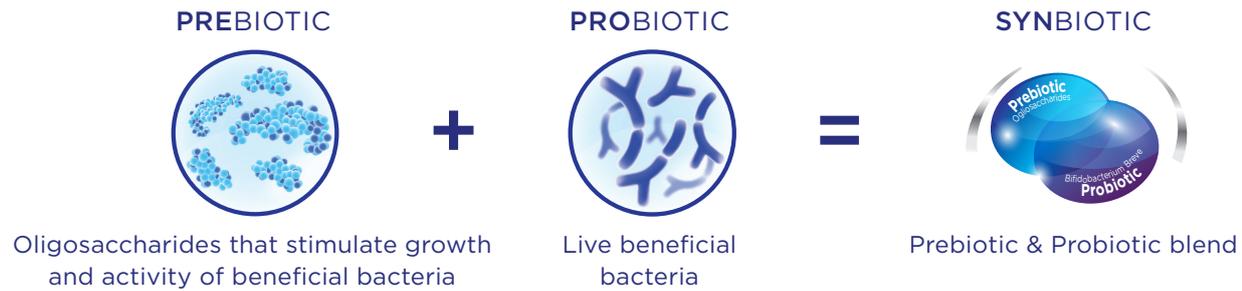
When breastfeeding is not possible using a specialised formula suitable for cow's milk allergy is recommended. A specialised formula with factors to support the gut microbiota and immune system should be considered such as oligosaccharides, synbiotics and lactose.¹⁻³



Role Of Synbiotics In Immune System Development

There is now a greater appreciation of how crosstalk between the gut microbiome and immune system influences allergy development during infancy and diseases later in life.¹¹⁸ Gut microbiota dysbiosis, an imbalance of gut bacteria is often associated with the development of CMPA.¹⁹⁻²¹ It is thought that gut microbiota dysbiosis impacts immune system development, leading to CMPA. As a result, the focus has now shifted from allergen avoidance to supporting healthy immune response via modulation of the gut microbiota.¹⁸ Synbiotics are a combination of a prebiotic oligosaccharides and probiotics that work synergistically to rebalance the gut microbiota. With a growing body of clinical evidence to suggest that synbiotics can have a beneficial effect in infants with CMPA, selected Nutricia products contain the synbiotic, SYNEO, to help rebalance microbiota and support immune system development.²²⁻²⁴

SYNEO - a unique blend of prebiotics and probiotics ²²⁻²⁴



Synbiotics are a combination of prebiotics and probiotics that act synergistically to target gut microbiota dysbiosis in the dietary management of cow's milk protein allergy²²⁻²⁴



Other key ingredients to consider in hypoallergenic formula:

Many formulas are fortified with additional ingredients, what are the key ones for consideration in CMPA hypoallergenic formulas?

Ingredient	Role In CMPA ^{2,26-30}
Lactose	Lactose is the main carbohydrate in human and mammalian milk. Physiological lactose malabsorption in infancy confers beneficial prebiotic effects, including the establishment of Bifidobacterium-rich faecal microbiota. Lactose containing formulas are thought to have improved palatability.
Nucleotides	Nucleotides play a key role in almost all biological processes in the body. Nucleotide supplementation promotes growth, benefits the GI tract and immune functions, and enhances mucosal recovery after intestinal injury.
Medium Chain Triglycerides (MCTs)	An increased supply of MCTs is important to promote growth in infants with malabsorption, such as severe food allergy and preterm infants.
Docosahexaenoic Acid (DHA)	Shown to provide anti-inflammatory effects, beneficial for infants with CMPA and other food allergies. Also promotes normal infant growth as well as visual and mental performance.
Long Chain Polyunsaturated Fatty Acids (LCPUFAS)	Helps to modulate the immune system and reduce allergic sensitisation, thereby reducing acute allergic symptoms.

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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.

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