

Supporting nutritional needs beyond infancy

Cow's milk protein allergy (CMPA) is an immune-mediated disease. Those with CMPA are at a higher risk of developing infections and future allergies, and those with persistent CMPA beyond 1 year of age are also at a higher risk of nutritional deficiencies and impaired growth. A new age-adapted amino acid-based formula with two structurally identical human milk oligosaccharides (HMO) provides continued nutritional support and nurtures immune systems after one year of age.

Persistent CMPA after one year of age

The majority of infants outgrow CMPA, however it persists beyond infancy for many, prolonging strict elimination diets into childhood.¹

- ~50% do not outgrow CMPA by 1-2 years of age^{2,3}
- ~20% do not outgrow CMPA by 3-4 years of age^{2,3}
- ~10% do not outgrow CMPA by 6 years of age^{1,2}

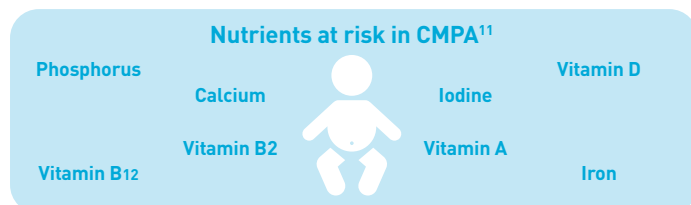
The impact on young children's immune systems

CMPA is an immune-mediated disease associated with gut microbiota dysbiosis^{4,5} and increased gut permeability,⁵ which impacts the maturation of the immune system.^{6,7} Infants and young children with CMPA have an increased risk of infections⁸⁻¹⁰ and are at a higher risk of developing other allergies later in life.⁹

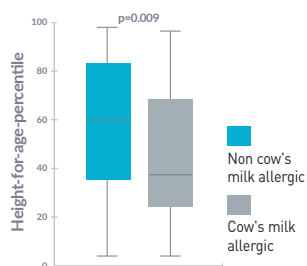
- Recurrent ear infections during childhood^{8,9}: **2x**
- Respiratory tract infections in the first two years of life¹⁰: **3.9x**
- Asthma⁹: **6.7x** • Atopic eczema⁹: **3.6x** • Allergic rhinitis⁹: **3x**

The increased risk of nutritional deficiencies and impaired growth

Without dietetic support, essential nutrients may not be sufficiently replaced in an elimination diet, which can increase the risk of nutritional deficiencies¹¹ and impaired growth.¹² The risk is higher when there are multiple food allergies.¹³

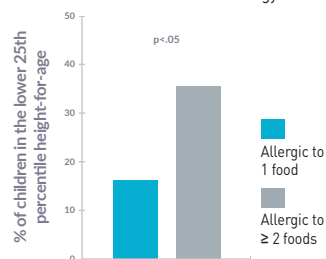


Lower height-for-age was observed in children aged 2-17 years with CMPA



Adapted from Robbins KA, et al.¹²

Children with two or more food allergies were shorter, based on height-for-age percentiles, than those with one food allergy



Adapted from Christie L, et al.¹³

Supporting nutritional needs beyond infancy

Breastfeeding is the gold standard in infant nutrition. Alongside complementary feeding from 6 months of age, the World Health Organization recommends breastfeeding up to two years of age and beyond.¹⁴ For infants fed an amino acid-based formula who have persistent CMPA and/or multiple food allergies and cannot be breastfed, continued use should therefore be considered after one year of age to meet their nutritional needs.^{1,15,16}

During this time, professional dietetic support and regular assessments are essential to ensure a sufficient intake of nutrients while on an elimination diet.¹⁷

After infancy, it is becoming increasingly popular to replace speciality formulas, such as amino acid-based formulas, with fortified plant-based milks for the management of CMPA.¹⁶ However, this practice is not supported by most scientific societies as their protein, vitamin and mineral levels are generally not tailored for early childhood and/or those on an elimination diet.¹⁶ Furthermore, they do not contain HMO to support a developing immune system.

The next step in advancing CMPA management

New Alfamino® Junior HMO supports children above one year of age with CMPA and/or multiple food allergies with an amino acid-based formula that is tailored to their growing nutritional needs.

Inspired by breast milk, Alfamino® Junior HMO also contains two HMO (2'-fucosyllactose [2'FL] and lacto-neotetraose [LNnT]) that are structurally identical to those found in breastmilk. 2'FL and LNnT in infant formula nurture the immune system and have been shown to positively modulate the gut microbiota and reduce ear and respiratory tract infections.¹⁸⁻²¹

IMPORTANT NOTICE: Mothers should be encouraged to continue breastfeeding even when their infants have cow's milk protein allergy. This usually requires qualified dietary counselling to completely exclude all sources of cow's milk protein from the mother's diet. If a decision to use a special formula intended for infants is taken, it is important to give instructions on correct preparation methods, emphasising that unboiled water, unsterilised bottles or incorrect dilution can all lead to illness. Formula for special medical purposes intended for infants must be used under medical supervision.

REFERENCES

1. Koletzko S, et al. J Pediatr Gastroenterol Nutr 2012;55(2):221-9
2. Fiocchi A, et al. World Allergy Organ J 2010;3(4):57-161
3. Høst A. Ann Allergy Asthma Immunol 2002;89(6 Suppl 1):33-7
4. Azad MB, et al. Clin Exp Allergy 2015;45(3):325-32
5. Thompson-Chagoyan OC, et al. Int Arch Allergy Immunol 2011;156(3):325-32
6. Chin AM, et al. Semin Cell Dev Biol 2017;66:81-93
7. Tanaka M, Nakayama J. Allergol Int 2017;66(4):515-22
8. Juntti H, et al. Acta Otolaryngol 1999;119(8):867-73
9. Tikkanen S, et al. Acta Paediatr 2000;89(10):1174-80
10. Woicka-Kolejwa K, et al. Postepy Dermatol Alergol 2016;33(2):109-13
11. Meyer R. Pediatr Allergy Immunol 2018;29:689-704
12. Robbins KA, et al. J Allergy Clin Immunol 2014;134(6):1466-8
13. Christie L, et al. J Am Diet Assoc 2002;102(11):1648-51
14. World Health Organization. Promoting proper feeding for infants and young children. 2020. Available at: <https://www.who.int/news-room/fact-sheets/detail/infant-and-young-child-feeding> Accessed 11 September 2020
15. British Dietetic Association. Suitable milks for children with cow's milk allergy. 2017. Available at: <https://www.bda.uk.com/uploads/assets/434eb7ee-86c9-436f-a4011b1c88a781dd/Cows-Milk-Allergy-Children-food-fact-sheet.pdf> Accessed 11 September 2020
16. Verdici E, et al. Nutrients 2019;11(8):1739
17. Laitinen K, et al. Br J Nutr 2005;94:112-25
18. Berger B, et al. mBio 2020;11(2):e03196-19
19. Puccio G, et al. J Pediatr Gastroenterol Nutr 2017;64(4):624-31
20. Vandenplas Y, et al. Presentation at EAACI Digital Congress, June 2020
21. Pedersen H et al. Presentation at FAAM-EUROBAT Digital 2020, October 2020.

© 2020 Nestlé. All rights reserved. Unless otherwise noted, all trademarks are owned by Société des Produits Nestlé SA. Avenue Nestlé 55, 1800 Vevey, Switzerland - October 2020