



This educational module was developed by Danone and reviewed by paediatrician **Dr Anthony Chitti.**

The module is presented by **Dr Anthony Chitti.**



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ACCREDITED CPD

## Accreditation Number: A2512CMPA1

This activity has been accredited for 1.0 hr of Group 1 CPD (or 1.0 CPD credit) suitable for inclusion in an individual pharmacist's CPD plan which can be converted to 1.0 hr of Group 2 CPD (or 2.0 CPD credits) upon successful completion of relevant assessment activities.

Pharmacist Competencies: 1.5, 2.1, 2.2, 2.3, 3.1, 3.2



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# **COW'S MILK ALLERGY IN INFANCY**

## **PHARMACY MODULE**

November 2025

*Breast milk is best for babies. A healthy diet is important for breastfeeding. A decision not to breastfeed, or partial bottle feed, may reduce milk supply making it difficult to reverse. Use formula as directed. For Healthcare Professionals only - not for distribution to the general public.*

# LEARNING OUTCOMES

*Breast milk is best for babies. A healthy diet is important for breastfeeding. A decision not to breastfeed, or partial bottle feed, may reduce milk supply making it difficult to reverse. Use formula as directed. For Healthcare Professionals only - not for distribution to the general public.*

By the end of this learning module, you will be able to:

1. Identify the symptoms of cow's milk allergy (CMA) in infants and distinguish between IgE and non-IgE cow's milk allergy.
2. Recognize the difference between CMA and lactose intolerance in infants.
3. Recall the recommended feeding options for infants with CMA in Australia.
4. Understand the symptoms of cow's milk allergy to effectively support a patient where required and determine when to refer a patient back to their GP and/or Paediatrician.

# WHAT IS AN ALLERGY?

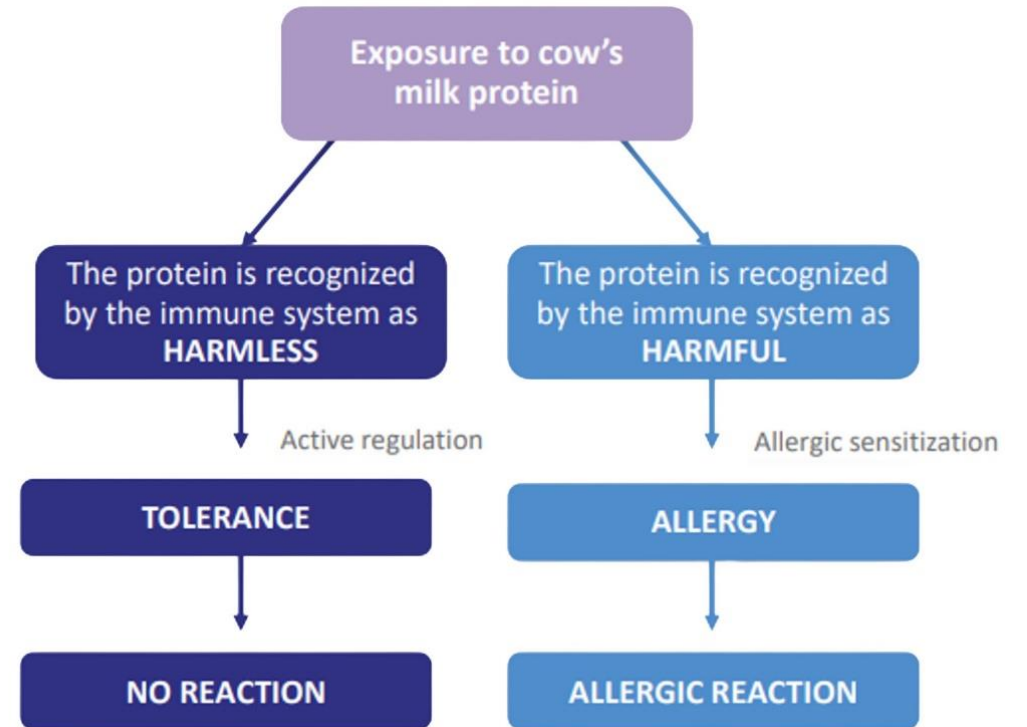
“Allergy is a chronic condition involving an abnormal reaction to an ordinarily harmless substance called an allergen”

“Food allergy (FA) is an adverse health effect arising from a specific immune response that occurs reproducibly on exposure to a given food”

Food allergies are always triggered by the protein component of the food and always involve the immune system.



“Cow’s milk allergy (CMA) is an immune-mediated response to proteins in cow’s milk that occurs consistently with ingestion”<sup>2</sup>



**References:** 1. Boyce J A, et al. The Journal of Allergy and Clinical Immunology 2010, 126(6), 1105-1118. 2. Flom J D, & Sicherer S H Nutrients 2019, 11(5), 1051 WAO/DRACMA Pediatr Allergy Immunol 2010; 21 (Suppl. 21): 1-125

# PRESENTATION OF COW'S MILK ALLERGY (CMA)

Most CMA symptoms in infants are IgE-, non-IgE mediated or mixed onset.<sup>1</sup>





IgE <sup>2,3,4</sup>	Non - IgE <sup>2,3,4</sup>
Immunoglobulin E (IgE)	Non Immunoglobulin E (Non-IgE)
Immediate symptoms: Minutes - 2 hours	Delayed symptoms: 1 hour - several days
Validated diagnostic tools available include Skin Prick testing (SPT), Serum Specific IgE testing (sIgE).	No validated diagnostic tools available
IgE (antibody) mediated	Cell mediated (may involve T- cells & Eosinophils)
Fully understood mechanisms	Mechanisms not fully understood
Symptoms: typically symptoms across multiple systems - GI (gastrointestinal), skin, respiratory or systemic (anaphylactic shock)	Most symptoms related specifically to the gut, GI symptoms (gastrointestinal symptoms) GORD, EoE, Allergic colitis

The distinction between the two types of allergy has important implications for the management of food allergy.<sup>5,6</sup>

**References:** 1. Vandenplas Y, et al JPGN 2024;78(2);386-413. 2. Venter C, et al. Clin Transl Allergy 2017; 7:26 3. Anvari S, et al Clinical Reviews in Allergy & Immunology 2019; 57:244-260. 4. Venter et al. World Allergy Organization Journal 2024; 17:10093. 5. Chehade M. Current opinion in allergy and clinical immunology 2017; 7(3), 264-268. 6. ASCIA Healthcare Professional Guide for Milk Substitutes in Cow's Milk Allergy 2020.




# IDENTIFYING COW'S MILK ALLERGY (CMA)

## Example CMA Symptoms <sup>3,4,5</sup>

 <b>GASTROINTESTINAL</b> <ul style="list-style-type: none"><li>• diarrhoea</li><li>• constipation</li><li>• blood in stools</li><li>• vomiting</li><li>• reflux disease/GORD</li><li>• abdominal pain</li></ul>	 <b>DERMATOLOGICAL</b> <ul style="list-style-type: none"><li>• moderate persistent eczema</li><li>• urticaria</li><li>• rashes</li><li>• severe atopic eczema</li><li>• angioedema</li></ul>
 <b>RESPIRATORY</b> <ul style="list-style-type: none"><li>• wheezing</li><li>• chronic coughing</li><li>• acute rhinitis</li><li>• respiratory distress</li></ul>	 <b>OTHER SYMPTOMS</b> <ul style="list-style-type: none"><li>• unsettled</li><li>• feed refusal</li><li>• taking a long time to feed</li><li>• inconsolable crying</li><li>• anaphylaxis</li><li>• faltering growth</li></ul>

Careful evaluation of nonspecific symptoms is essential to avoid misdiagnosing and over diagnosing CMA.

92% of infants with cow's milk protein allergy (CMA) suffer from two or more symptoms<sup>1,2</sup>

<b>DERMATOLOGICAL</b>	
Up to <b>90%</b> of CMA infants will have atopic dermatitis/eczema, urticaria, rashes	
+	
	<b>RESPIRATORY</b>
	Up to <b>30%</b> of CMA infants will have wheezing, chronic coughing, respiratory distress, runny nose
+	
<b>GASTROINTESTINAL</b>	
Up to <b>60%</b> of CMA infants will have diarrhoea, constipation, vomiting, frequent regurgitation, blood/mucus in stools	

References: 1. Host A and Halken S. Allergy 1990;45:587- 96. 2. Fiocchi A et al. WAO Journal 2010;3(4):57-161. 3.Luyt et al. Clin Experimental Allergy. 2014;44:642-72. 4. Fox A et al. Clin Transl Allergy (2019);9:40. 5. Koletzko B et al. JPGN. 2012;2:221-229.

# PREVALENCE OF COW'S MILK ALLERGY

Food allergy rates in Australia are among the highest in the world. <sup>1</sup>

10% of infants have a food allergy and it is increasing.<sup>2</sup>

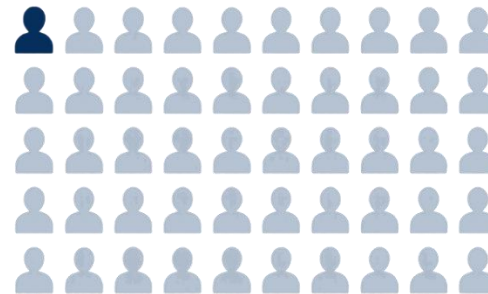
Cow's milk allergy is one of the most common types of food allergy.

**In Australia and New Zealand around 2% of babies are allergic to cow's milk.<sup>2</sup>**

Cows milk allergy can persist until 3-5 years of age.<sup>2</sup>



1 in 50

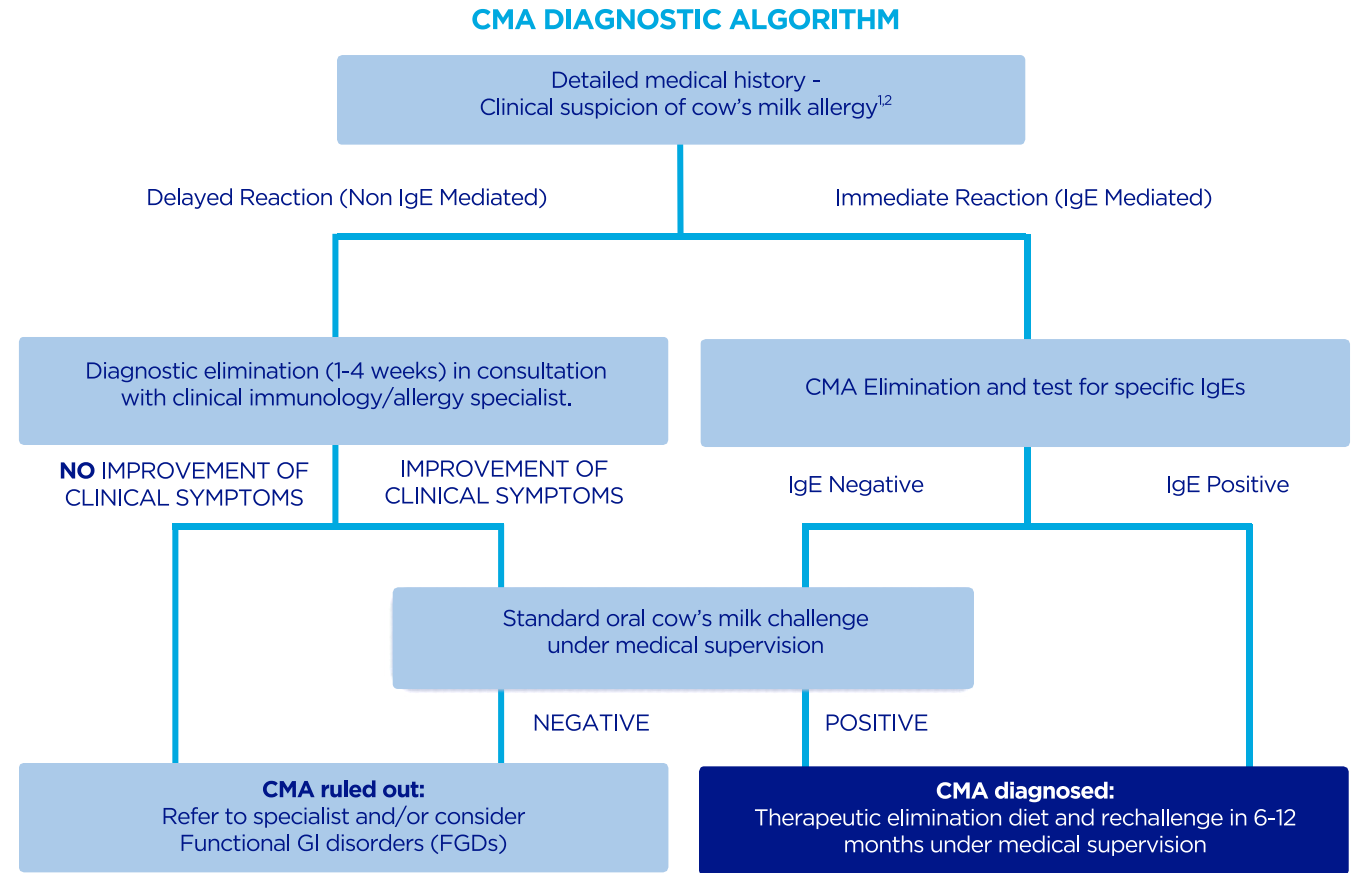


**References :** 1. Allen, K. J., & Koplin, J. J. 2015; Pediatric clinics of North America, 62(6), 1441-1451. 2. ASCIA Information for parents, consumers and carers Available at <https://www.allergy.org.au/patients/about/allergy/what-is-allergy>. Accessed November 2018 ASCIA = The Australasian Society of Clinical Immunology and Allergy.

# CMA DIAGNOSTIC ALGORITHM

Pharmacists in primary care should be familiar with CMA presentations and referral criteria.

Pharmacists play a key role in care coordination and referral systems to ensure patient safety.



References: 1. Koletzko B et al. JPGN 2012;55:221-229. 2. ASCIA guide to cow's milk dairy allergy: <https://www.allergy.org.au/patients/food-allergy/cows-milk-dairy-allergy> (cited February 2024).

# CMA IMPACT – INAPPROPRIATE DIAGNOSIS

Misdiagnosis carries allergic and nutritional risks, including acute reactions, growth faltering, micronutrient deficiencies and a diminished quality of life for infants and caregivers.

An inappropriate diagnosis may also add financial burden on families and on the healthcare system. <sup>1</sup>

A recent report developed by Deloitte Access Economics for the Australian Society of Clinical Immunology and Allergy (ASCIA) and National Allergy Council provides key insights into the economic and social impacts of allergic disease in Australia. <sup>2</sup>



**References:** 1. Vandenplas Y et al JPGN. 2024;78(2):386-413. 2. ASCIA. Costly Reactions: The economic and social cost of allergic disease in Australia. Available at <https://www.allergy.org.au/ascia-reports-economic>. 2025. Date accessed: November 2025.

# IS IT LACTOSE INTOLERANCE OR COW'S MILK ALLERGY (CMA)?

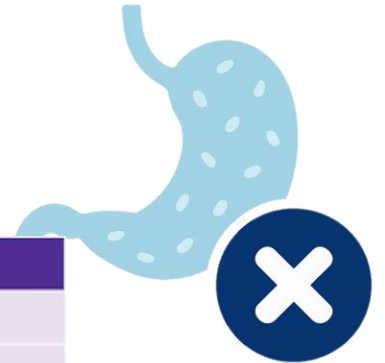
Lactose is the primary carbohydrate in breast milk and has many benefits.<sup>1</sup>

 Confusion between Lactose Intolerance and cow's milk allergy (CMA) leads to misdiagnosis and inappropriate dietary management.<sup>2,3</sup>

Lactose intolerance is not an allergy.

Lactose intolerance in children is mostly temporary and gets better when the underlying gut issue is resolved.<sup>2</sup>

The prevalence of CMA in the first year of life is around 2%–3%,<sup>4,5</sup> primary LI is rarely seen in infants.<sup>2</sup>

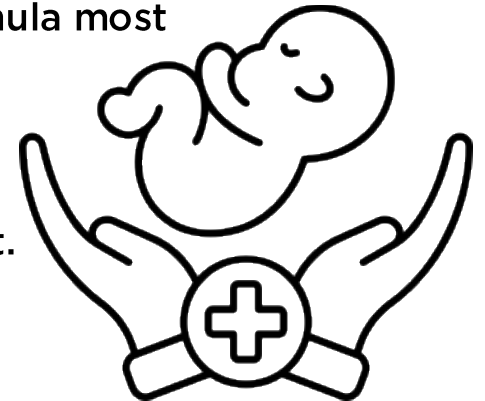


	Cow's milk allergy <sup>2,3</sup>	Lactose intolerance <sup>2,3</sup>
Mechanism	IgE or non-IgE-mediated allergic reaction	Lactase deficiency
Food component involved	Cow's milk protein (protein)	Lactose (carbohydrate)
Age of onset	During 1 <sup>st</sup> year	5–6 years
Dietary management	Cow's milk protein-free diet	Lactose-free diet/low lactose diet

**References:** 1. Francavilla R et al. *Pediatr Allergy Immunol* 2012;23:420-7. 2. Heine RG et al. *World Allergy Organ J.* 2017;10(1):41. 3. Costanzo MD, Canani RB. *Ann Nutr Metab* 2018;73(suppl 4):30-37. 4. Schoemaker AA et al. *Allergy.* 2015 Aug;70(8):963-72. 5. Luyt D et al. *Clin Exp Allergy.* 2014;44(5):642-72.

# MANAGING COW'S MILK ALLERGY

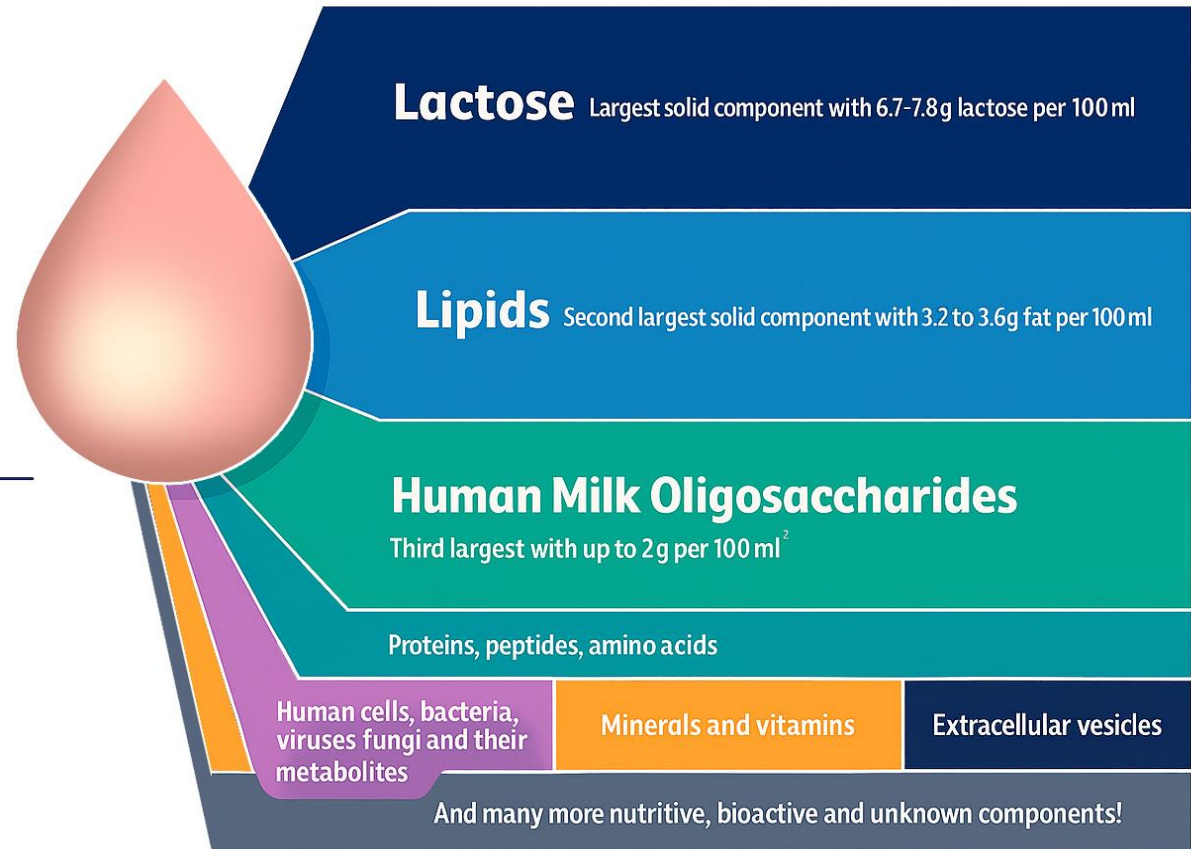
- Dietary avoidance is the only management strategy for infants and or children with cow's milk allergy.
- Parents need guidance and education on how to safely remove cow's milk from their infant or child's diet.
- Breast milk is the best feeding option for all infants, including those with CMA. It is important for breast feeding mothers to receive support with breast feeding while safely removing cow's milk protein from their own diet.
- Unnecessary elimination diets in breast feeding mothers should be avoided.
- Safe milk alternatives should be discussed when a mother plans to discontinue breastfeeding, introduce complementary feeds, or if breastfeeding is unexpectedly interrupted.
- The age of the infant and the clinical characteristics of the CMA should determine the type of formula most appropriate.
- Education should include management plans due to accidental exposure.
- Monitoring nutritional intake, growth and for resolution of CMA in infants and children is important.



References: Venter C et al. World Allergy Organization Journal (2024) 117:100931.

# NOTHING COMPARES TO BREAST MILK – IT’S THE GOLD STANDARD NUTRITION FOR INFANTS

Breast milk is the first choice for all infants including those with food allergy.<sup>1</sup>



**References:** 1. ASCIA Guide to cow's milk dairy allergy: <https://www.allergy.org.au/patients/food-allergy/cows-milk-dairy-allergy> (cited February 2024). 2. Ballard O, Morrow AL. *Pediatr Clin North Am.* 2013;60(1):49-74. 3. Thurl S et al. *Nutr Rev.* 2017 Nov; 75(11): 920-33.

# WHAT IS A HYPOALLERGENIC FORMULA?

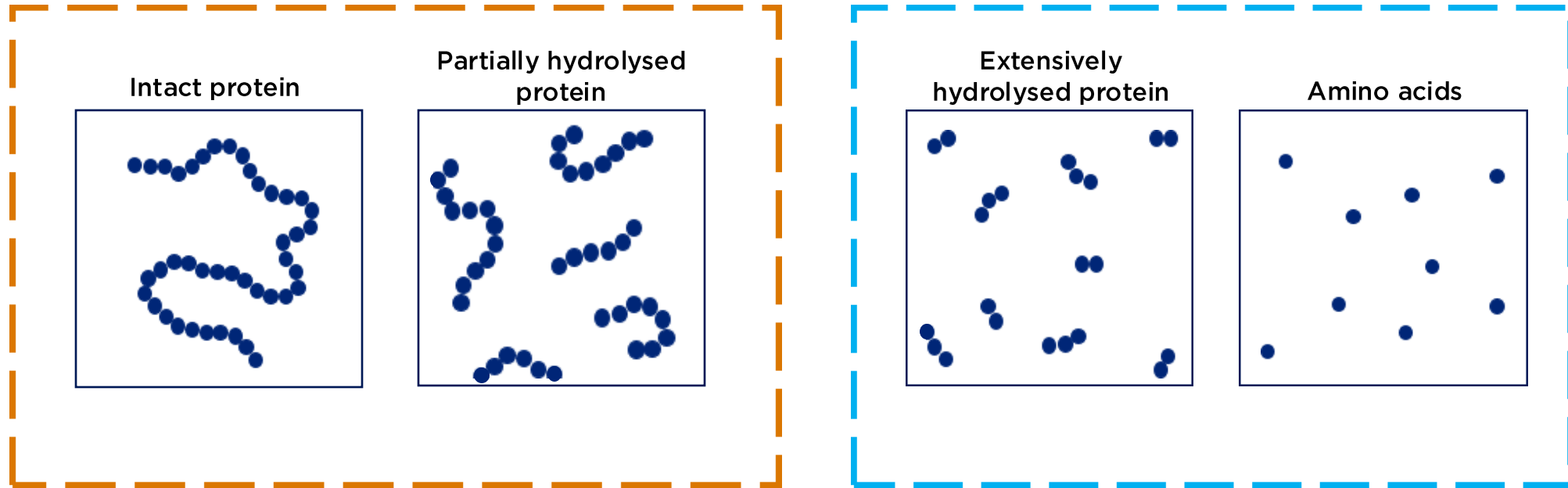
For a formula to be called hypoallergenic at least 90% of infants with a proven cow's milk allergy (CMA) must tolerate the feed with a 95% confidence interval.<sup>1</sup>

According to this definition only extensively hydrolysed formula (eHF) or amino acid formulas are suitable for the management of CMA.

Extensively Hydrolysed formulas (eHF)	Amino Acid formulas (AAF)
Intact cows milk protein is broken down into smaller peptides (extensively hydrolysed).	Amino acids are protein in its simplest form. Amino acid formulas are based on pure amino acids therefore are peptide free.
Short chain peptides are less likely to cause an allergic reaction.	Amino acids are unlikely to bind to immune cells and therefore do not cause a reaction. <sup>2</sup>

Reference: 1. Vandenplas Y et al JPGN.2024;78(2):386-431. 2. Corkins K et al. Nutr Clin Pract 2016;31:723-729.

# VISUAL EXAMPLE OF PROTEIN STRUCTURES



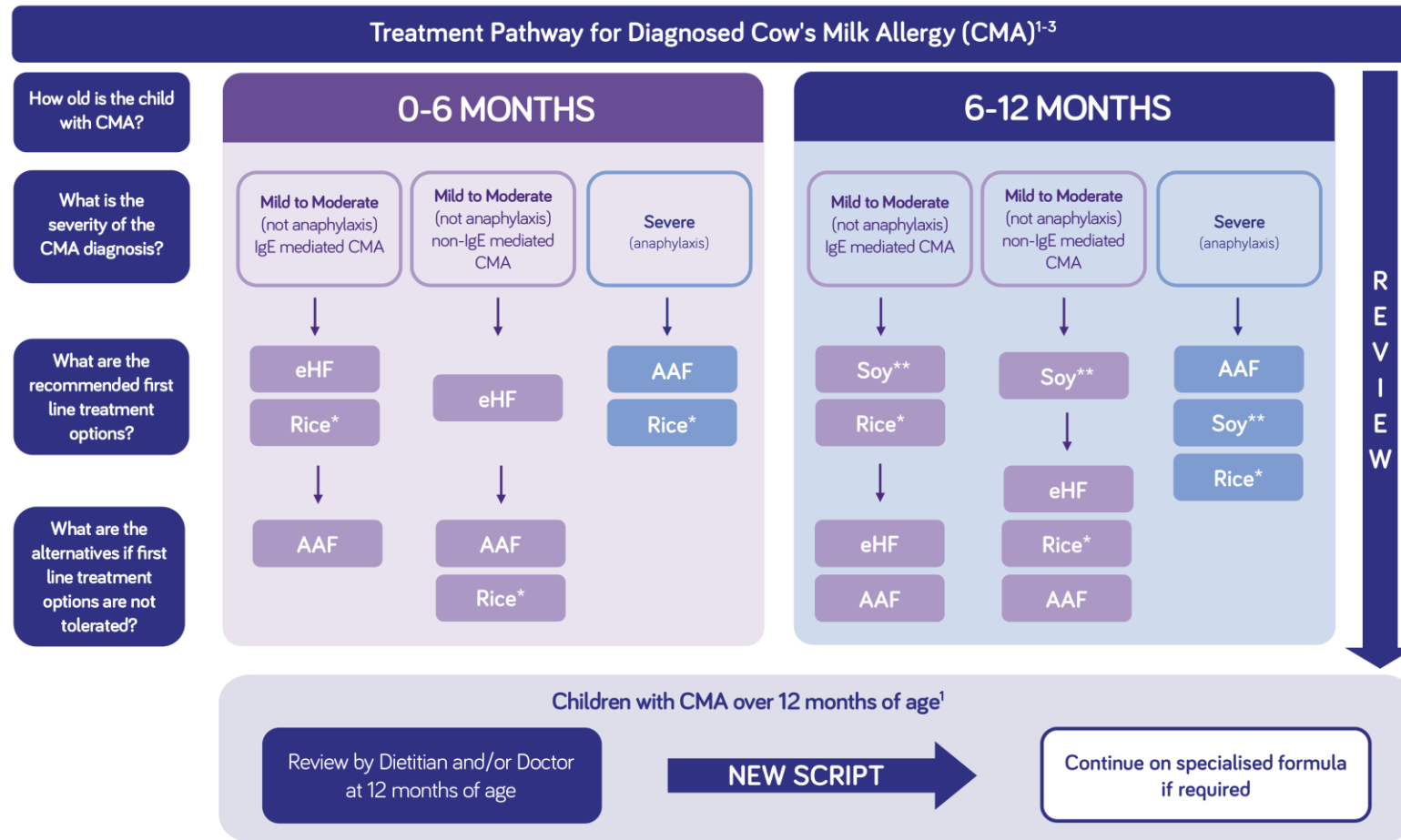
## HYDROLYSED PROTEIN

Whole  
protein



The extent to which a protein is hydrolysed has implications on digestibility and allergenicity.

# ASCIA'S EVIDENCE-BASED MANAGEMENT FOR FORMULA-FED INFANTS









ASCIA - Australasian Society of Clinical Immunology and Allergy | CMA - cow's milk protein allergy | eHF - extensively hydrolysed formula | AAF - amino acid formula

\*Rice protein based formula not suitable for children allergic to rice \*\*Soy protein based formula not suitable for children allergic to soy

References: 1. ASCIA Healthcare Professional Guide for Milk Substitutes in Cow's Milk Allergy 2024 2. ASCIA Patient, Consumer and Carers Guide Cow's Milk Allergy 2023. 3. Vanderplas et al JPGN. 2024;78:386-413

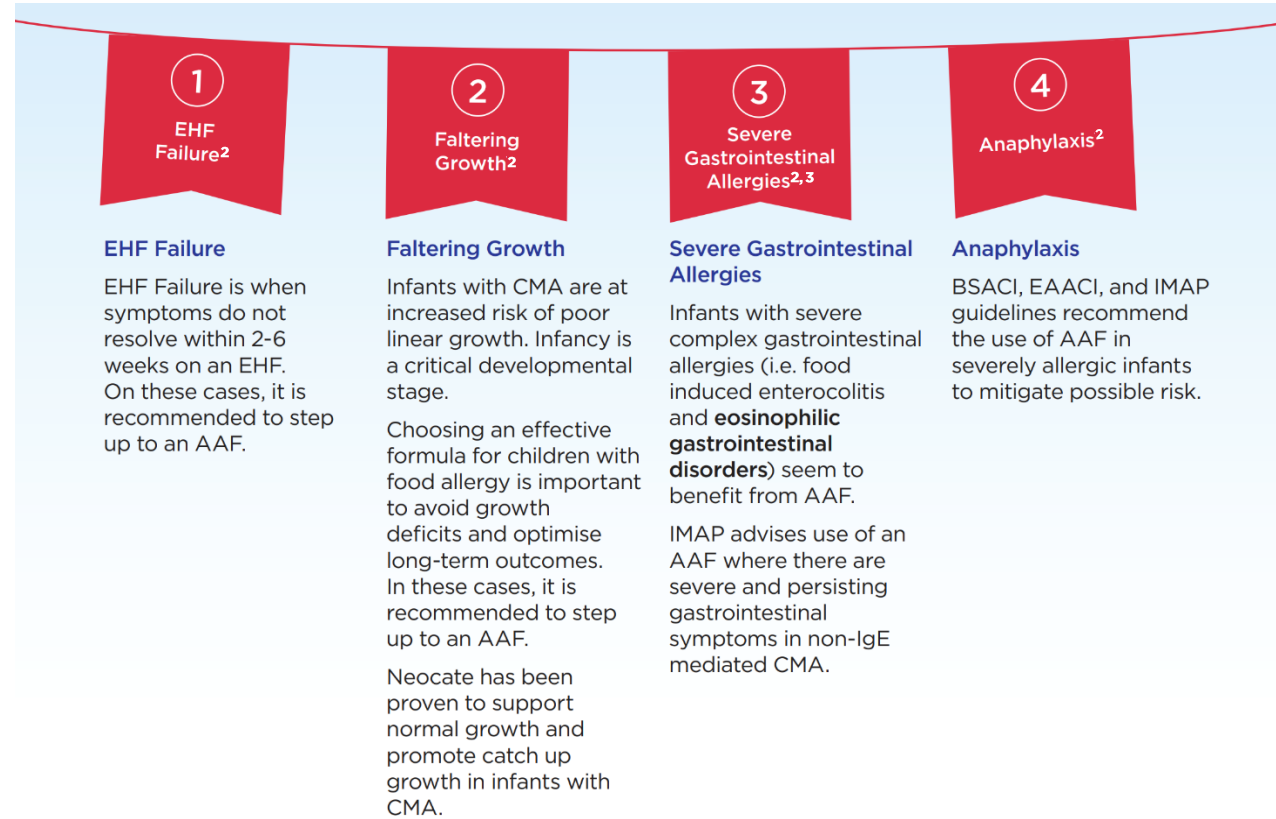
# SUITABLE FORMULAS FOR THE MANAGEMENT OF CMA FOR FORMULA FED INFANTS

Hypoallergenic formulas		
Extensively Hydrolysed formulas (eHF)	 	ASCIA recommends eHF as the first choice for formula fed infants under 6 months of age for the management of CMA (not anaphylaxis).
Amino acid formulas (AAF)	 	ASCIA recommends an amino acid formula(AAF) when first line formulas are not tolerated, or as first line for anaphylaxis or eosinophilic oesophagitis.
Other suitable formulas		
Soy formula		Soy formula is first choice for infants over 6 months of age as long as soy is tolerated.
Rice protein based formula		Rice protein-based formulas are based on hydrolysed rice and are considered an alternative formula to eHF or soy protein formula.  Rice protein-based formula is not suitable if the infant is allergic to rice.

**References:** ASCIA Guide for Milk Substitutes in Cow's Milk Allergy. Available at <https://www.allergy.org.au/hp/papers/guide-for-milk-substitutes-cows-milk-allergy>. Date accessed August 2025.ASCIA

# RED FLAG INDICATORS FOR WHEN TO USE AN AMINO ACID FORMULA<sup>1</sup>

Refer the patient to a specialist when these are encountered.








**BSCA = The British Society for Allergy and Clinical immunology**

**EAACI = European Academy of Allergy and Clinical Immunology**

**IMAP = An International Interpretation of Milk Allergy in Primary Care**

**References.** 1.Nutricia Red Flag campaign, UK 2019.2. Meyer R et al. J Allergy Clin Immunol 2018;6(2):383-99.3. Hill DJ et al. Clin Exp Allergy 2007;37:808-22.

# FORMULAS NOT SUITABLE FOR THE MANAGEMENT OF CMA FOR FORMULA FED INFANTS

Formulas not suitable for the management of CMA		
<p><b>Cows milk based formulas</b></p>  	<p>Cow's milk based, including Reflux, Lactose free, organic, infant and follow on formula.</p> <p>Based on intact cow's milk proteins.</p>	
<p><b>Partially hydrolysed formula (pHF)</b></p>  	<p>Cow's milk protein has been only partially broken down into smaller partially hydrolysed protein chains so can still cause allergy.</p>	
<p><b>Goat milk based and other mammal-based formulas &amp; milks</b></p> 	<p>Goat milk and sheep-based formulas.</p> <p>Proteins in these milks are similar to proteins in cows' milk resulting in cross-reactivity.<sup>2</sup></p>	


**References:** ASCIA Guide for Milk Substitutes in Cow's Milk Allergy. Available at <https://www.allergy.org.au/hp/papers/guide-for-milk-substitutes-cows-milk-allergy>. Date accessed August 2025.  
 2. Vandenplas Y, et al.JPGN.2024;78(2):386-413.

# GUT MICROBIOTA – GOING BEYOND SYMPTOM RELIEF



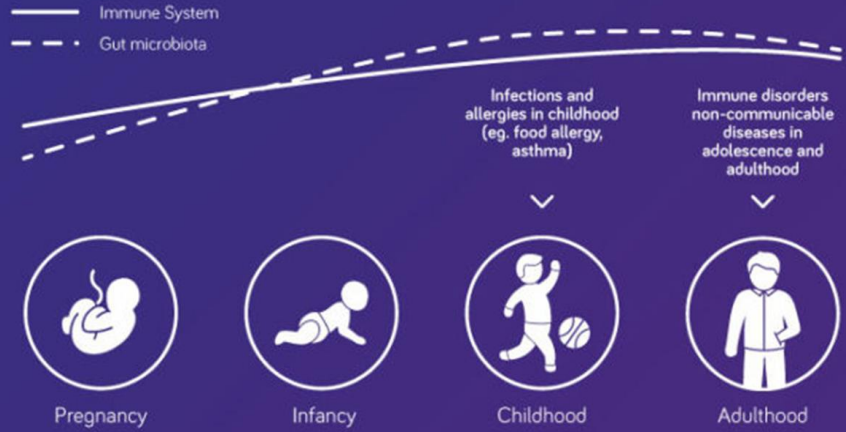
There is a growing body of research investigating gut microbiota – the community of bacteria living in the gut – and immune responses and outcomes.

**A balanced gut microbiome is important for immune system development<sup>1</sup>**



- Up to **70-80%** of immune cells are located in the gut<sup>2</sup>.
- Crosstalk occurs between the gut microbiome and the immune system<sup>1,3-5</sup>
- Gut dysbiosis can potentially lead to **allergies and other health consequences**<sup>1,6</sup>

**Disruptions in the microbiota and immune system development in early life have potential later life healthy consequences<sup>1,5,6</sup>**



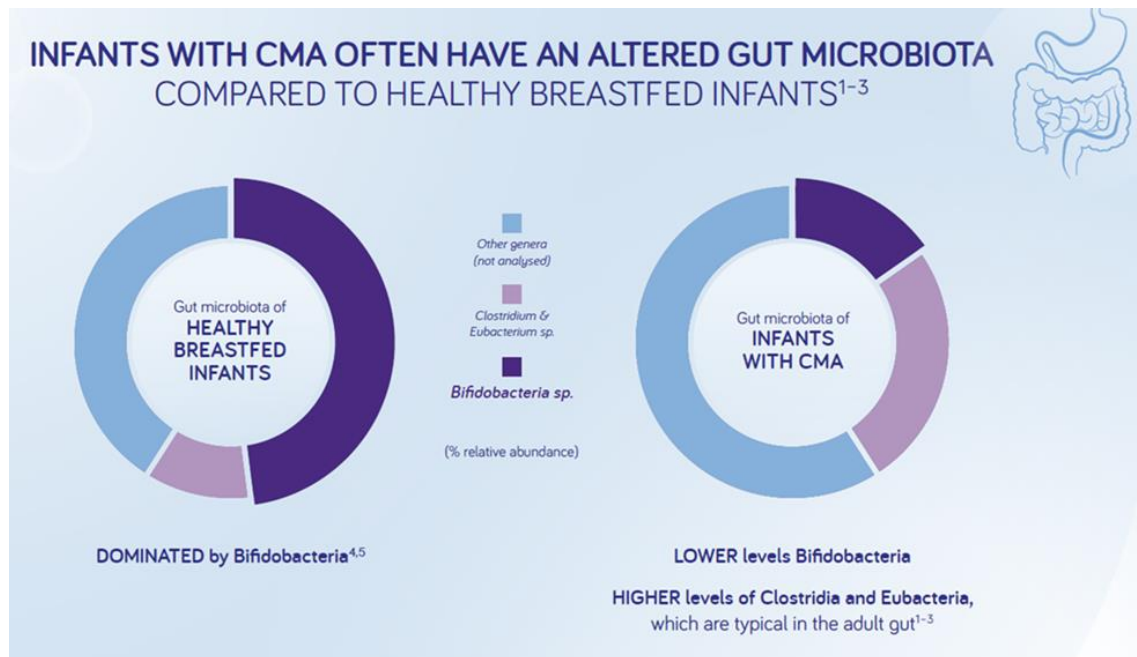
Legend: — Immune System, - - - Gut microbiota

Stages: Pregnancy, Infancy, Childhood, Adulthood

Consequences: Infections and allergies in childhood (eg. food allergy, asthma); Immune disorders non-communicable diseases in adolescence and adulthood

**References :** 1. Martin R et al. *Benef Microbes* 2010;1 (4):367-382. 2. Vighi G et al. *Clinical and Experimental immunology* 2008, 153 Suppl 1(Suppl 1), 3-6. 3. Wopereis H et al. *Pediatr Allergy Immunol.* 2014;25(5):428-438. 4. Belkaid, Y. & Harrison, O.J. *Immunity* 2017, 46(4), 562-576. 5. Walker, W. A., & Iyengar, R. *Pediatric Research*, 77(1-2), 220-228 (2015). 6. West C et al. *The Journal of Allergy and Clinical Immunology* 2015, 135(1), 3-14.

# GUT MICROBIOTA DYSBIOSIS IN INFANTS WITH ALLERGIC CONDITIONS (CMA)



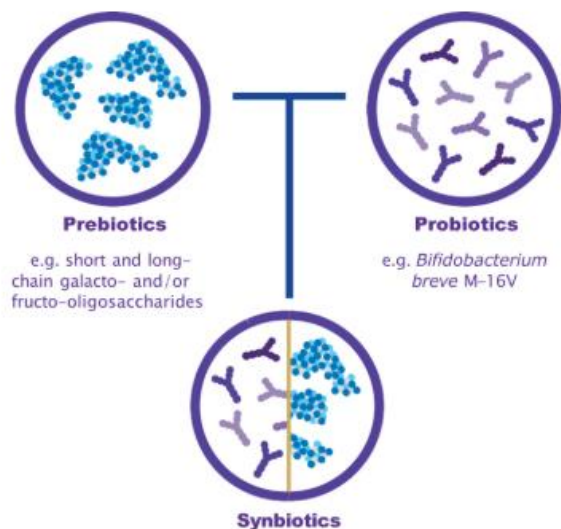
Infants with food allergies, CMA, have been shown to have lower levels of bifidobacteria in their gut microbiota compared with healthy, breast-fed infants.<sup>2</sup>

Gut dysbiosis can potentially lead to the development of allergies and other health consequences in later life.<sup>3</sup>

CMA patients may be at a greater risk of infections compared with infants without CMA.<sup>6-8</sup>

**References:** 1. Canani RB et al. ISME J. 2016;10(3):742-750. 2. Thompson-Chagoyan OC et al. Pediatr Allergy Immunol. 2010;21(2p2):e394-e400. 3. Candy DCA et al. Pediatr Res. 2018;83(3):677-686. 4. Harmsen HJ et al. J Pediatr Gastroenterol Nutr. 2000;30(1):61-67. 5. Scholtens PAMJ et al. J. Annu Rev Food Sci Technol. 2012;3(1):425-447. 6. Woicka-Kolejwa, K et al. Advances in Dermatology and Allergology/Postępy Dermatologii i Alergologii, 33(2), 109-113. 7. Fiocchi A et al. Nutrients. 2021; 13(11):3795. 8. Sorensen K, et al. Immun Inflamm Dis. 2022; 10:e572. doi:10.1002/iid.3.572

# SYNBIOTICS AND COW'S MILK ALLERGY – BEYOND SYMPTOM RELIEF



Synbiotics = a combination of prebiotics and probiotics.<sup>1,2</sup>

Prebiotics = non-digestible food ingredient that stimulate the growth or activity of beneficial gut bacteria.<sup>3</sup>

A probiotic = a type of beneficial bacteria that can help to rebalance gut Microbiota<sup>4,5</sup> when consumed in the right amount.


Some studies have shown synbiotics could help to regulate microbiota and immune responses both directly and indirectly.<sup>6</sup>

Synbiotics can be of assistance in managing, and reducing the severity of, symptoms of a Cow's Milk Allergy.<sup>7,8</sup>


**References:** 1.Fox A et al. World Allergy Organ J. 2019;12(5):100034. 2.Swanson KS et al. Nat Rev Gastroenterol Hepatol. 2020;17(11):687-701. 3.Gibson GR et al. Nat Rev Gastroenterol Hepatol. 2017;14(8):491-502. doi:10.1038/nrgastro.2017.75.4. Hill CF et al. Nature Reviews Gastroenterology & Hepatology. 2014; 11 (8): 506-14.5. Patel RM et al. Clin Perinatol. 2013;40(1):11-25. 6. Liu Y et al. Front Nutr. 2022;8:634897.7.Sorensen K et al. Nutrients. 2021;13: 2205.8. Hubbard G et al. Immune Inflamm & Dis. 2022;10(6):e636.

# LACTOSE: PREFERRED CARBOHYDRATE FOR INFANTS, EVEN THOSE WITH CMA


The avoidance of lactose in CMA is unnecessary unless the infant has severe diarrhoea.<sup>1</sup>




**Higher palatability** compared with other carbohydrates and preferable for infants<sup>2</sup>



**Prebiotic effect** promoting the colonisation of beneficial gut microbes.<sup>2,3</sup>




**Improved calcium and magnesium absorption** due to the acidic gut resulting from lactose fermentation.<sup>2,3</sup>



**Brings hypoallergenic formulas for CMA closer to lactose containing standard infant formula** for healthy infants. Addition of lactose to hypoallergenic formulas **aims to support the microbiome bringing it closer to that of breastfed infants**<sup>4</sup>

**BENEFITS OF LACTOSE**



**References:** 1. Vandenplas Y et al. J Pediatr Gastroenterol Nutr. 2023 Jul 26. 2. Heine RG et al. World Allergy Organ J. 2017;10(1):41. 3. Romero-Velarde E et al. Nutrients 2019;11(11):2737. 4. Venter C et al. World Allergy Organ J. 2024;17:100931.

# EXTENSIVELY HYDROLYSED & AMINO ACID FORMULAS FOR THE MANAGEMENT OF CMA FOR FORMULA FED INFANTS<sup>1</sup>

A specialized formula with factors to support the gut microbiota and immune system should be considered such as oligosaccharides, synbiotics and lactose.<sup>2,3,4</sup>

## Extensively hydrolysed formula

	Aptamil Allerpro SYNEO Stage 1 (Nutricia)	Aptamil Allerpro SYNEO Stage 2 (Nutricia)	Aptamil Pepti Junior (Nutricia)	Nestle Extensive HA (Nestle)
Age	0 – 6 months	6-12 months	0-12 months	0-12 months
Protein source	Extensively hydrolysed whey	Extensively hydrolysed whey	Extensively hydrolysed whey	Extensively hydrolysed whey
Carbohydrate Lactose	✓	✓	✗	✓
Omega 3	✓	✓	✓	✓
Prebiotics	scGOS/lcFOS ✓	scGOS/lcFOS ✓	✗	✗
Probiotics	BBM16V ✓	✓	✗	B.Lactis ✓
HiMo	✗	✗	✗	2'FL, LNnT ✓

Synbiotics =  
Prebiotics &  
probiotics

## Amino Acid formulas

	Neocate SYNEO (Nutricia)	Alfamino (Nestle)	Elecare (Abbotts)
Age	0-12 months	0-12 months	0-12 months
Protein Source	Amino Acid	Amino Acid	Amino Acid
Omega 3	✓	✓	✓
Prebiotics	scGOS/lcFOS ✓	✗	✗
Probiotics	BBM16V ✓	✗	✗
HiMo	2'FL ✓	2'FL, LNnT ✓	✗

Reflects product formulation data gathered in ANZ Competitor websites August 2025.

**References:** 1.ASCIA . Guide for Milk Substitutes in Cow's Milk Allergy. Available at <https://www.allergy.org.au/hp/papers/guide-for-milk-substitutes-cows-milk-allergy>. Date accessed August 2025 2. D'Auria E et al. Nutrients 2019 Jun 21;11:(6)1399.3.Heine RG et al. World Allergy Organisation Journal. 2017 Dec 12.4. Sorensen K et al. Nutrients. 2021, 13 (7):2205.

# RICE BASED FORMULAS FOR THE MANAGEMENT OF CMA FOR FORMULA FED INFANTS

	<b>Novalac Allergy (Aspen Pharmacare Australia)</b>	<b>Alula Gold Allergy (Alula)</b>
<b>Age</b>	0-12 months	0-12 months
<b>Protein source</b>	Rice protein Hydrolysate	Rice protein Hydrolysate
<b>Carbohydrate Lactose</b>	✗	✗
<b>Omega 3</b>	✓	✓
<b>Prebiotics</b>	✗	✗
<b>Probiotics</b>	✗	✗
<b>HiMO</b>	✗	✗

Reflects product formulation data gathered in ANZ Competitors websites August 2025.

# UNDERSTANDING HYPOALLERGENIC FORMULA EFFECTS

## Key Expectations For Parents/Caregivers



### Formula Appearance and Taste

Hypoallergenic formulas look thinner and less milky and have a distinct taste. Some infants do not notice the taste difference, particularly younger infants, under 6 months of age. Persistence is the key for acceptance. Some babies can take at least 15 tries before they accept a new taste.<sup>1</sup>

### Symptom Improvement Timeline

Parents can expect allergy symptom relief within 3 to 14 days of starting a hypoallergenic formulas.<sup>2-4</sup> Concerns about symptoms and resolution should be discussed with their healthcare professional.

### Change in Infant Stools

Infant stools may change in colour and consistency initially. Green stools are normal when using hypoallergenic formulas. Concerns about stool colour and consistency should be discussed with their healthcare professional.

### Increased Wind (hypoallergenic formulas with Synbiotics)

Parents may notice their baby is a bit gassy and fussy as their gut adjusts to synbiotic. This should improve after a few days and not persist beyond 2 weeks.

References : 1. Ventura AK & Worobey J. Current Biology. 2013; 23(9): R401-R408. 2. Hill DJ et al. J Pediatr. 1999; 135:118-121. 3. Vanderhoof JA et al. J Pediatr. 1997; 131:741-744. 4. de Boissieu D et al. J Pediatr. 1997; 131:744-747. Nutricia Resource = What To Expect When You Start a Hypoallergenic Formula reviewed by M Tomlin.

# CASE STUDY

**14 week old male infant, Mum presents to the pharmacy**

## History:

- Formula fed since 3 weeks of age
- Currently on goats milk formula
- No growth concerns, otherwise well infant
- Mum reporting hard poos and discomfort
- GP suggested possible lactose intolerance and recommended changing to a lactose free formula.

Mum's concern "Everyone is just saying nothing is wrong and it will settle but they are not here day to day, but I see him uncomfortable".

Wants advice regarding formula change and further support.



\* Case study based on a call received to Nutricia Careline 2024.

# CONSIDERATIONS

- Hard stools may indicate constipation – needs further discussion, and review regarding type of poos, frequency, consistency, fluid volumes, preparation of formula
- Assess reason for the choice of goat's milk formula – personal preference, family history, additional symptoms.
- Lactose intolerance symptoms – typically include diarrhoea, gas, abdominal discomfort. **LACTOSE INTOLERANCE IS RARE IN INFANTS.**
- Supports - GP, maternal child health nurse support - who is supporting Mum?
- Formula recommendation?
  1. No evidence to change to LI formula. Symptoms are not related to LI.
  2. Reassure mother of this and discuss the need for further assessment re bowel motions, formula, fluid volumes, additional history discussed before changing formula.
- Could this be CMA or functional GI symptoms?
  1. Bowel motion changes require further clarification. More information is needed to avoid misdiagnosis while acknowledging Mum's concerns and minimising additional stress.
  2. Refer Mum back to her GP or to see a Dietitian or Paediatrician.
  3. Direct Mum to validated information so that she can discuss questions with the HCP and feel she has support regarding her concerns.



# KEY TAKEAWAYS



- Cow's milk allergy (CMA) is one of the most common types of food allergy in infancy.
- Most CMA symptoms in infants are IgE-, non-IgE mediated or mixed onset. The difference between IgE and non-IgE mediated allergies is important for the management of CMA.



- 92% of infants with CMA suffer from 2 or more symptoms



- Confusion between Lactose Intolerance and CMA leads to misdiagnosis and inappropriate dietary management.

- Dietary avoidance is the only management strategy for infants with cow's milk allergy.



- Breast milk is the best feeding option for all infants, including those with CMA. It is important for breast feeding mothers to receive support with breast feeding and avoid unnecessary elimination diets.

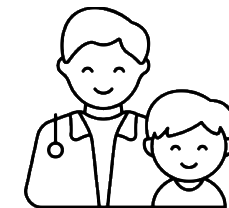
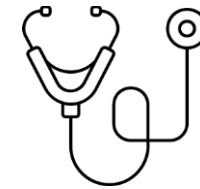


# KEY TAKEAWAYS

- For formula fed infants the age of the infant and the clinical characteristics of the CMA should determine the type of formula most appropriate as an initial option. ASCIA'S Evidence-Based Management For Formula-Fed Infants provide guidance.



- Refer onto a GP, Paediatrician or Allergy specialist for formal diagnosis and management, especially when symptoms are persistent, severe or involve multiple systems.
- CMA infants often have an imbalanced gut microbiota which can impact immune development. For formula fed infants consider specialized formulas with factors to support the gut microbiota and immune system.
- CMA typically resolves, monitoring for resolution of CMA is important. Infants with CMA at 12 months of age should be assessed by a dietitian and/or doctor.



# HELPFUL SOURCES OF INFORMATION AND SUPPORT



<https://www.allergy.org.au/>



<https://allergyfacts.org.au/>



<https://preventallergies.org.au/>



<https://nationalallergycouncil.org.au/>

# HOW CAN YOU OFFER ONGOING SUPPORT & PARENTING ADVICE?

The Nutricia Careline is a team of trusted dietitians, nutritionists and a midwife who are available to support families, caregivers and HCPs.

**NUTRICIA**  
CARELINE



You can Live Chat  
or call us:

**AU: 1800 438 500**

**NZ: 0800 438 500**

(Mon to Fri 7.30am to 5pm AEST /  
9.30am to 7pm NZ time).

or email  
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