



Media Backgrounder

Danone's new *Nutricia Cuijk* facility will meet growing demand for specialized infant formula for health conditions such as cow's milk protein allergy (CMPA)

About allergies

Allergies occur when the immune system overreacts to substances that are usually harmless, such as foods, pollen or pet dander.

The prevalence and impact of allergy is rising dramatically worldwide.¹ Up to 30-40% of the global population currently suffer from allergies, and the current prediction is that half of the EU population will be affected by allergies by 2025.¹ Children bear a major burden – most allergies start in childhood and allergies disproportionately affect children.¹

Allergy risk factors

There are several factors that increase the risk of allergy development. While genetics play a part, current evidence indicates that environmental factors may also play a significant role.

There is increasing interest and awareness of the role that the gut microbiota plays in mediating the immune system and how this relates to the development of allergies.²⁻⁴ Increased antibiotic use, Caesarean section, pollution, poor diet and malnutrition all affect the balance of the microbiota and may increase the risk of developing allergies.

Cow's Milk Protein Allergy

Cow's milk protein allergy (CMPA) is one of the most common childhood allergies. Because of difficulties with classification and diagnosis, exacerbated by the varying clinical presentations and non-specific symptoms associated with CMPA, it is difficult to accurately assess prevalence; however, it is estimated to affect up to 5% of infants.^{5,6}

When an infant has CMPA, the immune system over-reacts to one or more of the proteins contained in cow's milk. The infant's immune system recognizes these proteins as harmful and, to protect itself, releases substances including histamines, which cause allergic symptoms.

Symptoms of CMPA tend to develop in the first few months of life.⁶ CMPA can cause a wide range of respiratory, dermatological and gastrointestinal symptoms – such as worsening eczema, colicky pain, reflux, diarrhea or constipation. Severe systemic reactions can also cause anaphylaxis – a serious, life-threatening reaction.⁶

The impact of allergy

Beyond the clinical symptoms, CMPA can have a significant impact on the quality of life of both patients and their families, as well as being an ongoing economic burden on healthcare services.⁶⁻⁹

While most infants with CMPA outgrow the condition by the time they are school age, an increasing number may have persistent symptoms or develop other allergic conditions over time. This susceptibility to subsequent conditions is commonly referred to as the 'allergic march'.¹⁰⁻¹²

Research

Danone's mission is to deliver health through food to as many people as possible. We work through our *Nutricia* brand to find new and innovative ways to reduce the allergy burden through nutrition and help people live healthier lives. Within the allergy field, we focus on understanding how the right nutrition during early life can have an impact on overall immune health, allergy development and CMPA management.

Nutricia has a strong heritage in immune-allergy research, dedicating over 40 years to the subject and publishing over 600 peer-reviewed papers, including reports about:

- Allergy and the immune-gut interplay
- The importance of nutrition in the first 1,000 days
- Immune training and resilience through exposure
- CMPA management and prevention through nutrition, including amino acid formulas and hydrolysate-based formulas with prebiotics, probiotics and synbiotics

Nutricia Cuijk

Based in Cuijk, the Netherlands, the new, sustainable, zero-waste *Nutricia Cuijk* plant has been built with particular emphasis on the production of safe, high-quality specialized infant formula products for babies with specific health needs such as CMPA.

The *Nutricia Cuijk* plant employs a specific manufacturing process – called hydrolyzation – to produce foods for special medical purposes containing extensively hydrolyzed protein to meet the specific nutritional needs of infants diagnosed with CMPA. In this process, cow's milk proteins are broken down – or 'snipped' – into smaller protein fragments. As a result, the immune system of a baby with CMPA is less likely to trigger an allergic reaction.

Once at full capacity, *Nutricia Cuijk* will produce more than 600 different products – including *Nutricia*'s cow's milk protein allergy management *Pepti* and *ProSyneo* range of products.

About Danone (www.danone.com)

Dedicated to bringing health through food to as many people as possible, Danone is a leading global food & beverage company building on health-focused and fast-growing categories in three businesses: Essential Dairy & Plant-Based Products, Waters and Specialized Nutrition. Danone aims to inspire healthier and more sustainable eating and drinking practices, in line with its 'One Planet. One Health' vision which reflects a strong belief that the health of people and that of the planet are interconnected. To bring this vision to life and create superior, sustainable, profitable value for all its stakeholders, Danone has defined its 2030 Goals: a set of nine integrated goals aligned with the Sustainable Development Goals (SDGs) of the United Nations. Danone commits to operating in an efficient, responsible and inclusive manner; it holds itself to the highest standards in doing business, as reflected by its ambition to become one of the first multinationals certified as B Corp™. With more than 100,000 employees, and products sold in over 120 markets, Danone generated €24.7 billion in sales in 2018. Danone's portfolio includes leading international brands (*Actimel*, *Activia*, *Alpro*, *Aptamil*, *Danette*, *Danio*, *Danonino*, *evian*, *Nutricia*, *Nutrilon*, *Volvic*, among others) as

well as strong local and regional brands (including AQUA, Blédina, Bonafont, Cow & Gate, Horizon, Mizone, Oikos, Prostokvashino, Silk, Vega).

Listed on Euronext Paris and on the OTCQX market via an ADR (American Depositary Receipt) program, Danone is a component stock of leading social responsibility indexes including the Dow Jones Sustainability Indexes, Vigeo Eiris, the Ethibel Sustainability Index, MSCI Global Sustainability, MSCI Global SRI Indexes and the FTSE4Good Index.

References

1. European Academy of Allergy & Clinical Immunology. Advocacy Manifesto, Tackling the Allergy Crisis in Europe-Concerted Policy Action Needed. Updated March 2016. Last accessed: March 2019
2. Kim BJ, Kim BJ, Lee SY, Kim HB, et al. Environmental changes, microbiota and allergic diseases. *Allergy Asthma Immunol Res* 2014; 6(5): 389-400.
3. Azad MD, Konya T, Persaud RR, et al. Impact of maternal intrapartum antibiotics, method of birth and breastfeeding on gut microbiota during the first year of life: a prospective cohort study. *BJOG* 2016; 123(6): 983-993.
4. Haahtela T, Holgate S, Pawankar R, Akdis CA, Benjaponpitak S, Caraballo L, et al. The biodiversity hypothesis and allergic disease: world allergy organization position statement. *World Allergy Organ J* 2013; 6(1): 3.
5. Fiocchi A, Brozek J, Schünemann H, et al. World Allergy Organization (WAO) Diagnosis and Rationale for Action against Cow's Milk Allergy (DRACMA) Guidelines. *World Allergy Organ J* 2010; 3(4): 57-161.
6. Lozinsky AC, Meyer R, Anagnostou K, et al. Cow's milk protein allergy from diagnosis to management: a very different journey for general practitioners and parents. *Children (Basel)* 2015; 2(3): 317-329.
7. Gupta R, Holdford D, Bilaver L, et al. The economic impact of childhood food allergy in the United States. *JAMA Pediatr* 2013; 167(11): 1026-1031.
8. Patel DA, Holdford DA, Edwards E, et al. Estimating the economic burden of food-induced allergic reactions and anaphylaxis in the United States. *J Allergy Clin Immunol* 2011; 128(1): 110-115.
9. Sladkevicius E, Guest JF. Budget impact of managing cow milk allergy in the Netherlands. *J Med Econ* 2010; 13(2): 273-283.
10. Halken S. Prevention of allergic disease in childhood: clinical and epidemiological aspects of primary and secondary allergy prevention. *Pediatr Allergy Immunol* 2004;15(16): 4-5, 9-32.
11. Wahn U. What drives the allergic march? *Allergy* 2000; 55: 591-599.
12. Shaker M. New insights into the allergic march. *Curr Opin Pediatr* 2014; 26(4): 516-520.

Contacts

Christine Lydon
Senior Content Editor
FleishmanHillard Fishburn
christine.lydon@fhflondon.co.uk
+44 208 618 2889

Jayson Otke
External Communications & Media Relations
Danone Specialized Nutrition
jayson.otke@danone.com
+31 615 112 147