



Digestive health

Growing research supports the role of gut health in overall health and wellbeing.

The gut microbiome (the collective term for microorganisms and their genetic material that live in the digestive system) plays an important role in how food is digested and how nutrients are absorbed and used in the body¹.

Facts

The foods we eat plays an essential role in maintaining the diversity and proper functioning of our gut².

Research demonstrates the role of fermented foods, such as yoghurt, in promoting a healthy digestive system.

Fermented foods

In recent years, the gut microbiome has been linked to the development of conditions such as obesity³ and inflammatory bowel disease⁴. However, fermented foods including dairy foods with added probiotics (e.g. yoghurt, culture drinks and kefir) are some of the most common and easily available sources of probiotics that promote a healthy digestive system.

Probiotics are microbes that, when consumed in adequate amounts, provide a health benefit⁵ and have the potential to maintain the natural balance of the gut microbiota.

Fermented dairy foods like yoghurt and kefir are a common vehicle for probiotics. To see a benefit on the gut microbiome, a key measure of its effectiveness is that the beneficial bacteria must be able to survive the transit through the gastrointestinal system. This protection is a crucial step as it means probiotics can reach the gut intact and exert their positive health benefits.

Research shows probiotic bacteria have a better chance of surviving the harsh conditions of the gut when they're consumed in dairy products (e.g. yoghurt with added probiotics)^{6,7}

The protein and fat found in dairy foods protects probiotic species and helps the survival of probiotics in the digestive system (particularly the highly acidic environment of the stomach⁸).

Additionally, some studies have even shown that after eating yoghurt, some individuals experience a slight increase in the variety of helpful microbes in their digestive systems⁹. Certain types of beneficial gut bacteria, like Bifidobacteria and Lactobacilli have been found to increase with various probiotics.¹⁰ Consuming yoghurt daily is also thought to reduce harmful bacteria in the gut¹¹.





Lactose maldigestion

One of the most scientifically recognised health benefits related to dairy and gut health is yoghurt's role in helping to manage lactose maldigestion. It appears yoghurt is better tolerated when compared with milk, most likely because of the live bacteria within the product. These bacteria break down lactose by using it as an energy source. In addition, the unique yoghurt matrix alters digestion by increasing digestion time compared to milk, therefore helping with the absorption of nutrients and reducing gastrointestinal upsets¹².

Lactose intolerance

For those with diagnosed lactose intolerance, research has found that 12g of lactose in a single dose can be tolerated by the majority of people with lactose intolerance – this is approximately the amount of lactose in one cup (250ml) of milk. Some research shows 18g over a full day (in divided doses), can be tolerated^{13,14,15}. Lactose free milks are also widely available as an alternative option.

Strategies for incorporating dairy into the diet

	Up to 250ml of milk may be well tolerated if it's consumed with other foods or throughout the day		Yoghurt contains 'good' bacteria that help to digest lactose
	Most hard cheeses are virtually lactose-free		Lactose-free milks are available and contain similar nutrients to regular milk

- 1 Valdes AM, Walter J, Segal E, Spector TD. Role of the gut microbiota in nutrition and health. *BMJ*. 2018 Jun 13;361:k2179. doi: 10.1136/bmj.k2179.
- 2 Wu GD et al. Linking long-term dietary patterns with gut microbial enterotypes. *Science*. 2011 Oct 7;334(6052):105-8. doi: 10.1126/science.1208344. Epub 2011 Sep 1.
- 3 Graham C, Mullen A, Whelan K. Obesity and the gastrointestinal microbiota: a review of associations and mechanisms. *Nutr Rev*. 2015 Jun;73(6):376-85. doi: 10.1093/nutrit/nuv004. Epub 2015 Apr 6.
- 4 Hedin CR, van der Gast CJ, Stagg AJ, et al. The gut microbiota of siblings offers insights into microbial pathogenesis of inflammatory bowel disease. *Gut Microbes*. 2017; 8(4):359-65. doi: 10.1080/19490976.2017.1284733.
- 5 Health and Nutritional Properties of Probiotics in Food including Powder Milk with Live Lactic Acid Bacteria, Report of a Joint FAO/WHO Expert Consultation on Evaluation of Health and Nutritional Properties of Probiotics in Food including Powder Milk with Live Lactic Acid Bacteria, Cordoba, Argentina, October 1-4,200
- 6 Elli M, Callegari ML, Ferrari S, Bessi E, Cattivelli D, Soldi S, et al. Survival of yogurt bacteria in the human gut. *Appl Environ Microbiol*. 2006 Jul;72(7):5113-7. 110.
- 7 Mater DDG, Bretigny L, Firmesse O, Flores M-J, Mogenet A, Bresson J-L, et al. *Streptococcus thermophilus* and *Lactobacillus delbrueckii* subsp. *bulgaricus* survive gastrointestinal transit of healthy volunteers consuming yogurt. *FEMS Microbiol Lett*. 2005 Sep 15;250(2):185-7.
- 8 Saxelin M, Korpela R, Mayra-Makinen A. Introduction: classifying functional dairy products. In: Mattila-Sandholm T, Saarela M, editors. *Functional dairy products*. New York: CRC Press; 2003. pp. 1-15.
- 9 Lisko DJ, Johnston GP, Johnston CG. Effects of Dietary Yogurt on the Healthy Human Gastrointestinal (GI) Microbiome. *Microorganisms*. 2017 Feb 15;5(1).
- 10 Filteau M, Matamoros S, Savard P, Roy, D. Molecular monitoring of fecal microbiota in healthy adults following probiotic yogurt intake. *PharmaNutrition* 2013, 1, 123-129.
- 11 Rohde CL, Bartolini V, Jones N. The use of probiotics in the prevention and treatment of antibiotic-associated diarrhea with special interest in *Clostridium difficile*-associated diarrhea. *Nutr Clin Pract*. 2009 Feb;24(1):33-40.
- 12 Vonk RJ, Priebe MG, Koetse HA. Lactose intolerance: analysis of underlying factors. *Eur J Clin Invest*2003;33:70-5.
- 13 Savaiano DA, Boushey CJ, McCabe GP. Lactose intolerance symptoms assessed by meta-analysis: a grain of truth that leads to exaggeration. *J Nutr* 2006;136:1107-1113.
- 14 Wilt TJ, Shaukat A, Shamliyan T, Taylor BC, MacDonald R, Tacklind J, et al. (2010) Lactose Intolerance and Health. Evidence report/Technology Assessment No. 192. Agency for Healthcare Research and Quality (US), Rockville, MD.
- 15 Corgneau M, Scher J, Ritie-Pertusa L, et al. Recent advances on lactose intolerance: tolerance thresholds and currently available answers. *Crit Rev Food Sci Nutr* 2017;57:3344-3356.

Disclaimer

The content of this publication is provided for general information only and has not been prepared to address your specific circumstances. We do not guarantee the completeness, accuracy or timeliness of the information.

Acknowledgement

Dairy Australia acknowledges the funding contribution of the Commonwealth Government for eligible research and development activities.

© Dairy Australia Limited 2024. All rights reserved.

Dairy Australia Limited ABN 60 105 227 987
E enquiries@dairyaustralia.com.au
T +61 3 9694 3777
F +61 3 9694 3701
dairyaustralia.com.au