INNER HEALTH

Always read the label and follow the directions for use
Available in 60g and 120g powder

KIDS HEALTH

KIDS

- ✓ Supports the maintenance of healthy intestinal flora
- ✓ Supports a normal healthy gastrointestinal system
- ✓ Helps maintain general wellbeing
- ✓ Antibiotic use

EACH 1.6G DOSE CONTAINS 13.5 BILLION LIVE PROBIOTICS:

Lactobacillus rhamnosus (LGG®)	6 Billion CFU
Lactobacillus acidophilus (NCFM®)	3.75 Billion CFU
Bifidobacterium lactis (Bi-07)	3.75 Billion CFU

PATIENT INSIGHT

- People who prefer a fridge probiotic are more engaged with their health, and their family's health.[1]
- 50% of probiotic users buy fridge products.[1]
- Children under 10 are the most likely age group to be prescribed antibiotics, except for adults over 75.[2]

CLINICAL FOCUS:

- Children's digestive health
- Children's general health and wellbeing
- Children taking antibiotic prescriptions

KEY FORMULA FEATURES:

- Clinically trialled probiotic strains for children's health.[3,4,5]
- Contains *Lactobacillus rhamnosus* (LGG®) to help restore the balance of good gut bacteria with antibiotic use.[3]

KEY ACTIONS:

- Supports the maintenance of healthy intestinal flora
- Supports a normal healthy gastrointestinal system
- Maintains and restores the gut microbiome during and after antibiotic use

PROFESSIONAL PRESCRIBING GUIDELINES:

Directions for use:

Infants & children to 12 years:
Take 1.6g (½ metric teaspoon) daily mixed into water, juice, formula or milk (warm or cold). Sprinkle on cereal, food or take directly on the spoon. Alternatively take as advised by a healthcare professional.

Antibiotic use:
If your child has been taking a course of antibiotics, take 1.6g (½ metric teaspoon) twice daily. Separate from antibiotic doses by two hours.

Inner Health Kids is non-flavoured with a naturally sweet taste.

Disclaimer: In the interest of supporting Healthcare Practitioners, all safety information provided at the time of publishing is in accordance with Natural Medicine Database (NATMED PRO), renowned for its professional monographs which include a thorough assessment of safety, warnings, and adverse effects.

For further information on specific interactions with medications, please contact Clinical Support on 1800 777 648, or via email, anz_clinicalsupport@metagenics.com.

WARNINGS:

If symptoms persist consult your healthcare professional.

CONTRAINDICATIONS:

Immunodeficiency: Probiotic preparations might cause pathogenic colonisation in patients who are severely immunocompromised.[6]

Valvular heart disease: Although endocarditis related to probiotic use is a rare cause of infective endocarditis, cases of endocarditis have been reported for patients with valvular heart disease.[6]

PREGNANCY:

Possibly safe when used orally and appropriately. A meta-analysis of four clinical trials shows that taking probiotics during pregnancy increases the relative risk of pre-eclampsia. The specific effects of *L. rhamnosus* and *B. lactis* are unclear from this analysis. More information is needed to determine if certain patients are at increased risk.[7,8]

BREASTFEEDING:

Possibly safe when used orally and appropriately.[7,8]

NO ADDED: Artificial flavours, colourings or preservatives.
FREE FROM: Gluten, wheat, dairy, lactose, eggs and nuts.
Suitable for vegans & vegetarians.

HCP COUNSELLING QUESTIONS

I am looking for a shelf-stable probiotic for kids. Which shelf-stable Inner Health probiotic is the closest to Inner Health Kids?

Inner Health Plus Baby & Kids is suitable for children from birth to 12 years; and also features LGG®.

CLINICAL FEATURES

Supports the maintenance of healthy intestinal flora and a normal healthy gastrointestinal system in children

The colonisation process of an infant's microbiota continues to develop until about three years of age, when the infant microbiome becomes significantly more adult-like.[9] Until this time, the microbiota fluctuate significantly and are more impressionable to environmental impacts than the microbiome of adults.[10] Bifidobacteria species are considered to be the most prevalent bacterial group in infants.[10] As a child's gut develops, bifidobacteria and lactobacilli can contribute to a healthy microbial balance and assist in controlling the proliferation of undesirable bacteria.[11]

Therefore, when recommending probiotic strains for children, it is important that they target commensal species in the gut microbiome specific to their developmental stage.[12]

Lactobacillus acidophilus NCFM® and *Bifidobacterium lactis* Bi-07 have been studied in combination in clinical trials for children's gut health.[3-5]

This combination works synergistically to benefit gut health in children, including regulation of stool transit time.[13] NCFM® supports the digestive system and the gut microbiome, in several ways.[14] One is via production of short-chain fatty acids (SCFAs) to be fermented and utilised by gut bacteria as a fuel substrate.[12] Similarly, Bi-07 also produces and assists in the commensal production of SCFA via the metabolism of dietary fibres, helping to support healthy colonic pH for nutrient digestion.[15] Additionally, NCFM® can help to digest lactose via lactase activity, thus reducing symptoms of lactose intolerance such as bloating.[14]

Further, NCFM® can help to maintain balance in the microbiome via inhibition of adherence of pathogenic species to the gut.[16]

Lactobacillus rhamnosus LGG® has also demonstrated benefits for children's digestive health.[17] These include decreases in severity of symptoms of irritable bowel syndrome at a dose of 6 billion CFU per day in as soon as four weeks.[17] LGG® has demonstrated strong gastrointestinal adhesion properties, and promotes the growth and biodiversity of bifidobacteria, lactobacilli, and enterococci, therefore contributing to increased microbial diversity to support SCFA production and mucosal barrier function.[18]

Maintains and restores the gut microbiome during and after antibiotic use

Antibiotic treatment is considered one of the most extreme perturbations to the human microbiome, resulting in both acute and chronic alterations to the quantity and diversity of the normal intestinal microbiota.[19]

Fortunately, commensal species can be supported and restored during and after antibiotic use with specific probiotic strains, administered at research-backed doses.[20]

Several studies conducted in children, both in hospital and home settings, have found that 10 billion CFU per day of LGG® can maintain the balance of commensals and lower the risk of pathogen overgrowth in children taking antibiotics.[21,22] This is due to the probiotic production of protective intestinal glycoproteins, as well as an increase in secretory IgA (sIgA) and sIgA-producing cells, specific to diarrhoea-causing pathogens such as rotavirus and *Clostridium difficile*.[20,23]

References

1. Thrive Fridge versus Shelf Probiotic Tracker. 2022.
2. Australian Commission on Safety and Quality in Health Care (ACSQHC). AURA 2023: fifth Australian report on antimicrobial use and resistance in human health. Sydney:ACSQHC; 2023. pages 63, 78. https://www.safetyandquality.gov.au/publications-and-resources/resource-library/aura-2023-fifth-australian-report-antimicrobial-use-and-resistance-human-health-report
3. Szajewska H, Canani RB, Guarino A, et al. Probiotics for the prevention of antibiotic-associated diarrhea in children. *J Pediatr Gastr Nutr.* 2016;62(3):495-506. doi:10.1097/mpg.0000000000001081
4. Laursen RP, Hojsak I. Probiotics for respiratory tract infections in children attending day care centers—a systematic review. *Eur J Pediatr.* 2018;177(7):979-994. doi:10.1007/s00431-018-3167-1
5. Leyer GJ, Li S, Mubasher ME, et al. Probiotic effects on cold and influenza-like symptom incidence and duration in children. *Pediatrics.* 2009;124(2):e172-e179. doi:10.1542/peds.2008-2666
6. Probiotics. Natural Medicines Database. Therapeutic Research Centre; Updated Jul 10, 2020. Accessed Mar 22, 2024. https://ausdi.hcn.com.au/nmInteractions.htm
7. *Bifidobacterium animalis* ssp *lactis.* Natural Medicines Database. Therapeutic Research Centre. Updated May 28, 2022. Accessed May 20, 2024. https://ausdi.hcn.com.au/nmInteractions.htm
8. *Lacticaseibacillus rhamnosus.* Natural Medicines Database. Therapeutic Research Centre. Updated Feb 16, 2024. Accessed May 20, 2024. https://ausdi.hcn.com.au/nmInteractions.htm
9. Round JL, Mazmanian SK. The gut microbiome shapes intestinal immune responses during health and disease. *Nature Reviews. Immunology.* 2009 May;9(5):313. doi: 10.1038/nri2515
10. Arrieta MC, Stiemsma LT, Amenyogbe N, et al. The intestinal microbiome in early life: health and disease. *Front Immunol.* 2014;5:427. doi:10.3389/fimmu.2014.00427
11. Jenkins G, Mason P. The role of prebiotics and probiotics in human health: a systematic review with a focus on gut and immune health. *Food Nutr J.* 2022;7(1). doi:10.29011/2575-7091.100245
12. Minami J, et al. Lysozyme in breast milk is a selection factor for bifidobacterial colonisation in the infant intestine. *Benef Microbes.* 2016;7(1):53-60.
13. Chen, K, Xin, J, Zhang G, et al. A combination of three probiotic strains for treatment of acute diarrhoea in hospitalised children: an open label, randomised controlled trial. *Benef Microbes.* 2020; 11 (4):339-346. doi: 10.3920/BM2020.0046
14. Sanders ME, Klaenhammer TR. Invited review: The scientific basis of *Lactobacillus acidophilus* NCFM functionality as a probiotic. *J Dairy Sci.* 2001;84(2):319-331. doi:10.3168/jds.s0022-0302(01)74481-5
15. Mäkeläinen H, Saarinen M, Stowell J, et al. Xylo-oligosaccharides and lactitol promote the growth of *Bifidobacterium lactis* and *Lactobacillus* species in pure cultures. *Benef Microbes.* 2010;1(2):139-148. doi:10.3920/bm2009.0029
16. Collado MC, Meriluoto J, Salminen S. Role of commercial probiotic strains against human pathogen adhesion to intestinal mucus. *Lett Appl Microbiol.* 2007;45(4):454-460. doi:10.1111/j.1472-765x.2007.02212.x
17. Gawrońska A, Dziechciarz P, Horvath A, et al. A randomized double-blind placebo-controlled trial of *Lactobacillus* GG for abdominal pain disorders in children. *Aliment Pharm Therap.* 2007;25(2):177-184. doi:10.1111/j.1365-2036.2006.03175.x
18. Pärtty A, Lehtonen L, Kalliomäki M, et al. Probiotic *Lactobacillus rhamnosus* GG therapy and microbiological programming in infantile colic: a randomized, controlled trial. *Pediatr Res.* 2015;78(4):470-475. doi:10.1038/pr.2015.127
19. Shaw LP, Bassam H, Barnes CP, et al. Modelling microbiome recovery after antibiotics using a stability landscape framework. *Isme J.* 2019;13(7):1845-1856. doi:10.1038/s41396-019-0392-1
20. Teitelbaum JE, Walker WA. Nutritional impact of pre and probiotics as protective gastrointestinal organisms. 2002. *Annu Rev Nutr;* 22:107–138. doi: 10.1146/annurev.nutr.22.110901.145412
21. Vanderhoof JA, Whitney DB, Antonson DL, et al. *Lactobacillus* GG in the prevention of antibiotic-associated diarrhea in children. *J Pediatrics.* 1999;135(5):564-568. doi:10.1016/s0022-3476(99)70053-3
22. Szajewska H, Albrecht P, Topczewska-Cabanek A. Randomized, double-blind, placebo-controlled trial: effect of *Lactobacillus* GG supplementation on *Helicobacter pylori* eradication rates and side effects during treatment in children. *J Pediatr Gastroenterol Nutr.* 2009 Apr;48(4):431-6. PubMed PMID: 19330931.
23. Fukushima Y, Kawata Y, Hara H, et al. Effect of a probiotic formula on intestinal immunoglobulin A production in healthy children. *Int J Food Microbiol.* 1998;42(1-2):39-44. doi:10.1016/s0168-1605(98)00056-7

For any enquiries, contact Clinical Support
P: 1800 777 648
E: ANZ_clinicalsupport@metagenics.com

RTN1883 - 05/24