



## Children's Multi-Probiotic

### 7-Strain Formula · 3 Billion Active Cells

- Contains a probiotic blend of seven species of Lactobacillus and Bifidobacterium, which are associated with a healthy gut microbiome during childhood
- Provides a guaranteed minimum of 3 billion active cells per serving
- Powder allows for easy dosing and convenience of mixing in other food/drinks
- · No added flavours, colours, or sugar; gluten-free

**Code:** 9460 **NPN:** 80033530 **Size:** 60 g Powder



#### **PRODUCT SUMMARY**

Children's Multi-Probiotic provides a clinical dose of seven probiotic *Lactobacillus* and *Bifidobacterium* species associated with healthy gastrointestinal function and the natural microbiome established during childhood. A healthy microbiota has been linked to a broad range of beneficial functions, including modulation of the immune system, increased response to vaccination, improved health of the cells lining the gastrointestinal tract and the GI barrier, and resistance to pathogenic bacterial species. Many of the beneficial effects of healthy microbiota have been attributed to their metabolites, such as short-chain fatty acids (SCFAs) and bile acids, which have both local and systemic effects.

The species in Children's Multi-Probiotic have been shown to have a number of specific benefits. For example, Bifidobacterium longum subspecies infantis has been described as a "champion colonizer of the infant gut," linked to decreased inflammation and greater vaccine response. In addition, multiple strains in Children's Multi-Probiotic have been associated with reduced inflammation when given to preterm infants. A meta-analysis suggests that Lactobacillus fermentum may be the most effective species for reducing the severity of atopic dermatitis in children. Similarly, multiple species of Lactobacillus and Bifidobacterium, particularly L. casei, reduce the risk for developing C. difficile-associated diarrhea following antibiotic use. Several large meta-analyses have also found a significant reduction in respiratory tract infections among children supplemented with probiotics.



**To Place Your Order Email:** customerservice@bioclinicnaturals.com **Call:** 1·888·826·9625 • **Fax:** 1·877·433·9862

Proudly



## CHILDREN'S MULTI-PROBIOTIC 7-STRAIN FORMULA · 3 BILLION ACTIVE CELLS



Serving Size: 1 g

Servings Per Container: 60

### Each Gram (1/2 Teaspoon) Contains:

3 billion active cells\* of the following specially cultured strains of probiotics:

Total Bacterial Culture		3 billion CFU <sup>†</sup>
Lactobacillus rhamnosus (HA-111) (whole cell)	35%	1.05 billion CFU <sup>†</sup>
Bifidobacterium bifidum (HA-132) (whole cell)	15%	0.45 billion CFU <sup>†</sup>
Bifidobacterium breve (HA-129) (whole cell)	15%	0.45 billion CFU <sup>†</sup>
Bifidobacterium longum subsp. infantis (HA-116) (wh	nole cell)10%	0.30 billion CFU <sup>†</sup>
Lactobacillus acidophilus (HA-122) (whole cell)	10%	0.30 billion CFU <sup>†</sup>
Lactobacillus casei (HA-108) (whole cell)	10%	0.30 billion CFU <sup>†</sup>
Lactobacillus fermentum (HA-179) (whole cell)	5%	0.15 billion CFU <sup>†</sup>

<sup>†</sup>CFU: colony forming units

Non-medicinal Ingredients: Maltodextrin, silica, ascorbic acid. May contain traces of milk and/or soy.

**Recommended Dose: Children 1–5 Years Old:** ½ teaspoon (approx. 1 g) 1–3 times per day. **Children 6–12 Years Old:** ½–1 teaspoon 3 times per day. Can be mixed with water, juice, or your favourite smoothie, or sprinkled onto foods like cereal, fruit, or yogurt, or use as directed by a health care practitioner. Take at least 2–3 hours before or after antibiotics

**Recommended Use:** Source of probiotics. Helps support intestinal/gastrointestinal health. May promote a favourable gut flora.

**Caution:** Stop use and consult a health care practitioner if symptoms of digestive upset (e.g., diarrhea) occur, worsen, or persist beyond 3 days. Do not use this product if you have an immunocompromised condition (e.g., AIDS, lymphoma, patients undergoing long-term corticosteroid treatment). Consult a health care practitioner prior to use if you have fever, vomiting, bloody diarrhea, or severe abdominal pain. Keep out of reach of children.

Contraindications: Consult a health care practitioner for use with cardiac valvular disease and short-gut syndrome.

Drug Interactions: No known drug interactions; should be separated from antibiotic use by at least 2 hours.

Contains no artificial colours, preservatives, or sweeteners; no starch, wheat, gluten, yeast, corn, egg, fish, shellfish, salt, tree nuts, or GMOs. Suitable for vegetarians. Sealed for your protection. Do not use if seal is broken. For freshness, store in a cool, dry place.

References available at bioclinicnaturals.com



### · GUARANTEED ·

Bioclinic Naturals\* products are manufactured to meet or exceed current Good Manufacturing Practices (cGMP) of the U.S. Food and Drug Administration (FDA), Health Canada, and the Therapeutic Goods Administration (TGA) of Australia.





PRODUCT OF CANADA Bioclinic Naturals® Canada Burnaby, BC V3N 4T6 bioclinicnaturals.com

<sup>\*</sup>Guaranteed minimum 3 billion active cells per gram at expiry date.

<sup>\*</sup>Guaranteed minimum 5 billion active cells per gram at manufacture date.

### bioclinic naturals natural solutions + clinical results bioclinicnaturals.com

# Children's Multi-Probiotic – 7-Strain Formula 3 Billion Active Cells

### About Children's Multi-Probiotic

- Probiotic supplementation has been associated with a broad range of benefits in the pediatric population, promoting a protective environment for healthy gut bacteria and potentially reducing the incidence of gut-related health concerns.<sup>1</sup>
- Children's Multi-Probiotic provides seven probiotic Lactobacillus and Bifidobacterium species. These probiotic species are found in healthy children and have the greatest evidence base in clinical trials.<sup>1,2</sup>
- Intestinal microbiota (gut bacteria) has an extremely broad influence on both local gut health and systemic health. This includes supporting immune activity as well as immune tolerance, in addition to increasing the response to vaccination.<sup>3</sup>
- Bifidobacterium longum subspecies infantis, for example, has been shown to efficiently colonize the infant's gastrointestinal tract, reduce inflammation, and improve the immune response to vaccination.<sup>4,5</sup>
- Microbiota plays a crucial role in promoting the health of the cells that line the GI tract. They support a well-functioning intestinal barrier and provide resistance to more harmful bacterial species.<sup>3</sup>
- Gut bacteria may provide some protection against inflammation and allergies.<sup>2</sup> Lactobacillus fermentum, for example, is among the most effective species for reducing the severity of atopic dermatitis in children.<sup>6</sup>
- Many different species of Lactobacillus and Bifidobacterium, especially Lactobacillus casei, have been shown to reduce the risk of developing C. difficile-associated diarrhea following antibiotic use.<sup>7,8</sup>
- Children supplemented with probiotics have been shown to be less likely to develop upper respiratory tract infections and to have fewer absences from school/davcare.<sup>9,10</sup>

### How to Use Children's Multi-Probiotic

• Children 1–5 Years Old: Take ½ teaspoon (approx. 1 g), 1–3 times per day. Children 6–12 Years Old: Take ½ –1 teaspoon, 3 times per day. Can be mixed with water, juice, or your favourite smoothie, or sprinkled onto foods like cereal, fruit, or yogurt, or use as directed by a health care practitioner. Take at least 2–3 hours before or after antibiotics.

### **Cautions and Contraindications**

• Stop use and consult a health care practitioner if symptoms of digestive upset (e.g., diarrhea) occur, worsen, or persist beyond 3 days. Do not use this product if you have an immunocompromised condition (e.g., AIDS, lymphoma, patients undergoing long-term corticosteroid treatment). Consult a health care practitioner prior to use if you have fever, vomiting, bloody diarrhea, or severe abdominal pain. Keep out of reach of children. Consult a health care practitioner for use with cardiac valvular disease and short-gut syndrome.<sup>1</sup>

### **Drug Interactions**

 No known drug interactions; should be separated from antibiotic use by at least 2 hours.

### **Quick Tips for Optimal Health**

Dietary choices have the greatest impact on the composition of gut bacteria. While a western diet generally shifts the bacterial population to one associated with more inflammation, a diet that emphasizes plant-based and high-fibre foods has been linked to a more favourable microbiome. 11,12
Dietary fibre is an important influence on gut bacteria, with higher fibre levels associated with a greater abundance of both <i>Lactobacillus</i> and <i>Bifidobacterium</i> species. <sup>13</sup>
A high intake of sugar, such as from sugar-sweetened beverages, has been linked to unfavourable changes in the composition of gut bacteria. These changes are thought to be partly responsible for the increased risk of metabolic disease and obesity. <sup>14,15</sup>

PATIENT NAME:	PRACTITIONER CONTACT INFORMATION:
PRACTITIONER NOTES:	
	-
	-
	-
	-
	-

Increased stress levels in older children have been associated with an increase in the production of stress hormones that disrupt the gut barrier and the gut bacterial composition. Several studies suggest supplementation with <i>Lactobacillus</i> species may prevent some of the adverse consequences of stress, such as preventing spikes in cortisol production. <sup>16</sup>
While sometimes necessary, frequent or early antibiotic use during childhood has been identified as a risk factor for the later development of overweight/obesity, as well as asthma and allergic rhinitis. This is likely because of a disruption of the microbiome. <sup>17</sup> Probiotic supplementation may help prevent some of the adverse effects of antibiotic use. <sup>18</sup>
Environmental toxins may also disrupt the microbiome. For example, both passive and active tobacco smoke has been shown to increase the risk for allergic diseases among children, in part through its effects on the microbiome. 19,20
Supplementation with probiotics just before or during a meal is more effective than taking them following a meal. This is likely because of the bactericidal effects of stomach acid, as the pH is nearly neutral during a meal but drops approximately 30 minutes following a meal. <sup>21</sup>

### References

- 1. García-Santos, J.A., Nieto-Ruiz, A., García-Ricobaraza, M., et al. (2023). Impact of probiotics on the prevention and treatment of gastrointestinal diseases in the pediatric population.
- 2. Lopez-Santamarina, A., Gonzalez, E.G., Lamas, A., et al. (2021). Probiotics as a possible strategy for the prevention and treatment of allergies. A narrative review. Foods, 10(4), 701.
- 3. Sanders, M.E., Merenstein, D.J., Reid, G., et al. (2019). Probiotics and prebiotics in intestinal health and disease: From biology to the clinic. Nat Rev Gastroenterol Hepatol, 16(10), 605-16.
- 4. Huda, M.N., Ahmad, S.M., Alam, M.J., et al. (2019). Bifidobacterium abundance in early infancy and vaccine response at 2 years of age. Pediatrics, 143(2), e20181489.
- 5. Underwood, M.A., German, J.B., Lebrilla, C.B., et al. (2015). Bifidobacterium longum subspecies infantis: Champion colonizer of the infant gut. Pediatr Res, 77(1-2), 229-35.
- 6. Fijan, S., Kolč, N., Hrašovec, M., et al. (2023). Single-strain probiotic lactobacilli for the treatment of atopic dermatitis in children: A systematic review and meta-analysis. Pharmaceutics, 15(4), 1256.
- 7. Ma, Y., Yang, J.Y., Peng, X., et al. (2020). Which probiotic has the best effect on preventing Clostridium difficile-associated diarrhea? A systematic review and network meta-analysis. J Dig Dis, 21(2), 69-80.
- 8. Goldenberg, J.Z., Yap, C., Lytvyn, L., et al. (2017). Probiotics for the prevention of Clostridium difficile-associated diarrhea in adults and children. Cochrane Database Syst Rev, 12(12), CD006095.
- 9. Wang, Y., Li, X., Ge, T., et al. (2016). Probiotics for prevention and treatment of respiratory tract infections in children: A systematic review and meta-analysis of randomized controlled trials. *Medicine*, 95(31), e4509.
- 10. Zhao, Y., Dong, B.R., & Hao, Q. (2022). Probiotics for preventing acute upper respiratory tract infections. Cochrane Database Syst Rev, 8(8), CD006895.
- 11. Dupont, H.L., Jiang, Z.D., Dupont, A.W., et al. (2020). The intestinal microbiome in human health and disease. Trans Am Clin Climatol Assoc, 131, 178-97.
- 12. Shankar, V., Gouda, M., Moncivaiz, J., et al. (2017). Differences in gut metabolites and microbial composition and functions between Egyptian and U.S. children are consistent with their diets. mSystems, 2(1), e00169-16.
- 13. So, D., Whelan, K., Rossi, M., et al. (2018). Dietary fiber intervention on gut microbiota composition in healthy adults: A systematic review and meta-analysis. Am J Clin Nutr, 107(6), 965-83.
- 14. Di Rienzi, S.C., & Britton, R.A. (2020). Adaptation of the gut microbiota to modern dietary sugars and sweeteners. Adv Nutr, 11(3), 616-29.
- 15. Calcaterra, V., Cena, H., Magenes, V.C., et al. (2023). Sugar-sweetened beverages and metabolic risk in children and adolescents with obesity: A narrative review. Nutrients, 15(3), 702.
- 16. Freimer, D., Yang, T.T., Ho, T.C., et al. (2022). The gut microbiota, HPA axis, and brain in adolescent-onset depression: Probiotics as a novel treatment. Brain Behav Immun Health, 26, 100541.
- 17. Vallianou, N., Dalamaga, M., Stratigou, T., et al. (2021). Do antibiotics cause obesity through long-term alterations in the gut microbiome? A review of current evidence. Curr Obes Rep., 10(3), 244-62.
- 18. Kesavelu, D., & Jog, P. (2023). Current understanding of antibiotic-associated dysbiosis and approaches for its management. Ther Adv Infect Dis, 10, 20499361231154443.
- 19. Saulyte, J., Regueira, C., Montes-Martínez, A., et al. (2014). Active or passive exposure to tobacco smoking and allergic rhinitis, allergic dermatitis, and food allergy in adults and children: A systematic review and meta-analysis. *PLoS Med, 11(3)*, e1001611.
- 20. Brindisi, G., Marazzato, M., Brunetti, F., et al. (2022). Allergic rhinitis, microbiota and passive smoke in children: A pilot study. Pediatr Allergy Immunol, 33 Suppl 27(Suppl 27), 22-6.
- 21. Tompkins, T.A., Mainville, I., & Arcand, Y. (2011). The impact of meals on a probiotic during transit through a model of the human upper gastrointestinal tract. Benef Microbes, 2(4), 295-303.