

HMF Bifido Powder

GENESTRA BRANDS®

Daily Probiotic Supplement

Six-strain Bifidobacteria combination

- Provides 40 billion CFU per dose
- · Convenient once-daily powder format
- Supports gastrointestinal health, abdominal comfort and a healthy microflora[‡]
- Promotes healthy immune function[‡]
- Includes proprietary, research-driven strains

HMF Bifido Powder offers six proprietary *Bifidobacteria* strains to support probiotic colonization in the large intestine. *Bifidobacteria* are normally present in the gut from birth to old age, where they play an important role in gastrointestinal health. *Bifidobacteria* help to mediate carbohydrate fermentation in the large intestine and contribute to the production of important short-chain fatty acids (SCFAs), including acetate and lactate. Although they are the most abundant genus present in the guts of healthy infants, *Bifidobacteria* concentrations decrease as individuals age, with greatest declines observed in the elderly. Clinical research suggests that *Bifidobacteria* supplementation can promote a healthy gut flora composition, support gastrointestinal comfort, and may have a particular role in maintaining immune function. HMF Bifido Powder provides highly researched probiotic strains such as BI-04, CUL-34 and CUL-20, which have been demonstrated in clinical trials to contribute to gastrointestinal and immune health.[‡]



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	Amour	ıt Per Seı	rving	%D
	4	0 billion	CFU	÷
actis L-20	(CUL-34))	1)		
actis	(BI-04)			
fantis	is (Bi-26)		
ngun	n (CUL-7	75)		
ngun	m (CUL-7	5))

Other Ingredients: Potato maltodextrin

Recommended Dose

In a glass, add water to 2 level scoops and mix. Take once daily or as recommended by your health professional.

Size **Product Code** Net Weight 1 oz (30 g) 10429 FOS GMO Non Gluten Dairv No Sov GMO Free FOS Free

Tried, tested and true.

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[‡]These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure or prevent any disease.

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Daily Probiotic Supplement

Scientific Rationale:

The human intestinal tract contains more than 400 bacterial species.¹ This microflora composition can be altered by a number of factors, including diet, occasional stress, certain medications, aging and travel.¹ When the microflora balance is affected in the intestines, common gastrointestinal complaints can occur, including mild bloating and gas.² Research suggests that supplementation with *Bifidobacteria* can promote a healthy gut flora composition and help support gastrointestinal and immune health.^{3,4‡}

Bifidobacteria are normally present in the gut from birth to old age.³ As they can be transmitted from the mother's vagina, gastrointestinal tract or breast milk, they are one of the first genera to colonize the infant gut.^{4,5} In fact, *Bifidobacteria* are the most abundant genus present in the guts of healthy infants, and are present in higher amounts in vaginally-born and breast-fed infants when compared to those who are caesarean-delivered or formula-fed.³ As infants consume solid foods, typically around 6 months of age, bacterial diversity in the gut expands; however, the level of *Bifidobacteria* falls to 30-40% and continues to decrease throughout childhood and adolescence.⁴ *Bifidobacteria* populations decrease further in adulthood (2-14% relative abundance), but remain stable before dropping again in the elderly.³ In addition to the natural reduction in microbial diversity associated with old age, the high prevalence of antibiotic use in the elderly significantly impacts the intestinal microbiota composition, further reducing *Bifidobacteria* levels and impacting overall health.^{3‡}

Bifidobacteria typically colonize the large intestine, where they help to mediate carbohydrate fermentation.^{5‡} As a result of their involvement in host metabolism, they contribute to the production of metabolites such as vitamins, antioxidants, polyphenols and short-chain fatty acids (SCFAs), which positively affect the gut.^{5‡} Acetate and lactate are the primary fermentation end-products associated with *Bifidobacteria*-mediated carbohydrate metabolism.⁵ Various colonic bacteria convert these metabolites into butyrate, the major source of energy for colonocytes.⁵ Butyrate further contributes to gut health by promoting the production of mucin and upper gut motility, while regulating nuclear factor kappa B (NF \ltimes B) activity.⁵ In addition, *Bifidobacteria* help to strengthen the epithelial barrier to further maintain gut health.^{3.5‡}

HMF Bifido Powder provides a combination of six proprietary *Bifidobacteria* strains from a blend of four different *Bifidobacteria* species. Included in this formula are CUL-34 and CUL-20, which have been selected based on their superior adherence to the gut lining, and natural resistance to pH and bile acid.⁶ Double-blind, placebo-controlled trials have reported that daily supplementation with a probiotic supplement (containing CUL-34 and CUL-20) significantly modulates the intestinal microflora composition, supporting a favorable gut flora.^{7.8‡} An additional randomized, double-blind, placebo-controlled trial supplementation with the same probiotic strains provided support for occasional bloating and abdominal comfort, as well as bowel motility and elimination.^{9‡}

Additionally, approximately 80% of the body's immunologically active cells are located in gut-associated lymphoid tissue, demonstrating an important interaction between the intestines and the immune system.^{10‡} Preclinical research suggests that probiotics may directly mediate the activation of immune cells, the release of cytokines, and IgA antibody-mediated responses in the mucosa.^{11‡}

Research suggests that *Bifidobacteria* may have a particular role in supporting the immune system.^{4‡} Preliminary research showed that a probiotic supplement containing CUL-34 and CUL-20 significantly altered the immune response, as measured by alterations in the production of cytokines.^{12‡} Similarly, a clinical trial reported daily supplementation with a probiotic containing CUL-34 and CUL-20 and vitamin C provided support for upper respiratory tract health.^{13‡}

HMF Bifido Powder also provides BI-04, a proprietary probiotic strain that has been investigated for its effects on immune health.¹⁴ In a randomized, double-blind, placebo-controlled trial, physically active adults consumed either a placebo or probiotic supplement (containing 2.0x10⁹ CFU of BI-04) daily for 150 days.^{14‡} Participants recorded their physical activity and respiratory health throughout the study via a web-based questionnaire.¹⁴ When compared to the placebo, daily supplementation with BI-04 significantly promoted upper respiratory immune health, demonstrating its beneficial effects on the immune system.^{14‡}

REFERENCES

- Nagpal, R, Yadav, H, Kumar, M, Jain, S, Yamashiro, Y, Marotta, F. (2013). Chapter I. Priobiotics, Prebiotics and Synbiotics. In Otles, S. (Ed.), Probiotics and Prebiotics in Food, Nutrition and Health (pp. 1-24). Boca Raton, FL: CRC Press.
 Fink, RN, Lembo, AJ. Curr Treat Options Gastroenterol. 2001; 4(4): 333-337.
- Fink, RN, Lembo, AJ. Curr Treat Options Gastroenterol. 2001; 4(4): 333-337.
 Arboleya, S, Watkins, C, Stanton, C, Ross, RP. Front Microbiol. 2016; 7: 1204.
- Arboleya, S., Watkins, C., Stanton, C., Ross, RP. Front Microbiol. 2010, 7. 1204.
 O'Neill, I. Schofield, Z. Hall, LJ. Emerg Top Life Sci. 2017; 1: 333–349.
- O'Neill, I, Schotield, Z, Hall, LJ. Emerg lop Life Sci. 2017; 1: 333–34
- Bottacini, F, van Sinderen, D, Ventura, M. Biochem J. 2017; 474(24): 4137-4152.

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6. Seroyal. Data on file.

- Madden, JA, Plummer, SF, Tang, J, Garaiova, I, Plummer, NT, Herbison, M. Hunter, JO, Shimada, T, Cheng, L, Shirakawa, T. Int Immunopharmacol. 2005; 5(6): 1091-1097.
- Plummer, SF, Garaiova, I, Sarvotham, T, Cottrell, SL, Le Scouiller, S, Weaver, MA, Tang, J, Dee, P, Hunter, J. Int J Antimicrob Agents. 2005; 26(1): 69-74.
 Williams, EA, Stimpson, J, Wang, D, Plummer, S, Garaiova, I, Barker, ME, Corfe,
- BM. Aliment Pharmacol Ther. 2009; 29(1): 97-103.
- 10. Saavedra, JM. Nutr Clin Pract. 2007; 22: 351-365.
- 11. Oyetayo, VO, Oyetayo, FL. Afr J Biotechnol. 2005; 4(2): 123-127.

 Hepburn, NJ, Garaiova, I, Williams, EA, Michael, DR, Plummer, S. Benef Microbes. 2013; 4(4): 313-317.
 Garaiova, I, Muchová, J, Nagyová, Z, Wang, D, Li, JV, Országhová, Z, Michael, DR, Plummer, SF, Ďuračková, Z, Eur J Clin Nutr. 2015; 69(3): 373-379.

14. West, NP, Horn, PL, Pyne, DP, Gebski, VJ, Lahtinen, SJ, Fricker, PA, Cripps, AW. Clin Nutr. 2014; 33(4): 581-587.

