



GENESTRA BRANDS®

HMF Powder

PROBIOTIC SUPPLEMENT

Fructooligosaccharides and probiotics to promote intestinal health*

- Provides 22 billion CFU per day from two strains of *Lactobacillus acidophilus*, *Bifidobacterium bifidum*, and *Bifidobacterium animalis* subsp. *lactis*
- Includes 1,760 mg of fructooligosaccharides (FOS) per day

Genestra HMF Powder is a synbiotic combination of four strains of proprietary human-sourced probiotics and FOS that promotes optimal intestinal health. The intestinal microbiota, which contains more than 400 bacterial species, can be altered by medication use, aging, and premature or caesarean births. The intestines are a critical barrier that selectively allow absorption or promote the excretion of compounds, and their optimal function depends on a healthy bacterial balance. The most commonly used probiotics are *Lactobacilli* and *Bifidobacteria*. They effectively colonize the intestines, but after their ingestion ends, their counts decline. Probiotics also reinforce the epithelial barrier and control permeability by mediating tight junction integrity. Prebiotics, including FOS, are fermented by microbes in the large intestine, which in turn results in the production of short chain fatty acids, including butyrate, the preferred energy source in colon cells. Synbiotic products support the growth of healthy bacteria already living in the colon and supplemented probiotic strains.*



SUPPLEMENT FACTS			
Serving Size 1 Scoop (1 g)			
Servings per Container 60			
Each Serving Contains		% DV for Adults and Children 4+ Years	% DV for Children 1-3 Years
Total Carbohydrate	<1 g	<1%♦	†
Probiotic Consortium	11 billion CFU	†	†
<i>Lactobacillus acidophilus</i> (CUL-60)			
<i>Lactobacillus acidophilus</i> (CUL-21)			
<i>Bifidobacterium bifidum</i> (CUL-20)			
<i>Bifidobacterium animalis</i> subsp. <i>lactis</i> (CUL-34)			
Fructooligosaccharides (FOS)	880 mg	†	†

♦ Percent Daily Values (DV) are based on a 2,000 calorie diet
† Daily Value not established

Recommended Dose

Adults and Children (1 year and older): In a glass, add water or milk to one scoop (¼ teaspoon) of HMF Powder and mix. Take two times daily with meals, at least two to three hours before or after taking antibiotics, or as recommended by your healthcare practitioner.

Size
Net Weight 2.1 oz (60 g)

Product Code
10408-U



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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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Scientific Rationale:

HMF Powder is formulated using Genestra's proprietary *Lactobacillus* and *Bifidobacterium* probiotic consortium – microorganisms that have been used in a wide body of clinical research. Studies demonstrate that these strains effectively maximize intestinal colonization to promote the growth of beneficial bacteria and support gastrointestinal comfort.^{1-2*}

In one double-blind, placebo-controlled trial, HMF probiotics were found to modulate the intestinal microflora composition.^{1*} Participants were divided into two groups, receiving either a probiotic or placebo supplement for 21 days.¹ Fecal samples were collected at baseline (day one) and on days seven and 35 to determine the average bacterial composition.¹ Each probiotic capsule was taken once daily and contained 2.5×10^{10} CFU from a combination of two strains of *Lactobacillus acidophilus* (CUL-60 and CUL-21) and two strains of *Bifidobacterium* spp.¹ HMF probiotic supplementation helped to support the growth of beneficial strains and maintain a healthy bacterial balance.^{1*}

In an eight-week long, double-blind, randomized, placebo-controlled study involving 52 adults, supplementation with a combination of four HMF probiotic strains significantly reduced intestinal discomfort.^{2*} Participants were randomized to either the placebo or probiotic capsule group (25 billion CFU from CUL-60, CUL-21, CUL-34 and CUL-20) and consumed one capsule daily for eight weeks.² Participants scored their intestinal discomfort (including symptom severity score, abdominal pain, bloating, days with pain, satisfaction with bowel habits, and quality of life) at baseline and every two weeks during the supplementation period.² When compared to baseline

values, all six measures significantly improved after eight weeks of supplementation – including a 22% decrease in days with intestinal discomfort, 32% improvement in satisfaction with bowel habits, and 30% improvement in quality of life scores.^{2*} When compared to placebo values, satisfaction with bowel habits significantly improved after six weeks, quality of life significantly improved after eight weeks, and days with pain improved after 10 weeks of probiotic intake.^{2*} Therefore, HMF probiotic strains can be used to promote intestinal comfort and bowel habit satisfaction.^{2*}

HMF Powder also contains the prebiotic fiber fructooligosaccharides (FOS). Prebiotics are non-digestible food ingredients that stimulate the growth and/or metabolic activity of beneficial bacteria in the intestines.³ They are not broken down or absorbed in the upper part of the gastrointestinal tract, but are fermented in the colon, where they promote a healthy gut flora.^{3*} Preclinical research suggests that prebiotics such as FOS preferentially target *Bifidobacteria* and support their growth.^{3*} Fermentation of prebiotics leads to the production of short chain fatty acids (SCFA), an important energy source for colon cells.³ In addition, SCFA maintain an acidic intestinal pH, further contributing to a healthy microflora composition.^{3*} Furthermore, prebiotic fermentation may mediate the intestinal uptake of ions, including iron, calcium and magnesium, promoting their absorption.^{3*} Preclinical research suggests that prebiotics may also have a role in supporting healthy lipid metabolism.^{3*}

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REFERENCES

1. 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.
2. Williams, EA, Stimpson, J, Wang, D, Plummer, S, Garaiova, I, Barker, ME, Corfe, BM. *Aliment Pharmacol Ther*. 2009; 29(1): 97-103.
3. Owuamanam, CI, Ihediohanma, NC, Iwouano, JO. *PJN*. 2010; 9: 833-843.

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