



HMF Intensive 500

PROBIOTIC SUPPLEMENT

500 billion CFU per dose

- Supports gastrointestinal health and comfort*
- Balances microflora composition*
- Offers five proprietary strains from a combination of *Lactobacillus* and *Bifidobacterium* genera
- Convenient, once-daily powder format
- Potency guaranteed through expiration
- Backed by over 20 years of clinical evidence

HMF Intensive 500 is our most concentrated probiotic formula yet, providing 500 billion CFU daily from a combination of five human-sourced, research-driven strains. Included in this blend are three strains of *Lactobacilli* and two strains of *Bifidobacteria* to ensure colonization in both the small and large intestines.^{1*} These proprietary strains were selected based on their high quality, viability, strong epithelial adherence and naturally high tolerance to stomach acid.^{2*} HMF probiotics have been evaluated for their effectiveness in clinical trials over the past 15 years and are some of the most studied probiotic cultures in the world.³⁻⁸ Research has reported that strains present in HMF Intensive 500 contribute to a favorable gut flora balance, support gastrointestinal comfort and maintain immune health (when combined with vitamin C).^{3-5*} Provided in a convenient, once-daily powder format, HMF Intensive 500 is an easy way to support daily gastrointestinal health.*



Supplement Facts

Serving Size 1 Sachet (5 g)
Servings Per Container 30

Each Serving Contains

Probiotic Consortium	500 billion CFU †
<i>Bifidobacterium animalis</i> subsp. <i>lactis</i> (CUL-34)	
<i>Bifidobacterium bifidum</i> (CUL-20)	
<i>Lactobacillus acidophilus</i> (CUL-60)	
<i>Lactobacillus acidophilus</i> (CUL-21)	
<i>Lactobacillus salivarius</i> (CUL-61)	

† % Daily Value not established

Other ingredients: Potato maltodextrin

Recommended Dose: In a glass, add water or milk to one sachet of HMF Intensive 500 and mix. Take once daily with meals, or as recommended by your healthcare practitioner.

Product Size: 30 - 0.18 oz (5 g) Sachets of Powder [Net Wt 5.3 oz (150 g)] **Product Code:** 10199



REFERENCES

1. Govender, M, Choonara, YE, Kumar, P, du Toit, LC, van Vuuren, S, Pillay, V. AAPS PharmSciTech. 2014; 15(1): 29-43.
2. Seroyal. Data on file.
3. Madden, JA, Plummer, SF, Tang, J, Garaiova, I, Plummer, NT, Herbison, M, Hunter, JQ, Shimada, T, Cheng, L, Shirakawa, T. Int Immunopharmacol. 2005; 5(6): 1091-1097.
4. Plummer, SF, Garaiova, I, Sarvatham, T, Cottrell, SL, Le Scouller, S, Weaver, MA, Tang, J, Dee, P, Hunter, J. Int J Antimicrob Agents. 2005; 26(1): 69-74.
5. Williams, EA, Stimpson, J, Wang, D, Plummer, S, Garaiova, I, Barker, ME, Corfe, BM. Aliment Pharmacol Ther. 2009; 29(1): 97-103.
6. Garaiova, I, Muchová, J, Nagayová, Z, Wang, D, Li, JY, Országhová, Z, Michael, DR, Plummer, SF, Duračková, Z. Eur J Clin Nutr. 2015; 69(3): 373-379.
7. Plummer, S, Weaver, MA, Harris, JC, Dee, P, Hunter, J. Int Microbiol. 2004; 7(1): 59-62.
8. Allen, SJ, Jordan, S, Storey, M, Thornton, CA, Gravenor, M, Garaiova, I, Plummer, SF, Wang, D, Morgan, G. J Nutr. 2010; 140(3): 483-488.

*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

This information is intended for use by healthcare practitioners only and does not establish a doctor-patient relationship. Please be sure to consult your physician before taking this or any other product.

Copyright © 2016 Seroyal. All rights reserved. No part of this information may be used or reproduced in any form or by any means, or stored in a database or retrieval system, or be distributed or replicated without express permission of Seroyal. Making copies of any part of this information for any purposes other than your own personal use is a violation of copyright law.

3483. Version 1.

US: (888) 737-6925 | www.seroyal.com **Seroyal**



HMF Intensive 500 PROBIOTIC SUPPLEMENT

Scientific Rationale:

The human intestinal tract contains more than 400 bacterial species.¹ The distribution of these microorganisms throughout the gut is not uniform, with the concentration and diversity of species increasing towards the distal end of the GI tract.² In addition, certain species preferentially colonize specific areas of the digestive system.³ Compared to other strains, *Lactobacilli* survive better in acidic environments, and are one of few species present in the stomach and duodenum.^{3*} In contrast, *Bifidobacteria* are found in larger numbers in the colon, where they play a role in fermentation and complex carbohydrate digestion.^{3*}

The composition of the gut microflora 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. In some individuals, an altered intestinal microflora composition can also affect the absorption of bile acids in the colon and secretion of fluid and mucous through the mucosa; in turn, this can result in occasional discomfort and bowel habit changes.^{5*}

Probiotics are live microorganisms that support gastrointestinal health and contribute to a healthy microflora composition.^{1*} Studies have shown that they mediate microbial colonization and support the growth of beneficial bacteria in the intestines.^{1*} Probiotics accomplish this by mediating intestinal pH and strengthening the epithelial barrier.^{6*} They mediate the integrity of tight junctions and increase mucin release, which in turn regulates permeability and reduces microbial adherence to cells.^{6,7*} Probiotics may also support gastrointestinal comfort by decreasing gas formation in the colon, mediating colonic transit and conjugating bile acids, which helps control both the secretion of water in the colon and changes in mucosal permeability.^{8*} 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.^{9*} Research suggests that probiotics may directly mediate the release of cytokines and chemokines from epithelial cells, the activation of immune cells, and IgA antibody-mediated responses in the mucosa.^{10*}

HMF Intensive 500 is formulated using GENESTRA BRAND'S proprietary *Lactobacillus* and *Bifidobacterium* probiotic consortium – microorganisms that have been used in a wide body of clinical research.¹¹⁻¹⁶ Studies demonstrate that these strains effectively maximize intestinal colonization to promote the growth of beneficial bacteria, support gastrointestinal comfort, and maintain immune health (when combined with vitamin C).^{13-15*}

In one double-blind, placebo-controlled trial, HMF probiotics were found to modulate the intestinal microflora composition.^{12*} Participants were divided into two groups, receiving either a probiotic or placebo supplement for 21 days.¹² Two fecal samples were collected at baseline (day one) to determine the average bacterial composition at baseline.¹² Fecal samples were also collected on days seven and 35.¹²

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.¹² HMF probiotic supplementation supported a healthy microflora composition.^{12*} Similarly, a second randomized, double-blind, placebo-controlled trial found that daily supplementation with an HMF probiotic (2.5×10^{10} CFU from a combination of two strains of *Lactobacillus acidophilus* (CUL-60 and CUL-21) and two strains of *Bifidobacterium bifidum*) for 15 days helped to support the growth of beneficial strains and maintain a healthy bacterial balance.^{13*}

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.^{14*} Participants were randomized to either the placebo or probiotic capsule group (25 billion CFU from *Lactobacillus acidophilus* CUL-60 and CUL-21, *Bifidobacterium animalis* subsp. *lactis* CUL-34, and *Bifidobacterium bifidum* CUL-20) and consumed one capsule daily for eight weeks.* 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, as well as two weeks later to determine potential effects after supplementation had ceased.*

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.^{14*} When compared to placebo values, satisfaction with bowel habits significantly improved after six weeks, while mean change in symptom severity score significantly improved after both six and eight weeks of probiotic supplementation.^{14*} Similarly, when compared to the placebo, quality of life significantly improved after eight weeks, while days with pain improved after 10 weeks of probiotic intake.^{14*} Therefore, HMF probiotic strains can be used to promote intestinal comfort and bowel habit satisfaction.^{14*}

A combination of HMF probiotics and vitamin C was also reported to support schoolchildren's respiratory immune health in a six-month, randomized, double-blind, placebo-controlled study.^{15*} Children were randomized to either a placebo or probiotic and vitamin C tablet group (12.5 billion CFU of *Lactobacillus acidophilus* CUL-60 and CUL-21, *Bifidobacterium animalis* subsp. *lactis* CUL-34, *Bifidobacterium bifidum* CUL-20 and 50 mg of vitamin C).¹⁵ Participants consumed one tablet daily for six months and their respiratory health was evaluated by a pediatrician every two months.¹⁵ Compared with the placebo group, upper respiratory tract health and immune function was significantly better supported in children that received the probiotic and vitamin C supplement.^{15*}

For educational purposes only. Do not distribute.

REFERENCES

1. Nagpal, R, Yadav, H, Kumar, M, Jain, S, Yamashiro, Y, Marotta, F. (2013). Chapter 1. Probiotics, Prebiotics and Synbiotics. In Orlitzky, S. (Ed.), *Probiotics and Prebiotics in Food, Nutrition and Health* (pp. 1-24). Boca Raton, FL: CRC Press.
2. Sekirov, I, Russell, SL, Antunes, LC, Finlay, BB. *Physiol Rev*. 2010; 90(3): 859-904.
3. Govender, M, Choonara, YE, Kumar, P, du Toit, LC, van Vuuren, S, Pillay, V. *AAPS PharmsciTech*. 2014;15(1): 29-43.
4. Fink, RN, Lembo, AJ. *Curr Treat Options Gastroenterol*. 2001; 4(4): 333-337.
5. Sarowska, J, Choroszty-Król, J, Reguliska-Ilow, B, Frej-Madrzak, M, Jama-Kmieciak, A. *Adv Clin Exp Med*. 2013; 22(5): 759-766.
6. Bermudez-Brito, M, Plaza-Diaz, J, Muñoz-Quezada, S, Gómez-Llorente, C, Gil, A. *Ann Nutr Metab*. 2012; 61(2): 160-174.
7. Saulnier, N, Zocco, MA, Di Caro, S, Gasbarrini, G, Gasbarrini, A. *Genes & Nutrition*. 2006; 1(2): 107-116.
8. Dai, C, Zheng, CQ, Jiang, M, Ma, XY, Jiang, LJ. *World J Gastroenterol*. 2013; 19(36): 5973-80.
9. Saavedra, JM. *Nutr Clin Pract*. 2007; 22(3): 351-365.
10. Corthesy, B, Gaskins, HR, Mercenier, A. *J Nutr*. 2007;137(3 Suppl 2): 781S-790S.
11. Allen, SJ, Jordan, S, Storey, M, Thornton, CA, Gravenor, M, Garaiova, I, Plummer, SF, Wang, D, Morgan, G. *J Nutr*. 2010; 140(3): 483-488.
12. Plummer, SF, Garaiova, I, Sarvotham, T, Cottrell, SL, Le Scoullier, S, Weaver, MA, Tang, J, Dee, P, Hunter, J. *Int J Antimicrob Agents*. 2005; 26(1): 69-74.
13. 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.
14. Williams, EA, Stimpson, J, Wang, D, Plummer, S, Garaiova, I, Barker, ME, Corfe, BM. *Aliment Pharmacol Ther*. 2009; 29(1): 97-103.
15. Garaiova, I, Muchová, J, Nagyová, Z, Wang, D, Li, J, Országhová, Z, Michael, DR, Plummer, SF, Duračková, Z. *Eur J Clin Nutr*. 2015; 69(3): 373-379.
16. Plummer, S, Weaver, MA, Harris, JC, Dee, P, Hunter, J. *Int Microbiol*. 2004; 7(1): 59-62.

* These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

This information is intended for use by healthcare practitioners only and does not establish a doctor-patient relationship. Please be sure to consult your physician before taking this or any other product.

Copyright © 2016 Seroyal. All rights reserved. No part of this information may be used or reproduced in any form or by any means, or stored in a database or retrieval system, or be distributed or replicated without express permission of Seroyal. Making copies of any part of this information for any purposes other than your own personal use is a violation of copyright law.

US: (888) 737-6925 | www.seroyal.com

Seroyal