



pre+probiotics™ pixie

Pre+probiotics Pixie increases levels of healthy, protective bacteria.*

Lactobacillus rhamnosus

Lactobacillus acidophilus

Lactobacillus plantarum

Bifidobacterium breve

Bifidobacterium Animalis lactis
Inulin

Fructooligosaccharides



20 BILLION
ACTIVE CULTURES



The blend of five strains gives a total of 20 billion units per serving. These bacteria have also been protected using the Microbac™ proprietary technology which studies have shown provide the equivalent of five times the effective colonization.*

LACTOBACILLUS RHAMNOSUS

Studies involving the Lactobacillus strain of bacteria suggest supplementation could lessen feelings of anxiety or ease symptoms of depression, counteract weight gain and diabetes, and might be a treatment for IBS.

- o Bravo, J. et al. Ingestion of Lactobacillus strain regulates emotional behavior and central GABA receptor expression in a mouse via the vagus nerve. Proceedings of the National Academy of Sciences of the United States of America. 108 (38).
- o Schmidt, K. et al. Prebiotic intake reduces the waking cortisol response and alters emotional bias in healthy volunteers. Psychopharmacology. 232 (10).
- o Yadav, H. et al. Beneficial metabolic effects of a probiotic via butyrate induced GLP-1 secretion. The Journal of Biological Chemistry.
- o Zajac, A. et al. A systematic review and meta-analysis of probiotics for the treatment of allergic rhinitis. International Forum of Allergy and Rhinology. 5 (6).
- o P. L. Conway, S. L. Gorbach, B. R. Goldin. Survival of Lactic Acid Bacteria in the Human Stomach and Adhesion to Intestinal Cells. Journal of Dairy Science. Volume 70, Issue 1, Pages 1-12. DOI: 10.3168/jds.S0022-0302(87)79974-3.
- o Beerepoot, M. A. et al. Lactobacilli vs antibiotics to prevent urinary tract infections: a randomized, double-blind, noninferiority trial in postmenopausal women. Archives of Internal Medicine. 172 (9).

LACTOBACILLUS ACIDOPHILUS

The benefits of this strain of probiotic are numerous and promising, particularly in the areas of lactose intolerance, cardiovascular health, digestion, and immune health

- o University of Maryland Medical Center. Lactobacillus acidophilus. University of Maryland Medical Center.
- o S. K. Akolkar, A. Sajgure, S. S. Lele. Lactase Production from Lactobacillus acidophilus. World Journal of Microbiology and Biotechnology. October 2005, Volume 21, Issue 6, pp 1119-1122.
- o Sanguansak Rerksupphaphol and Lakkana Rerksupphaphol. A Randomized Double-blind Controlled Trial of Lactobacillus acidophilus Plus Bifidobacterium bifidum versus Placebo in Patients with Hypercholesterolemia. J Clin Diagn Res. 2015 Mar; 9(3): KC01-KC04.
- o Maroof H, Hassan ZM, Mobarez AM, Mohamadabadi MA. Lactobacillus acidophilus could modulate the immune response against breast cancer in murine model. J Clin Immunol. 2012 Dec;32(6):1353-9. doi: 10.1007/s10875-012-9708-x.

LACTOBACILLUS PLANTARUM

L. plantarum works to maintain a balance of good and bad bacteria and does so while helping out with digestion and optimizing levels of vitamins and minerals. In fact, L. plantarum can actually synthesize some nutrients, like L-lysine.

- o Bravo, J. et al. Ingestion of Lactobacillus strain regulates emotional behavior and central GABA receptor expression in a mouse via the vagus nerve. Proceedings of the National Academy of Sciences of the United States of America. 108 (38).
- o Cahyanto MN, Kawasaki H, Nagashio M, Fujiyama K, Seki T. Construction of Lactobacillus plantarum strain with enhanced L-lysine yield. J Appl Microbiol. 2007 Mar;102(3):674-9.
- o Mangell P, Lennernas P, Wang M, et al. Adhesive capability of Lactobacillus plantarum 299v is important for preventing bacterial translocation in endotoxemic rats. APMIS. 2006 Sep;114(9):611-8.
- o Klarin B, Wullt M, Palmquist I, et al. Lactobacillus plantarum 299v reduces colonisation of Clostridium difficile in critically ill patients treated with antibiotics. Acta Anaesthesiol Scand. 2008 Sep;52(8):1096-102. doi: 10.1111/j.1399-6576.2008.01758.
- o Lonnermark E, Friman V, Lappas G, et al. Intake of Lactobacillus plantarum reduces certain gastrointestinal symptoms during treatment with antibiotics. J Clin Gastroenterol. 2010 Feb;44(2):106-12. doi: 10.1097/MCG.0b013e3181b2683f.
- o Mark S. Geier, Ross N. Butler, Gordon S. Howarth. Probiotics, prebiotics and synbiotics: A role in chemoprevention for colorectal cancer? Cancer Biology & Therapy. 2006;10(5):1265-1269. doi: 10.4161/cbt.5.10.3296.

BIFIDOBACTERIUM BREVE

This powerhouse probiotic bacteria plays a key role in your health. B. breve also protects colon function, alleviates constipation, and reduces gas, bloating, and diarrhea. Additionally, it stimulates your immune system, inhibits E. coli, and suppresses the fungus Candida.

- o Balakrishnan M, Floch MH. Probiotics, prebiotics and digestive health. Curr Opin Clin Nutr Metab Care. 2012 Nov;15(6):580-5. doi: 10.1097/MCO.0b013e328359684f.
- o Mondel M, Schroeder BO, Zimmermann K, et al. Probiotic E. coli treatment mediates antimicrobial human beta-defensin synthesis and fecal excretion in humans. Mucosal Immunol. 2009 Mar;2(2):166-72. doi: 10.1038/mi.2008.77.
- o Mohammadi AA, Jazayeri S, Khosravi-Darani K, et al. The effects of probiotics on mental health and hypothalamic-pituitary-adrenal axis: A randomized, double-blind, placebo-controlled trial in petrochemical workers. Nutr Neurosci. 2015 Apr 16.
- o Al-Salami H, Butt G, Fawcett JP, et al. Probiotic treatment reduces blood glucose levels and increases systemic absorption of gliclazide in diabetic rats. Eur J Drug Metab Pharmacokin. 2008 Apr-Jun;33(2):101-6.
- o Kolsom Parvaneh, Rosita Jamaluddin, Golgis Karimi, and Reza Erfani. Effect of Probiotics Supplementation on Bone Mineral Content and Bone Mass Density. ScientificWorldJournal. 2014; 2014: 595962. doi: 10.1155/2014/595962.
- o Gui Yang, Zhi-Qiang Liu, and Ping-Chang Yang. Treatment of Allergic Rhinitis with Probiotics: An Alternative Approach. N Am J Med Sci. 2013 Aug; 5(8): 465-468. doi: 10.4103/1947-2714.117299.
- o Mendonca FH, Santos SS, Faria Ida S, et al. Effects of probiotic bacteria on Candida presence and IgA anti-Candida in the oral cavity of elderly. Braz Dent J. 2012;23(5):534-8.

- o Mukherjee PK, Sendid B, Hoarau G, et al. Mycobiota in gastrointestinal diseases. Nat Rev Gastroenterol Hepatol. 2015 Feb;12(2):77-87. doi: 10.1038/nrgastro.2014.188.
- o Yoshikazu Ohtsuka, Takako Ikegami, Hirohisa Izumi, et al. Effects of Bifidobacterium breve on inflammatory gene expression in neonatal and weaning rat intestine. Pediatric Research (2012) 71, 46-53. doi: 10.1038/pr.2011.11.

BIFIDOBACTERIUM ANIMALIS LACTIS

Bifidobacterium lactis is one of the most versatile and hardest working for the human body and may also support healthy cholesterol levels, ease ulcerative colitis, and even combat the effects of celiac disease.

- o Lomax AR, Calder PC. Probiotics, immune function, infection and inflammation: a review of the evidence from studies conducted in humans. Curr Pharm Des. 2009;15(13):1428-518.
- o K Lindfors, T Blomqvist, K Juuti-Uusitalo, et al. Live probiotic Bifidobacterium lactis bacteria inhibit the toxic effects induced by wheat gliadin in epithelial cell culture. Clin Exp Immunol. 2008 Jun; 152(3): 552-558. doi: 10.1111/j.1365-2249.2008.03635.x.
- o Mikkel Jungersen, Anette Wind, Eric Johansen, et al. The Science behind the Probiotic Strain Bifidobacterium animalis subsp. lactis BB-12. Microorganisms 2014, 2, 92-110; doi:10.3390/microorganisms2020092.
- o Probiotic.org. B. Lactis Probiotics Supplementation Benefits. Probiotics.org.

INULIN

In your gut, inulin is converted into short-chain fatty acids (SCFAs) that are then converted to healthy ketones that feed your tissues. SCFAs may lower your risk of diabetes, promote weight loss, and might aid in heart health, bone health, colon cancer and constipation.

- 1 Prevention
- 2 Gut. 2013 Aug;62(8):1112-21.
- 3 Diabetes Metab J. 2013 Apr;37(2):140-8.
- 4, 8 Nutr Metab (Lond). 2015 Oct 24;12:36.
- 5, 14 Health Promot Perspect. 2013 Jun 30;3(1):55-63.
- 6 Am J Clin Nutr. 2009 Jun;89(6):1751-9.
- 7, 13, 22, 23 Authority Nutrition February 2016
- 9 PLoS ONE 7(8): e43263.
- 10 Medical News Today January 15, 2014
- 11 Cell. 2014 Jan 16;156(1-2):84-96.
- 12 Medical News Today January 15, 2014
- 15 Health Promot Perspect. 2013 Jun 30;3(1):55-63.
- 16 Br J Nutr. 2002 May;87 Suppl 2:S187-91.
- 17 Nutr Cancer. 2005;53(2):160-8.
- 18 Aliment Pharmacol Ther. 2007 May 1;25(9):1061-7.
- 19 Int J Food Sci Nutr. 2011 Mar;62(2):164-70
- 20 NPR May 22, 2014
- 21 Curr Gastroenterol Rep. 2014 Jan; 16(1): 370.

FRUCTOOLIGOSACCHARIDES

Fructooligosaccharides has a prebiotic effect to stimulate the growth of nonpathogenic intestinal microflora. Their consumption increases fecal bolus and may help reduce constipation.

- o Sabater-Molina, M., Larqué, E., Torrella, F. et al. J Physiol Biochem (2009) 65: 315. doi:10.1007/BF03180584