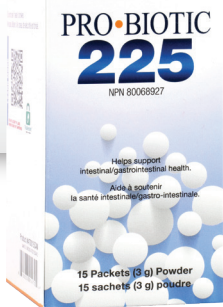


PROBIOTIC 225



RECOMMENDED USE

- *Source of probiotics*
- *Helps support intestinal/gastrointestinal health*
- *Could promote a favorable gut flora*

GASTROINTESTINAL SUPPORT

Probiotic 225 is a new probiotic formula designed to deliver active organisms shown to promote healthy gut microflora, and support intestinal health. Each Probiotic 225 packet provides six proven probiotic strains chosen for their ability to withstand the harsh gastrointestinal (GI) environment and adhere to the intestinal tract.

Overview

The GI tract is a finely balanced environment where roughly 500 different strains of bacteria compete for space and nutrients. When there is a healthy balance (eubiosis), few symptoms exist. However, dysbiosis can occur when an overabundance of potentially harmful organisms prevail. The natural microflora balance can be upset by medications (such as antibiotics, oral contraceptives, etc.), excessive alcohol consumption, or poor dietary intake.

Probiotics have been extensively studied and are characterized as having broad GI benefits by increasing the population of healthy bacteria following microflora imbalance and are proposed to help in lactose digestion.¹ Being intestinal bacteria, their metabolism of undigested carbohydrates can produce short chain fatty acids which provides energy to the cells of the intestine.²

Because probiotics are live organisms, there are many challenges associated with manufacturing and distributing probiotic supplements. For a probiotic to be effective, it must be shelf stable through the expiration date and precisely delivered to the intestinal tract, where it can have maximum benefit. BioShield technology is an innovative manufacturing

process developed to ensure consistent and reliable results. The microorganisms in Probiotic 225 are protected, sealed and freeze dried away from moisture, heat, light and oxygen. This allows the bacteria to remain dormant until they are exposed to moisture in the GI tract. By utilizing advanced encapsulation technology, the probiotic organisms are preserved and released on-target for maximum benefit.

Lactobacillus acidophilus (La-14)

Lactobacillus acidophilus is a beneficial bacterial strain that is normally found in the intestinal tract and mouth and is commercially used in dairy products for the production of acidophilus-type yogurt. *L. acidophilus* ferments various carbohydrates to produce lactic acid, which increases the absorption and bioavailability of minerals. This includes calcium, copper, magnesium and manganese. The production of lactic acid also promotes health by creating an inhospitable environment for invading microbes.³ *L. acidophilus* has been shown to protect intestinal cells by competing for adhesion space in the gut against harmful bacteria. The *L. acidophilus* strain in Probiotic 225 has been specifically chosen because of its strong adherence and survival attributes in the GI tract.

Lactiplantibacillus plantarum (Lp-115)

Lactiplantibacillus plantarum is a beneficial bacteria commonly found in fermented foods including sauerkraut, pickles, brined olives and sourdough. *L. plantarum* has been found to compete against strains of *Clostridium difficile* and *Clostridium perfringens*, due to the production of bacteriocins (lethal proteins) that inhibit bacterial growth in experimental animal models.⁴

Bifidobacterium lactis (BI-04)

Bifidobacterium lactis is predominantly found in the colon. Studies examining dietary supplementation with *B. lactis* have shown that it supports GI health by reducing intestinal permeability.⁵

Ligilactobacillus salivarius (Ls-33)

Ligilactobacillus salivarius has been shown to produce bacteriocins which inhibit the growth of *Helicobacter pylori* in a transgenic murine (mouse) model. It can withstand high concentrations of acids, therefore allowing it to adhere and survive in the stomach and bind to gastric epithelial cells, while producing high amounts of pathogen-inhibiting lactic acid.⁶

Lactacaseibacillus casei (Lc-11)

Lactacaseibacillus casei has been seen to help support intestinal/gastrointestinal health with improvement in stool consistency in patients with constipation.⁷ *Lactacaseibacillus casei* has been shown to inhibit the growth of *Helicobacter pylori* in a mouse model.⁸

Bifidobacterium bifidum (Bb-06)

Bifidobacterium bifidum has been shown to effectively compete with harmful bacteria in culture (non-human) studies suggesting that *B. bifidum*'s lactic acid and acetic acid production provides an antagonistic action against pathogens to help maintain microflora balance.⁹

Recommended Dose

Adults and adolescents 13 years+: Take one packet (3 g) once per day. If you are on antibiotics, take at least 2-3 hours before or after.

Medicinal Ingredients (per packet)

<i>Bifidobacterium bifidum</i> (Bb-06)	22.1 Billion CFU / 22,1 milliards UFC
<i>Lactiplantibacillus plantarum</i> (Lp-115)	68.2 Billion CFU / 68,2 milliards UFC
<i>Bifidobacterium animalis</i> subsp. <i>lactis</i> (BI-04)	29.5 Billion CFU / 29,5 milliards UFC
<i>Lactobacillus acidophilus</i> (La-14)	66.1 Billion CFU / 66,1 milliards UFC
<i>Ligilactobacillus salivarius</i> (Ls-33)	19.6 Billion CFU / 19,6 milliards UFC
<i>Lactacaseibacillus casei</i> (Lc-11)	19.6 Billion CFU / 19,6 milliards UFC

Non-Medicinal Ingredients

Arabinogalactan, Silicon dioxide.

Risk Information

Consult a health care practitioner if symptoms of digestive upset (e.g. diarrhea) occur, worsen, or persist beyond 3 days, (also discontinue use); and/or prior to use if you have fever, vomiting, bloody diarrhoea or severe abdominal pain. Do not use this product if you have an immune-compromised

condition (e.g. AIDS, lymphoma, patients undergoing long-term corticosteroid treatment).

To be sure this product is suitable/right for you always read and follow the label.

References

1. Rolfe RD. The role of probiotic cultures in the control of gastrointestinal health. *Journal of Nutrition* 2000; 130 (Supplement 2S):396S-402S.
2. Topping, David L., and Peter M. Clifton. "Short-chain fatty acids and human colonic function: roles of resistant starch and nonstarch polysaccharides." *Physiological reviews* 81.3 (2001): 1031-1064.
3. Lipski E. *Digestive Wellness*. New Canaan (CT): Keats Publishing; 1996. p. 60-61.
4. Chytilová M, Mudroňová D, Nemcová R, Gancarčíková S, Buleca V, Koščová J, Tkáčiková L. Anti-inflammatory and immunoregulatory effects of flax-seed oil and *Lactobacillus plantarum* - Biocenol™ LP96 in gnotobiotic pigs challenged with enterotoxigenic *Escherichia coli*. *Res Vet Sci*. 2013 Aug;95(1):103-9.
5. Lewis MC, Patel DV, Fowler J, Duncker S, Zuercher AW, Mercenier A, Bailey M. Dietary supplementation with *Bifidobacterium lactis* NCC2818 from weaning reduces local immunoglobulin production in lymphoid-associated tissues but increases systemic antibodies in healthy neonates. *Br J Nutr*. 2013 Oct;110(7):1243-52.
6. Aiba Y, Suzuki N, Kabir AM, Takagi A, Koga Y. Lactic acid-mediated suppression of *Helicobacter pylori* by the oral administration of *Lactobacillus salivarius* as a probiotic in a gnotobiotic murine model. *Am J Gastroenterol*. 1998 Nov;93(11):2097-101.
7. Koebnick, Corinna, et al. "Probiotic beverage containing *Lactobacillus casei* Shirota improves gastrointestinal symptoms in patients with chronic constipation." *Canadian Journal of Gastroenterology and Hepatology* 17.11 (2003): 655-659.
8. Sgouras, D., et al. "In vitro and in vivo inhibition of *Helicobacter pylori* by *Lactobacillus casei* strain Shirota." *Applied and environmental microbiology* 70.1 (2004): 518-526.
9. Fooks LJ, Gibson GR. Mixed culture fermentation studies on the effects of synbiotics on the human intestinal pathogens *Campylobacter jejuni* and *Escherichia coli*. *Anaerobe*. 2003 Oct;9(5):231-42.

LT-PDN-041CAN-C

ID# 470015CAN 15 Packets