

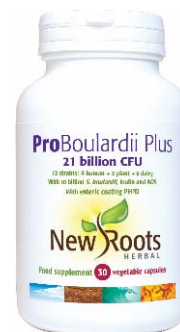
ProBoulardii Plus

30 enteric-coated vegetable capsules / Code FE2016



Pro Boulardii Plus is a powerful and advanced combination of **11** selected bacterial **strains** including ***S. boulardii***, Inulin and A.O.S., providing a minimum of **21 billion** of viable bacterias per **enteric coated** capsule to ensure an excellent protection from acid stomach secretion.

The indicated potency is guaranteed at expiry.



Ovo-lactovegetarian. Gluten free.

Animal origin: culture medium milk/soy

Common allergens: milk / soy

FORMAT: 30 vegetable capsules.

FORMULA

Ingredients: Bacterial culture (21 billion live active, healthy cells per capsule, see nutritional information), anticaking agent: silicon dioxide, inulin (from chicory root, *Cichorium intybus*), arabinogalactan (from *Larix laricina*), potato starch, antioxidant: ascorbic acid, anticaking agent: vegetable magnesium stearate, enteric-coated vegetable capsule (glazing agent: hydroxypropylmethylcellulose; aqueous enteric-coating solution; purified water).

Nutritional information:

1 capsule

Human strains:

<i>Lactobacillus acidophilus</i> R0418	619 million CFU
<i>Bifidobacterium longum</i> ssp. <i>longum</i> R0175	338 million CFU
<i>Bifidobacterium breve</i> R0070	338 million CFU
<i>Bifidobacterium infantis</i> R0033	338 million CFU

Plant strains:

<i>Saccharomyces boulardii</i>	10,000 billion CFU
<i>Lactobacillus plantarum</i> R1012	450 million CFU

Dairy strains:

<i>Lactobacillus rhamnosus</i> R0011	4,500 billion CFU
<i>Lactobacillus rhamnosus</i> R1039	3,375 billion CFU
<i>Lactobacillus helveticus</i> R0052	563 million CFU
<i>Lactobacillus casei</i> R0215	450 million CFU
<i>Streptococcus salivarius</i> ssp <i>thermophilus</i> R0083	225 million CFU
<i>Lactobacillus delbrueckii</i> ssp <i>bulgaricus</i> R9001	56 million CFU

Inulina	8,3 mg
---------	--------

Arabinogalactano (AOS)	8,3 mg
------------------------	--------

CFU: Colony-Forming Unit Cells

Cautions:

Consult a health-care practitioner before using if you have fever, vomiting, bloody diarrhoea, or severe abdominal pain; or if you have a special medical condition. Do not use if you have an immune-compromised condition.

Recommended daily dose:

1–2 capsules daily. If you are taking antibiotics, take this product at least 2–3 hours before or after taking them. Start 5 days prior to traveling and continue during the entire duration of the trip. Do not exceed the stated recommended daily dose. Keep refrigerated until opened. The product can be kept for 30 days at room temperature once opened.

Indications and uses:

Treatment and prevention of infectious gastroenteritis

Traveler's diarrhoea

Diarrhoea caused by bacteria

EXCLUSIVE INFORMATION FOR HEALTH-CARE PROFESSIONALS

ProBoulardii Plus

30 enteric-coated vegetable capsules / Code FE2016



DETAILS:

Pro Boulardii Plus is a unique formula that displaces the harmful bacteria that cause traveler's diarrhoea, neutralizing toxins and maintaining healthy intestinal flora during travel, without adverse effects. This combination of strains is a solution for typical traveler's symptoms such as diarrhoea, nausea, abdominal cramping, vomiting and abdominal distension, diarrhoea being the most common, caused by food or water contaminated by the pathogenic bacteria *Escherichia coli*, *Salmonella* and *Shigella*. Those at high risk include young adults and the elderly, as well as people with compromised immune systems, irritable bowel syndrome and diabetics.

It provides ten billion live active cells of *Saccharomyces boulardii*, whose main function is to block harmful bacteria that cause traveler's disease and neutralize the effects of the bacterial toxins that contribute to the symptoms of diarrhoea. This creates favourable conditions for the eleven million colony forming units (CFU) of the eleven probiotic strains scientifically proven to restore balance to the intestinal flora, allowing for the absorption of vitamins, beneficial nutrients and electrolytes, and contributing to liquid retention.

It is used for both the prevention and treatment of traveler's diarrhoea, and even for antibiotic associated diarrhoea (AAD).

The enteric coating of the capsules protects the product from gastric juices and ensures its strength 100%.

INGREDIENTS:

SACCHAROMYCES BOULARDII: This is a non-pathogenic yeast isolated from lychee in Indochina which grows at a temperature of 37°C and has beneficial effects on the human intestine⁽¹⁾. *S. boulardii* stimulates enzymatic activity, synthesizes a protease serine that degrades toxins and their respective receptors present in the mucosa of the colon, and increases the immune response of the intestinal mucosa, protecting the body from diarrhoea pathogens such as *E.coli* (increasing IgA)^(3,5). Studies have confirmed its use for the chronic treatment of diseases such as Crohn's disease, irritable bowel syndrome and HIV associated diarrhoea, and for the prevention of recurring disease from *Clostridium difficile*⁽⁶⁾.

Different studies have confirmed that this yeast has a marked effect on reducing diarrhoea, even when associated with β -lactamics, whether administered alone or with other antibiotics, preventing antibiotic associated diarrhoea (AAD) safely and effectively^(2,4,5).

It is of great help for preventing acute traveler's diarrhoea, especially when traveling to developing countries. It also has an anti-inflammatory effect⁽⁵⁾. Its efficacy against intestinal candidiasis has been proven^(28,29).

LACTOBACILLUS: This is a type of bacteria used for treating and preventing diarrhoea, including infectious diarrhoea like that of rotavirus in children and traveler's diarrhoea, and as a reinforcement for the immune system. It also has the particularity of adhering to the intestinal wall, impeding as such the settlement of harmful bacteria. It is likewise used to prevent and treat antibiotic associated diarrhoea (AAD). It is also effective for general digestive problems such as irritable bowel syndrome (IBS), Crohn's disease and intestinal inflammation⁽¹⁰⁾.

LACTOBACILLUS RHAMNOSUS R1011: This has shown the ability to survive and grow at high bile concentrations as well as in the harsh conditions of the gastrointestinal tract. Several studies confirm the notable benefits of this strain for aiding intestinal health and immune response⁽⁷⁾.

LACTOBACILLUS RHAMNOSUS R1039: This maintains the intestinal ecosystem and reduces the incidence of intestinal disorders such as AAD⁽⁸⁾.

LACTOBACILLUS ACIDOPHILUS R0418: This helps improve digestive health by maintaining the intestinal barrier and restoring intestinal flora, improving digestion, reinforcing the immune system and helping the beneficial bacteria that proliferate in the colon. It's effective as prevention against infection⁽⁹⁾.

LACTOBACILLUS PLANTARUM R1012: This can survive the digestive process and improves liver health, reduces inflammation in intestinal mucosa, reinforces the immune system, prevents and treats diarrhoea and prevents pathogenic invasion⁽²⁶⁾.

LACTOBACILLUS CASEI R0215: This protects general health, keeping the immune system and microflora balanced and strong. It also prevents and cures diarrhoea, improves the digestive process and strengthens the intestinal mucosa^(24,25).

LACTOBACILLUS HELVETICUS R0052: This is found in milk products and ensures good nutrient absorption. It protects the gastrointestinal tract, strengthens intestinal mucosa, prevents and cures diarrhoea and carries out an important role in digestion. It also limits the proliferation of *Candida albicans* and reduces lactose intolerance. It controls undesired intestinal microorganisms and bacteria⁽²³⁾.

LACTOBACILLUS DELBRUECKII SSP. BULGARICUS R9001: This increases immunity and fights against viruses, decreases diarrhoea and nausea, improves the digestion of dairy products and reduces inflammation⁽²²⁾.

BIFIDOBACTERIUM: This is used for many intestinal conditions, such as the prevention of diarrhoea in babies and children and traveler's diarrhoea in adults, in which case it's used with other bacteria like *Lactobacillus acidophilus*^(11,12). It's also used to restore the intestines and treat diseases such as ulcerative colitis⁽¹³⁾.

BIFIDOBACTERIUM INFANTIS R0033: This survives in the acids of the stomach and bile and is generally able to adhere to intestinal tissue. It produces acetic acid and inhibits pathogenic bacteria⁽¹⁸⁾.

BIFIDOBACTERIUM LONGUM R0175: This has anti-inflammatory properties and is indicated for gastrointestinal discomfort, AAD, pathogenic infection and seasonal allergies, among others^(14,15).

It helps form lactic acid as well as small amounts of formic acid. These acids decrease the intestinal pH, making the region undesirable for harmful bacteria. It is also an important producer of the B group vitamins⁽²⁷⁾.

Very recently, it's been shown that a formulation containing *Lactobacillus helveticus* R0052 and *Bifidobacterium longum* R0175 combined with *Lactobacillus rhamnosus* R0011, reduces serum levels of pro-inflammatory cytokines like interleukin-1 α , interleukin-6, interferon- γ and tumour necrosis factor α after an infection with *E.coli*⁽¹⁴⁾.

STREPTOCOCCUS SALIVARIUS SSP. THERMOPHILUS R0083: This is known for being sensitive to gastric conditions and surviving in the gastrointestinal tract and adhering to intestinal epithelial cells. It has been shown to have an effect on diarrhoea in children, enterocolitis in new-borns, intestinal inflammatory disease and acute diarrhoea from rotavirus. It improves lactose digestion in cases of lactose intolerance, produces antioxidants, stimulates the intestinal immune system and reduces the risk of ulcer and inflammation^(20,21).

References:

- 1) Guslandi, M., Mezzi, G., Sorghi, M., & Testoni, P. A. (2000). *Saccharomyces boulardii* in maintenance treatment of Crohn's disease. *Digestive diseases and sciences*, 45(7), 1462-1464.
- 2) McFarland, L. V., Surawicz, C. M., Greenberg, R. N., Elmer, G. W., Moyer, K. A., Melcher, S. A., ... & Cox, J. L. (1995). Prevention of β -lactam-associated diarrhea by *Saccharomyces boulardii* compared with placebo. *Am J Gastroenterol*, 90(3), 439-448.
- 3) Czerucka, D., & Rampal, P. (2002). Experimental effects of *Saccharomyces boulardii* on diarrheal pathogens. *Microbes and infection*, 4(7), 733-739.
- 4) Kollaritsch, H., Holst, H., Grobara, P., & Wiedermann, G. (1993). Prophylaxis of traveller's diarrhoea with *Saccharomyces boulardii*. *Fortschr Med*, 111, 152-156.
- 5) Czerucka, D., Piche, T., & Rampal, P. (2007). Review article: yeast as probiotics—*Saccharomyces boulardii*. *Alimentary pharmacology & therapeutics*, 26(6), 767-778.
- 6) McFarland, L. V. (2010). Systematic review and meta-analysis of *Saccharomyces boulardii* in adult patients. *World J Gastroenterol*, 16(18), 2202-2222.
- 7) Sharma, P., Tomar, S. K., Goswami, P., Sangwan, V., & Singh, R. (2014). Antibiotic resistance among commercially available probiotics. *Food Research International*, 57, 176-195.
- 8) Kheadr, E. E. (2006). Impact of acid and oxgall on antibiotic susceptibility of probiotic *Lactobacilli*. *African Journal of Agricultural Research*, 1(5), 172-181.
- 9) Bader, J., Popović, M. K., & Stahl, U. PROCESSING, CONSUMPTION AND EFFECTS OF PROBIOTIC MICROORGANISMS. *Encyclopedia of Life Support Systems*.
- 10) Berggren, A., Åhrén, I. L., Larsson, N., & Önnings, G. (2011). Randomised, double-blind and placebo-controlled study using new probiotic *Lactobacilli* for strengthening the body immune defence against viral infections. *European journal of nutrition*, 50(3), 203-210.
- 11) Ishizeki, et al. (2004). Study of the effects of administering *Bifidobacteria* on the intestinal microflora in low birth weight infants: Effects of administering three species of *Bifidobacteria*. *The Journal of the Japan Pediatric Society*, 108, 283.
- 12) Tomoda, T., Nakano Y. and Kageyama T. (1986). The Variation and Adherence of the Species of *Bifidobacterium* in the Intestine during Oral Administration of *Bifidobacterium*. *Medicine and Biology (Japan)*, 113 (2), 125-128.
- 13) Kageyama T, Nakano Y Tomoda T. (1987). Comparative Study on Oral Administration of Some *Bifidobacterium* Preparations. *Medicine and Biology (Japan)* 115, 65-68.
- 14) Messaoudi, M., Violle, N., Bisson, J. F., Desor, D., Javelot, H., & Rougeot, C. (2011). Beneficial psychological effects of a probiotic formulation (*Lactobacillus helveticus* R0052 and *Bifidobacterium longum* R0175) in healthy human volunteers. *Gut microbes*, 2(4), 256-261.

- 15) Hickson, M. (2011). Probiotics in the prevention of antibiotic-associated diarrhoea and *Clostridium difficile* infection. *Therapeutic Advances in Gastroenterology*, 4(3), 185–197. <http://doi.org/10.1177/1756283X11399115>
- 16) Chong, E. S. L. (2014). A potential role of probiotics in colorectal cancer prevention: review of possible mechanisms of action. *World Journal of Microbiology and Biotechnology*, 30(2), 351–374.
- 17) Slavin, J. (2013). Fiber and prebiotics: mechanisms and health benefits. *Nutrients*, 5(4), 1417–1435.
- 18) Kajiwar, S., Gandhi, H., & Ustunol, Z. (2002). Effect of honey on the growth of and acid production by human intestinal Bifidobacterium spp.: an in vitro comparison with commercial oligosaccharides and inulin. *Journal of Food Protection*, 65(1), 214–218.
- 19) Saavedra, J. M., Bauman, N. A., Perman, J. A., Yolken, R. H., & Oung, I. (1994). Feeding of Bifidobacterium bifidum and Streptococcus thermophilus to infants in hospital for prevention of diarrhoea and shedding of rotavirus. *The Lancet*, 344(8929), 1046–1049.
- 20) Delorme, C. (2008). Safety assessment of dairy microorganisms: Streptococcus thermophilus. *International journal of food microbiology*, 126(3), 274–277.
- 21) Iyer, R., Tomar, S. K., Maheswari, T. U., & Singh, R. (2010). Streptococcus thermophilus strains: multifunctional lactic acid bacteria. *International Dairy Journal*, 20(3), 133–141.
- 22) Mater, D. D., Bretigny, L., Firmesse, O., Flores, M. J., Mogenet, A., Bresson, J. L., & Corthier, G. (2005). Streptococcus thermophilus and Lactobacillus delbrueckii subsp. bulgaricus survive gastrointestinal transit of healthy volunteers consuming yogurt. *FEMS Microbiology Letters*, 250(2), 185–187.
- 23) Messaoudi, M., Lalonde, R., Violle, N., Javelot, H., Desor, D., Nejdi, A., ... & Cazaubiel, J. M. (2011). Assessment of psychotropic-like properties of a probiotic formulation (Lactobacillus helveticus R0052 and Bifidobacterium longum R0175) in rats and human subjects. *British Journal of Nutrition*, 105(05), 755–764.
- 24) Isolauri, E., Joensuu, J., Suomalainen, H., Luomala, M., & Vesikari, T. (1995). Improved immunogenicity of oral D x RRV reassortant rotavirus vaccine by Lactobacillus casei GG. *Vaccine*, 13(3), 310–312.
- 25) Matsuzaki, T., Yamazaki, R., Hashimoto, S., & Yokokura, T. (1998). The effect of oral feeding of Lactobacillus casei strain Shirota on immunoglobulin E production in mice. *Journal of Dairy Science*, 81(1), 48–53.
- 26) Grimoud, J., Durand, H., Courtin, C., Monsan, P., Ouarné, F., Theodorou, V., & Roques, C. (2010). In vitro screening of probiotic lactic acid bacteria and prebiotic glucooligosaccharides to select effective synbiotics. *Anaerobe*, 16(5), 493–500.
- 27) Reuter, G. (2001). The Lactobacillus and Bifidobacterium microflora of the human intestine: composition and succession. *Current issues in intestinal microbiology*, 2(2), 43–53.
- 28) Kumar, Suresh, et al. "Evaluation of efficacy of probiotics in prevention of Candida colonization in a PICU—a randomized controlled trial." *Critical care medicine* 41.2 (2013): 565–572.
- 29) Murzyn, Anna, et al. "Capric acid secreted by *S. boulardii* inhibits *C. albicans* filamentous growth, adhesion and biofilm formation." *PloS one* 5.8 (2010): e12050.