Probiotic Synergy™ Powder

designs for health®

Acid-tolerant powdered probiotic

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Probiotic Synergy™ Powder contains a proprietary blend of 5 stable and viable strains of probiotics, providing 20 billion live organisms in each 2 gram serving. These strains have been carefully selected to be acid tolerant and provide excellent adherence to the gut wall. Probiotic Synergy™ Powder also contains inulin, a prebiotic fiber that benefits gastrointestinal health through its ability to modulate gut microbiota composition, and serves as food for the probiotic strains, helping them to thrive.[1] Inulin has a subtly sweet flavor, adding to the already palatable taste of this powder. Because inulin is a soluble fiber it dissolves easily and can be mixed into water, juice, shakes, smoothies, yogurts, and even cottage cheese. It is not recommended to mix into hot foods or liquids as heat may degrade the concentration of healthy probiotics.

Benefits:*

- Improves occasional constipation and diarrhea
- Stimulates healthy microbial balance in the gut
- Inhibits the growth of pathogenic bacteria strains
- Helps rebalance gut microbiota following antibiotic treatments while minimizing side effects
- Aids in normal digestion
- Maintains bowel health and promotes bowel regularity
- Supports healthy immune system function & inflammatory responses
- May be beneficial for GI conditions including irritable bowel syndrome, colitis & dysbiosis

The Case for Probiotics

There are ten times more gut bacteria residing in the intestinal mucosa than there are human cells in the body. Nearly 70% of the immune system is associated with the GI tract through synergistic interactions with various bacteria colonies (flora) that reside in the GI tract to maintain its health and function. Imbalances in this gut flora—either an absence of beneficial bacteria or an overgrowth of unhealthy organisms—can affect an individual's health. Abdominal pain, bloating, gas, constipation, diarrhea, and a struggling immune system are some common symptoms of imbalanced gut flora. Gut dysbiosis is also associated with chronic conditions such as inflammatory bowel diseases (IBD), obesity, cancer, liver disease, and autism.[2] Antibiotic therapy, illness, poor diet, stress, bariatric surgery, and environmental toxins affect the health of gut flora.[2,3] In the past, regular consumption of fermented foods helped to maintain healthy gut flora, but these foods are increasingly rare in today's diet. The combination of unhealthy lifestyles and a lack of fermented foods makes it important for most people to supplement with probiotics.

Probiotics maintain a healthy bacterial environment in the intestines by displacing pathogenic bacteria, aiding in digestion including hard-to-digest foods such as dairy products, and by combating yeast overgrowth. Beneficial microbiota synthesize vitamin K2, some B vitamins, and conjugated linoleic acid (CLA) locally in the gut, and promote angiogenesis and enteric nerve function.[2] The potent immunoregulatory metabolite, CLA, is a polyunsaturated fatty acid that was shown to suppress inflammation associated with IBD by activating PPAR -γ in macrophages.[4] In human clinical trials, CLA was also shown to possess anti-obesogenic, anti-carcinogenic, and anti-atherosclerotic properties.[5] In addition to increasing the activity of natural killer cells and modulating cytokine and immunoglobulin secretion, probiotics modulate the immune response through enhancing the gut epithelial barrier, altering mucus secretion, and by secreting of antimicrobial compounds.[6] Many doctors recommend probiotics after a patient has been taking antibiotics as they often disturb the microbial balance which may lead to reduced resistance to pathogenic bacteria such as *Clostridium difficile* and the development of *C. difficile*-associated diarrhea (CDAD).[7] In a systematic review of 31 trials, for participants with a baseline risk of >5% for developing CDAD, probiotic supplementation reduced the risk by 70%.[7,8] Probiotic Synergy™ Powder may also help increase stool frequency and support healthy bowel elimination.[9]

Why were these strains chosen?

Lactobacillus plantarum was chosen because of its ability to produce high amounts of beneficial enzymes such as protease for aiding protein digestion. Bifidobacteria appears to be widely distributed in the human gut of adults and elderly, and particularly abundant in the guts of infants.[10] ***Bifidobacterium lactis*** will populate the lower intestine whereas the *L. plantarum* will populate the upper intestine. *L. plantarum* also helps lower the pH, making the environment better for the *B. lactis*.

Supplement Facts

Serving Size 2 grams (approx. 1/2 teaspoon)
Servings Per Container 60

Amount Per Serving		% Daily Value
Probiotic Proprietary Blend	2 g (20 billion CFU)	*
Bifidobacterium lactis (SD-5219)		
Bifidobacterium longum (SD-5844)		
Lactobacillus acidophilus (DSM-21717)		
Lactobacillus paracasei (SD-5275)		
Lactobacillus plantarum (SD-5870)		

*Daily Value not established.

Other Ingredients: Inulin.

In chemotherapy-treated patients, ***Bifidobacterium longum*** and ***Lactobacillus acidophilus*** were among 5 strains of probiotics that were reported to significantly reduce the incidence of or alleviate mucositis, a common adverse effect of treatment.[11] *B. lactis* was shown in clinical trials to improve colonic transit time and gastrointestinal symptoms in patients with chronic idiopathic constipation.[12] In a systematic review and meta-analysis, *B. lactis* supplementation was highly effective in increasing cellular immune function in healthy elderly patients by increasing both polymorphonuclear cell phagocytic and natural killer cell tumoricidal activity.[13] *B. longum* was shown to aid in alleviating persistent functional GI symptoms and gut dysbiosis in lactose-intolerant patients, by significantly decreasing bloat, and ameliorating constipation.[14] A systematic review of elderly patients with chronic constipation showed that *B. longum* significantly improved constipation by 10-40% compared to controls.[15] *L. acidophilus* was found to reduce levels of opportunistic bacteria and increase the relative abundance of beneficial bacteria strains and improved the metabolic phenotype in aging animal models.[16] Another animal study showed that *L. acidophilus* significantly improved epithelial barrier function, lowered pro-inflammatory cytokine activity in hepatocytes and colonocytes, and had anti-diabetic effects by regulating hepatic glucose and lipid metabolism.[17]

Lactobacillus paracasei supplementation was shown to reduce the number of respiratory tract infections and acute gastroenteritis in children under the age of 5,, and *L. acidophilus* helped reduce cases of acute diarrhea.[18] In an animal model, *L. plantarum* supplementation inhibited the absorption of aluminum which significantly lessened oxidative stress in the intestinal tract, regulated intestinal mucosal immune system function, and maintained intestinal permeability by restoring the tight junction proteins of the epithelial cells.[19]

Recommended Use:

- Take 2 grams (approx. 1/2 teaspoon) per day, or as directed by your health care practitioner.

Note:

- Refrigeration of this product is recommended to ensure maximum potency and shelf life.

For a list of references cited in this document, please visit:
https://www.designsforhealth.com/techsheet-references/probiotic-synergy-powder-references.pdf

Dosing recommendations are given for typical use based on an average 150 pound healthy adult. Healthcare practitioners are encouraged to use clinical judgement with case-specific dosing based on intended goals, subject body weight, medical history, and concomitant medication and supplement usage.

*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.

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