ORTHO BIOTIC

Ortho Molecular Products
Because Efficacy Matters®

CLINICAL APPLICATIONS

- *Helps Maintain Gastrointestinal Balance*
- *Increases Secretory IgA for Enhanced Gut Immunity*
- *Supports Bowel Regularity*
- *Supports Digestion and Micronutrient Absorption*

GASTROINTESTINAL SUPPORT

Ortho Biotic is a unique probiotic formula designed to deliver active organisms that have been shown to promote healthy gut flora, protect intestinal integrity and boost immune function. Each capsule provides 7 proven probiotic strains chosen for their ability to withstand the harsh gastrointestinal (GI) environment and adhere to the intestinal tract. Also included is *Saccharomyces boulardii*, an extensively researched microorganism shown to help restore microflora balance by enhancing "resident" probiotics. Ortho Biotic features BioShield Technology, an innovative process that preserves probiotic organisms and releases them in targeted amounts in the intestines for maximum benefit.

Overview

The GI tract is a finely balanced environment where 300 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 over-abundance of potentially harmful organisms prevail. The natural flora balance can be upset by medications (such as antibiotics, oral contraceptives, etc.), drinking chlorinated water, or eating too many processed foods.

Probiotics have been extensively studied and are characterized as having broad health benefits including (1) increasing populations of healthy bacteria following microflora imbalance; (2) supporting healthy bowel function; (3) increasing the production of important short chain fatty acids that provide energy to the GI lining; (4) creating a strong immune barrier and boosting immune function; (5) aiding in the digestion of difficult to break down compounds like lactose and casein; and (6) increasing detoxification of harmful compounds.

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 GI tract where it can have maximum benefit. BioShield Technology is an innovative manufacturing process, to ensure consistent, reliable results. The microorganisms in Ortho Biotic are first protected, sealed, and then freeze dried away from moisture, heat, light and oxygen. This puts the bacteria into a state of "hibernation," allowing them to remain dormant until they are exposed to moisture in the GI tract. By utilizing advanced encapsulation technology, the probiotic organisms are preserved and then released on target for maximum benefit. Ortho Biotic also contains probiotic strains that have been strategically selected based on research supporting their survivability and adherence to the intestinal tract.

Lactobacillus acidophilus (La-14)†

Lactobacillus acidophilus is a beneficial bacterial strain that is normally found in the human intestinal tract and mouth and is commercially used in dairy products for the production of acidophilus-type yogurt. *L. acidophilus* ferments various carbohydrates producing lactic acid, a short chain fatty acid that increases the absorption and bioavailability of minerals. This includes calcium, copper, magnesium, and manganese.[1] The production of lactic acid also promotes health by creating an inhospitable environment for invading microbes.[1]
L. acidophilus has been shown to protect intestinal cells by competing for adhesion space in the GI against harmful bacteria, such as *E. coli*.[2] The *L. acidophilus* La-14 strain has been specifically chosen for use in Ortho Biotic because

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of its strong adherence and survival attributes. It has been demonstrated to tolerate exposure to stomach acid, bile salts and the ability to withstand antibiotics including Ciproflaxin, Polymyxin B, and Tetracycline. [2]

Lactobacillus paracasei (Lpc-37)†

Lactobacillus paracasei is a lactic acid secreting strain that has been shown to protect against the harmful effects of bacteria such as *Staphylococcus aureus*.[3] *Lactobacillus paracasei* colonizes the intestinal tract first then reinforces defense mechanisms by supporting immune system response. It does this by supporting T-helper cell (white blood cell) production, and secreting sIgA- an antibody that is critical for supporting intestinal immunity. [4] *L. paracasei* Lpc-37 is a stomach acid-resistant strain and has also has been shown to withstand antibiotics such as Ciproflaxin and Vancomycin. [5]

Bifidobacterium bifidum (Bb-02)†

Bifidobacterium bifidum is predominantly found in the colon. Bifidobacterium is a normal resident of healthy infant GI tracts and usually colonizes within 4 days of life. [6] *B. bifidum* has been shown to effectively compete with harmful bacteria such *E. coli, Staphyolococcus aureus* and *Camplylobacter jejuni* suggesting that *B. bifidum's* lactic acid and acetic acid production provides an antagonistic action against pathogens to help maintain microflora balance.[7]

Bifidobacterium lactis (BI-04)†

Bifidobacteria lactis is predominantly found in the colon. A double-blind, randomized placebo-controlled trial on subjects receiving *B. lactis* or placebo for 8 weeks found that *B. lactis* supported a balanced immune response in individuals hypersensitive to environmental allergens.[8] Studies examining immune development and dietary supplementation with *B. lactis* have shown that *B. lactis* supports GI health by reducing intestinal permeability. [9]

Lactobacillus plantarum (Lp-115)†

Lactobacillus 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. [10] Studies have also demonstrated that *L. plantarum* helps boost the immune response by stimulating Th1-mediated immunity. [11]

Lactobacillus rhamnosus (Lr-32)†

Lactobacillus rhamnosus has been found to be beneficial in the expelling of parasites. In a study examining exposure to the parasite *Trichuris muris, L. rhamnosus* significantly enhanced worm expulsion. It has also been shown to promote GI health by increasing intestinal cell replication. [12]

Saccharomyces boulardii†

Saccharomyces boulardii is a probiotic yeast that was first isolated from the skin of the tropical fruits lychee and mangosteen in 1923 by French scientist Henri Boulard following the observation that mangosteen consumption controlled occasional diarrhea in natives of Southeast Asia. *S. boulardii* plays a role in supporting immune defense by increasing levels of the crucial antibody, secretory IgA, creating a first line of defense that helps bind and clear harmful bacteria. [13]

Directions

1 capsule per day or as recommended by your health care professional.

Does Not Contain

Wheat, gluten, soy, corn, animal or dairy products, fish, shellfish, peanuts, tree nuts, egg, artificial colors, artificial sweeteners or preservatives.

Cautions

If you are pregnant or nursing, consult your physician before taking this product.

Supplement Facts V2

Serving Size 1 Capsule
Servings Per Container 30 & 60

1 capsule contains	Amount Per Serving	% Daily Value
Proprietary Blend	20 Billion CFU++	
Lactobacillus acidophilus		*
Lactobacillus paracasei		*
Bifidobacterium lactis		*
Bifidobacterium bifidum		*
Lactobacillus plantarum		*
Lactobacillus rhamnosus		*
Saccharomyces boulardii	2 Billion CFU++	*

* Daily Value not established

ID# 527030 30 Capsules
ID# 527060 60 Capsules

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