



CHILDREN'S PROBIOTIC FORMULA

CLINICAL APPLICATIONS

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

GASTROINTESTINAL SUPPORT

This product is a probiotic formula for children, designed to deliver live bacteria that promote healthy gut flora, protect intestinal integrity and boost immune function. The formula contains three strains of *Lactobacillus* and three strains of *Bifidobacteria*, as well as *Streptococcus thermophilus* and *Saccharomyces boulardii*, an extensively researched microorganism shown to help restore microflora balance by enhancing "resident" probiotics. The eight strains of probiotic bacteria in this product have been strategically selected based on research which supports their survivability and adherence to the intestinal tract. This product comes in a powder form for easy administration to children.

Overview

The gastrointestinal (GI) tract is a well-balanced environment where 300 different strains of bacteria compete for space and nutrients. This natural flora balance can be upset by various factors including medications (such as antibiotics etc.), consumption of chlorinated water or eating too many processed foods. One of the key benefits of probiotics is their ability to increase populations of healthy bacteria in the face of microflora imbalance. In addition, extensive research has identified other broad health benefits, including supporting healthy bowel function, increasing the production of important short chain fatty acids that provide energy to the GI lining, boosting immune function, aiding in the digestion of difficult to break down compounds like lactose and casein, and increasing detoxification of harmful compounds.

Because probiotics are living organisms, there are various challenges associated with their manufacturing and distribution. 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. This product uses a technology in which microorganisms are first protected and sealed, then freeze dried away from moisture, heat, light and oxygen. The bacteria lie dormant in "hibernation" into a state of "hibernation," until exposed to moisture in the GI tract.

Deficiency[†]

Many Americans, including children, eat diets high in sugars and refined carbohydrates. These sugars can also have an effect on the microflora in the gut, causing dysbiosis which can contribute to gastrointestinal disturbances and immune challenges. Supplementing probiotics helps to maintain microflora balance in the gut after such disturbances occur.

Lactobacillus acidophilus[†]

Lactobacillus acidophilus is beneficial bacteria found in the GI tract and in the mouth. It ferments various carbohydrates and produces lactic acid, a short chain fatty acid that increases the absorption and bioavailability of minerals including calcium, copper, magnesium and manganese.^[1] The production of lactic acid also creates an inhospitable environment for invading microbes^[1] protects intestinal cells by competing for adhesion space with harmful bacteria, such as *E. coli*.^[2] The *L. acidophilus* La-14 strain has been demonstrated to tolerate exposure to stomach acid and bile salts, has and the ability to withstand Ciproflaxin, Polymyxin B, and Tetracycline.^[2] In addition, a study of 73 children (aged 3-24 months, with bouts of occasional diarrhea and mild or moderate dehydration) found those given the 10 billion CFU *L. acidophilus* had fewer watery stools and a decreased watery stool duration than those receiving placebo.^[3]

DIAMOND NUTRITIONALS

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Lactobacillus paracasei[†]

Lactobacillus paracasei has been shown to protect against the harmful effects of bacteria such as *Staphylococcus aureus*.^[4] *Lactobacillus paracasei* colonizes the intestinal tract, reinforces defense mechanisms by supporting T-helper cell (white blood cell) production, and secretes SlgA.^[5] This is a stomach acid-resistant bacteria has also has been shown to withstand antibiotics such as Ciproflaxin and Vancomycin.^[6] Together with *L. acidophilus*, *L. paracasei* has been shown to reduce duration of occasional diarrhea in children with long term loose and watery stools (6-24 months).^[2]

Bifidobacterium bifidum[†]

Bifidobacterium is a normal resident of healthy infant GI tracts and usually colonizes within 4 days of life.^[7] It has been shown to effectively compete with harmful bacteria, such as *E. coli*, *Staphylococcus aureus* and *Campylobacter jejuni*. This suggests that *B. bifidum*'s lactic acid and acetic acid production provides an antagonistic action that helps maintain microflora balance.^[8] Among 80 infants, 6-36 months old, with occasional diarrhea, given either formula supplement with *B. lactis* and *S. thermophilus* or non-supplemented formula, those receiving the probiotic formula had fewer incidences of diarrhea.^[9]

Lactobacillus rhamnosus[†]

Lactobacillus rhamnosus has been used in the prevention and treatment of occasional diarrhea in children.^[10] Among 69 children randomized to receive either a mixture of *L. rhamnosus* and *L. reuteri* 20 billion CFU per dose or placebo twice daily for 5 days, those receiving probiotics had reduced duration of loose stool (82 hours vs.101 hours in the placebo group). After early intervention with probiotics the length of hospitalization was reduced by 48% in the probiotic group.^[11] *Lactobacillus rhamnosus* has also been found to be beneficial in the expelling of parasites and it has also been shown to promote GI health by increasing intestinal cell replication.^[12]

Streptococcus thermophilus[†]

A study of 55 infants (5-24 months given either a formula with *B. bifidum* and *S. thermophilus* or non-supplemented formula for a course of 17 months) found that those receiving the probiotic formula had less occurrences of loose and watery stools (7% vs. 31%).^[13] A second study of 80 breast-fed children, 6-24 months old, with occasional diarrhea for fewer than 4 days, found those given either a yogurt containing *S. thermophilus* and *L. bulgaricus* had shorter hospital stays, better weight gain and reduced loose stool frequency.^[14]

Saccharomyces boulardii[†]

Saccharomyces boulardii is 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 a crucial antibody, secretory IgA, creating a first line of defense that helps bind and clear harmful bacteria.^[15] In one study, 200 children with occasional diarrhea were randomly given 250 mg/day of *S. boulardii* or placebo. Stool frequency and duration of diarrhea were greatly improved in the group that received the *S. boulardii*.^[16] Among 269 children (6 mo-14 yrs) given either antibiotic treatment plus 250 mg/twice per day of *S. boulardii* or placebo, those receiving the *S. boulardii* had lower incidence of loose and watery stools.^[17]

Directions

Add one scoop (1.7 g) to a glass of water or the beverage of your choice, stir and drink, or as recommended by your health care professional.

Does Not Contain

Gluten, corn, artificial colors and flavors.

Cautions

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

| Supplement Facts ^{v2} | | |
|---------------------------------------|--------------------|---------------|
| Serving Size 1 scoop (1.7 grams) | | |
| Servings Per Container 30 | | |
| 1 scoop contains | Amount Per Serving | % Daily Value |
| Proprietary Blend | 5 billion CFU** | |
| Lactobacillus acidophilus | | * |
| Lactobacillus rhamnosus | | * |
| Lactobacillus casei | | * |
| Bifidobacterium longum | | * |
| Streptococcus thermophilus | | * |
| Bifidobacterium bifidum | | * |
| Bifidobacterium lactis | | * |
| Saccharomyces boulardii | 1 billion CFU** | * |
| * Daily Value not established | | |

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