PrebioMax®

Promotes Beneficial Gut Microbiota*

Available in 60 chewable tablets

Clinical Applications

- Supports Healthy Microbial Activity in the GI Tract*
- Helps Maintain Digestive Health*

PrebioMax® *provides the gastrointestinal tract with xylooligosaccharides (XOS), prebiotic fermentable fibers that promote a healthy balance of gut microbiota to help maintain digestive health.**

Discussion

Every individual has a unique profile of gut microflora that plays a role in their digestive health and ultimately their overall vitality. Probiotics are naturally occurring friendly bacteria that exist primarily in the small and large intestine. They are taken orally for the purpose of recolonizing beneficial microflora species. Prebiotics are fermentable fibers that are neither digested nor absorbed; they provide nourishment for the gut microbiome and promote the healthy environment needed for probiotic flora to thrive. Specific kinds of prebiotic fibers can allow proliferation of some species over others, which can lead to a beneficial balancing effect in the gut microbiome.*[1,2]

Commonly used prebiotics include xylooligosaccharides (XOS), fructooligosaccharides (FOS), galactooligosaccharides (GOS), soyaoligosaccharides (SOS), and isomaltooligosaccharides (IMO), all of which were classified as prebiotics in the 2007 Food and Agriculture Organization of the United Nations Technical Meeting on Prebiotics Report.[3] These non-digestible carbohydrates naturally occur in small amounts in a wide variety of foods and vary slightly in their molecular configuration. Prebiotic fibers escape digestion in the upper gastrointestinal (GI) tract and are fermented in the lower GI tract where they promote the growth of beneficial bacteria. This is achieved when the healthy microflora produce beneficial short-chain fatty acids (SCFA). It should be noted that therapeutically effective doses of some prebiotics may cause uncomfortable side effects, such as gas and cramping.*[1,4,5]

Microbial bacteria are classified taxonomically according to phyla, classes, orders, families, genera, and species. The two most dominant gut microbial phyla are Firmicutes (F) and Bacteroidetes (B). Human and animal studies have identified differences in the Firmicutes/Bacteriodetes (F/B) ratio in gut microbiota in obese compared to lean subjects. It appears that in obese subjects, a reduced Bacteroidetes proportion occurs; it is observed as an increase in the Firmicutes *Lactobacillus* species and a decrease in the Bacteriodetes *Bifidobacterium* species compared to lean subjects.*[1,6]

Xylooligosaccharides are 5-carbon oligosaccharides derived from the xylan fraction of plant fiber that have demonstrated a positive effect on the F/B ratio in the gastrointestinal tract. The beneficial effects of XOS prebiotic fibers are typically observed with a lower dosage compared to 6-carbon prebiotic fibers (like FOS or inulin), which could explain the lack of side effects seen with XOS.*[1,2]

PrebioMax® features PreticX™, an XOS prebiotic fiber selected as a component of a patent-pending gut health composition.[7] In 2018, the European Food Safety Authority (EFSA) approved XOS as a novel food obtained from corncobs via enzyme-catalyzed hydrolysis.[8] PreticX has been shown to have an optimizing effect on beneficial microbes at lower doses than other prebiotic fibers. The low, effective dose is a convenience as well as a contributing factor to the comparatively less reported side effects. Additionally, the benefits resulting from promoting the Bacteriodetes *Bifidobacterium* species occur without the promotion of less desirable Firmicutes species in the GI tract, and this ultimately leads to a healthier microflora balance. A double-blind, randomized, placebo-controlled study determined the tolerance and effects of XOS on the composition of colon microbiota, pH, fecal SCFA, and lactic acid in healthy adult subjects (N = 32) who received a 2.8 g dose of PreticX or placebo daily for an eight-week intervention period. The XOS were tolerated without significant gastrointestinal side effects. Bifidobacteria counts increased significantly in the XOS group when compared to the placebo group.*[1]

A randomized pilot study in healthy (N = 16) and prediabetic (N = 13) subjects evaluated the effect of XOS on gut microbiota. Subjects received 2 g of XOS or placebo for eight weeks. Stool analysis was done at baseline and at week eight to characterize gut microbiota. Among the 40 identified species associated with prediabetes, four bacterial taxa—*Howardella*, *Slackia*, *Enterorhabdus*, and *Blautia hydrogenotrophica*—were abundant in the group of subjects who were prediabetic. The XOS significantly modified those species in the healthy and prediabetic subjects, suggesting a potentially beneficial altering of gut microbes associated with prediabetes.*[9]

Additional studies have linked XOS supplementation to an increase in bifidobacteria, demonstrating promotion of intestinal health without undesirable effects. Xylooligosaccharides have promising potential for use as an agent for maintaining and improving intestinal microflora balance and for enhanced overall health and well-being.*[2]

Although researchers have explored the mechanisms associating XOS with beneficial effects, further studies are needed to examine the precise physiological role of XOS and other prebiotics on human intestinal tract flora and in host digestive function.*

***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.**

PrebioMax® Supplement Facts

Serving Size: 2 Chewable Tablets

	Amount Per Serving	%Daily Value
Calories	20	
Total Carbohydrate	4 g	1%†
Xylooligosaccharides (XOS)[S1]	2.8 g	**

† Percent Daily Values are based on a 2,000 calorie diet.
**Daily Value not established.

Other Ingredients: Xylitol, hydroxypropyl cellulose, ascorbyl palmitate, stearic acid, natural flavors (no MSG), silica, citric acid, guar gum, monk fruit extract, and malic acid.

DIRECTIONS: Chew 2 tablets daily, or use as directed by your healthcare professional.

Consult your healthcare professional prior to use. Individuals taking medication should discuss potential interactions with their healthcare professional. Do not use if tamper seal is damaged.

STORAGE: Keep closed in a cool, dry place out of reach of children.

FORMULATED TO EXCLUDE: Wheat, gluten, soy, animal and dairy products, fish, shellfish, peanuts, tree nuts, egg, sesame, ingredients derived from genetically modified organisms (GMOs), artificial colors, and artificial sweeteners.

S1. PreticX™ is a trademark of AIDP Inc.

References

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All XYMOGEN® Formulas Meet or Exceed cGMP Quality Standards.

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