

PREBIOTICS AND PROBIOTICS HAVE BEEN SHOWN TO HELP BREAKDOWN NUTRIENTS IN PROTEINS, CARBOHYDRATES AND FATS AND MAY HELP IN WEIGHT MANAGEMENT

Kimberly Lloyd M.S.

With summertime approaching, we look forward to warm weather, vacations and outdoor activities! We especially want to look our best. Many of us would like to lose a few pounds! Although we know that any weight loss strategy involves reducing calories and exercising, very recent research shows that microbes inhabiting the intestinal tract may affect weight management and sugar balance.

A New Frontier for Beneficial Microbes: Weight Management and Metabolism

Metabolic syndrome is the condition that often precedes blood glucose imbalance and includes fat accumulation at the waistline. Many children, teens, young people, baby boomers and seniors are finding it difficult to keep the tummy area slim and are accumulating very unhealthy fat. Although we know eating a high fat or Western diet is not good for us, microbiologists are finding out information that may help us.

A study reported in Nature Medicine (2006) addressed the observation that certain microflora could actually make us fat.¹ The study showed that "obese" mice and "slim" mice had different populations of gut bacteria. Study results indicated that a certain type of microbe in the gut may have caused their obesity.¹

Beneficial Microbes May Help with Appetite Control, Sugar and Fat Metabolism

Scientists stated, "Manipulation of gut microbiota through the administration of prebiotics and probiotics [beneficial microbes] could reduce intestinal low grade inflammation and improve gut barrier integrity, thus ameliorating metabolic balance and promoting weight loss."² Gut microbiota appear to affect energy absorption, gut motility, appetite, glucose and lipid metabolism and fat storage in the liver.²

As this science unfolds, deciphering the complex microbiology of the human body is creating much excitement and new information! To some extent, we may blame the microbes, not just poor eating habits and slacking off on regular exercise, for some of our excess weight!

What is a Prebiotic?

Microbiologists define a true prebiotic as an ingredient:

- That is proven to bypass digestion and reach the colon intact.^{3,4}
- That stimulates the growth of types of bacteria shown to positively improve health.^{3,4}
- Two common beneficial microbes stimulated by prebiotics are lactobacilli and bifidobacteria.^{3,4}
- Fructooligosaccharides reach the colon and are true prebiotics by stimulating growth of beneficial microbes in the colon.^{3,4}

DIGESTIVE+++ contains true prebiotics. These are in the form of purified fructooligosaccharides (FOS) and those from Jerusalem artichoke, Dandelion leaves and Yacon Root.

Preliminary human and animal studies that manipulated microflora of the gut with prebiotics (fructooligosaccharides) and certain probiotics, tended to increase Bifidobacteria. The growth of Bifidobacteria was often accompanied by weight loss and improved parameters associated with less fat accumulation.^{3,4,5}

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Characteristics of Microbes in DIGESTIVE+++

Microbes used in typical probiotic dietary supplements are very fragile and a small percentage are alive at the end of their shelf life. Many species of microbes in dietary supplements need to be freeze dried and specially processed to keep them viable during handling, storage and to help maintain their usability in the intestines.

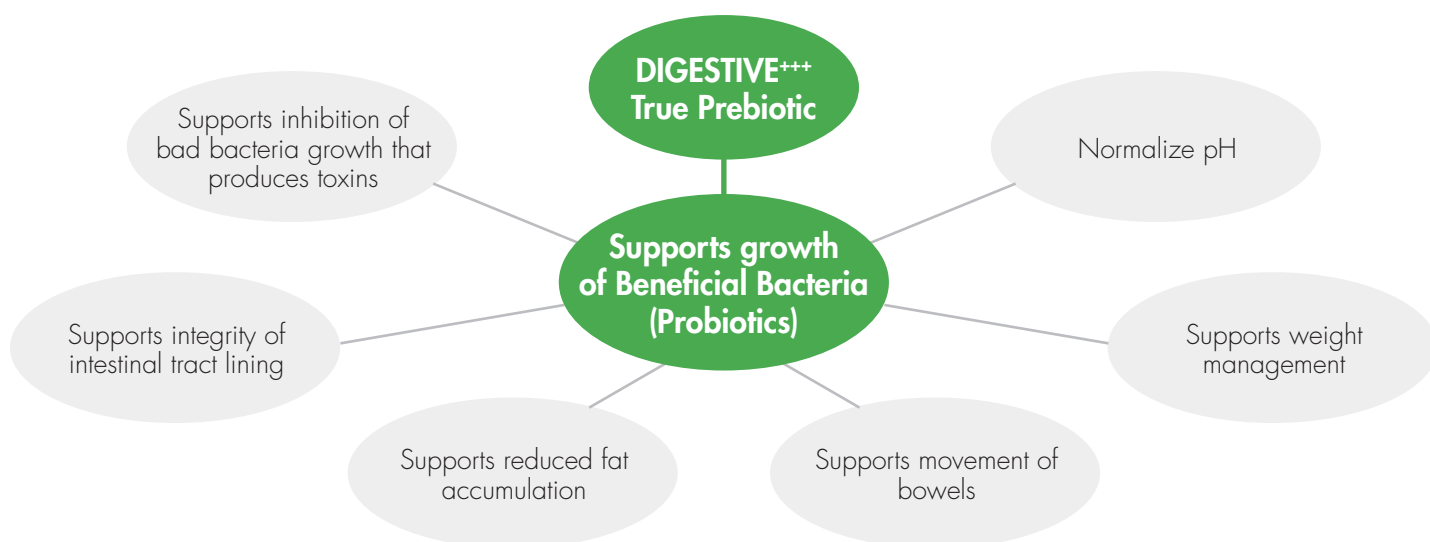
DIGESTIVE+++ contains the active microbe, *Bacillus coagulans*, which was renamed from *Lactobacillus sporogenes* in 1957 because of different properties as compared to other lactic acid producing *Lactobacillus* microbes. It reproduces by forming little capsules called spores, which have a stronger cell-wall type structure. They are stable at room temperature and remain viable during handling and for the duration of their shelf life. Studies showed *Bacillus coagulans* is eliminated from the GI tract about seven days after supplementation, so it is important to take DIGESTIVE+++ regularly for continual benefits.

DIGESTIVE+++ also contains a full range of basic enzymes, which promote more complete digestion and assimilation of the nutrients from foods. Because prebiotics (fructooligosaccharides) have specific chemistry, digestive enzymes do not break them down.

DIGESTIVE+++ blend contains enzymes that break down proteins, carbohydrates and fats. These enzymes are formulated to function at the pH ranges throughout the GI tract.

Proper digestion is one of the most important things your body can accomplish and taking DIGESTIVE+++ will help do that. Over the last 15 years, microbiologists have performed studies determining additional, important functions of beneficial microbes and prebiotic foods. This symbiotic partnership between our bodies and an optimal microbial ecosystem may help support proper weight management and metabolism.

DIGESTIVE+++ contains a true (FOS) Prebiotic formula of Fructooligosaccharides, and FOS from Jerusalem artichoke, dandelion leaves, yacon root



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Weight loss tips

If you're looking forward to the summer and losing a few pounds, in addition to keeping your GI tract healthy, here are a few weight loss tips:

- Keep calories low by eating lean proteins and fewer starchy carbohydrates (bread, pasta, rice, and high sugar products).
- Cut down on animal fats and eat healthy fats (nuts, avocados, seeds). Cut out fried foods.
- Include many servings of fresh vegetables, salads and stir fry dishes.
- Cook soups with beans, seasonal vegetables and small portions of meat or other proteins. They are a great way to eat healthy and feel full.
- Exercise: walk, swim and go to the gym. Play interactive sports such as volleyball, tennis or racquetball. Take classes in dance, Pilates, yoga or whatever suits you.



Thanks to LifePharm, DIGESTIVE+++ is a quality product you can trust to keep your GI tract healthy! That's the first step in achieving the physique you want. Next, incorporate the weight loss tips into your daily regimen and you'll look and feel healthy and light. Have a great summer!

References:

1. Charlotte Schubert. Microbes plump up mice. *Nature Medicine* 2006, 12,737
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3. Gibson GR, Roberfroid MB. Dietary Modulation of the Human Colonic Microbiota: Introducing the Concept of Prebiotics. *Journal of Nutrition*, 1995, 125:1401-1412.
4. Sandra Tavares da Silva, Carolina Araujo dos Santos and Josefina Bressan. Intestinal microbiota; relevance to obesity and modulation by prebiotics and probiotics. *Nutricion Hospitalaria* 2013;28 (4): 1039-1048.
5. Nakamura Y, Natsume M, Yasuda A et al. Fructooligosaccharides suppress high-fat diet induced fat accumulation in C57BL/6J mice. *Biofactors*. 2011 Jun 14.