



SMALL MOLECULE TECHNOLOGIES, INC.

MOLECULES & HEALTH

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Boost Beneficial Bacteria



When people hear the word “bacteria,” the first thought is generally related to various methods of eliminating germs to prevent disease and infection. But what if you were told that the key to better health may actually depend on your ability to grow and maintain specific types of bacteria inside of your body? It may sound shocking and surprising to some, but modern scientific research is confirming that controlling the balance of naturally occurring healthy bac-



teria in your digestive tract may very well hold the key to improving human health.¹⁻⁴

Biologists frequently use the word “symbiosis” (Latin for “living together”) to describe separate species that depend on each other for survival. An example of this is how bees depend on flowers for their nectar (food) and flowers need bees to protect them from other insects and spread their pollen so they can reproduce.

Humans happen to have a symbiotic relationship with the bacteria that live in the digestive tract, commonly referred to as microflora, gut/intestinal-flora, probiotics, microbiota, or several other names. The word “microbiome” describes the entire microbial environment and all of the organisms present in the intestines. Humans provide bacteria within the intestinal microbiome with a safe environment and constant supply of food, while the bacteria carry out a number of tasks to help us digest food and absorb nutrients.¹⁻⁴

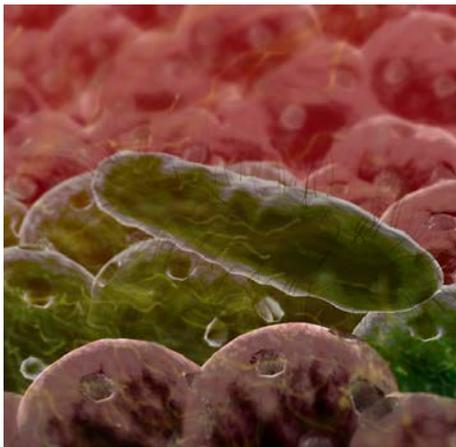
We have known for a long time that intestinal bacteria were important for digestion, but as our understanding of the relationship

between intestinal bacteria and overall human health increases, we learn that digestion is just the tip of the iceberg with regards to how microbes influence our daily lives. Intestinal bacteria are capable of producing thousands of different compounds that can have either beneficial or negative effects on human health. These compounds can have direct effect on the cells that line the intestine, but they also readily enter the bloodstream causing effects throughout the entire body.



Harmful bacteria produce toxins that cause irritation, inflammation, cancer, ulcers, and altered metabolism. In contrast, beneficial bacteria often produce compounds that have the exact opposite effect, reducing local and systemic inflammation, lowering

the risk of certain cancers, improving metabolism, improving immune function, and even improving brain health. Healthy and harmful bacteria are constantly competing for food and space on the intestinal wall, and our health depends on which organisms are winning the battle. When your microbiome is off balance and your intestines are unhealthy, the rest of your body systems are also suffering.¹⁻⁴



Influence Throughout the Entire Body

Your intestinal microbiome has been shown to greatly influence major systems in your body. Altered intestinal microbiomes have been implicated in:

- asthma^{5,6}
- obesity⁷⁻¹⁰
- premature aging¹¹
- autism¹²⁻¹⁵
- diabetes^{7-9,16}
- stress responses¹⁷
- non-alcoholic fatty liver disease¹⁸⁻²¹
- autoimmune disease²²
- depression^{23,24}

- chronic fatigue syndrome²⁵
- altered neuronal signaling / brain health^{24,26,27}

This list is just a partial look at the wide variety of systems influenced by the intestinal microbiome. The list is constantly expanding with new research being published on a weekly, if not daily, basis.

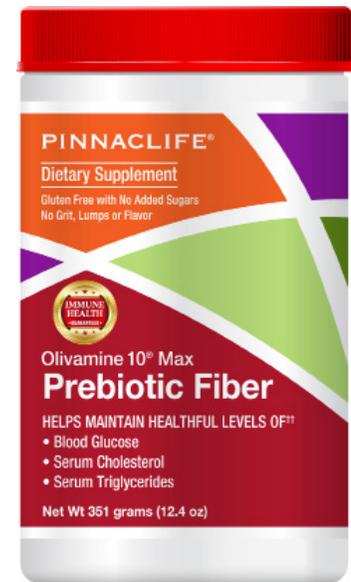
Dietary factors likely have the largest influence on your intestinal microbiome. The balance of carbohydrates, protein, fat, and fiber can drastically change the types of bacteria present in your intestines in as little as one day.¹ Generally, the foods we associate with being bad for us are more likely to promote bad bacteria, while healthy foods like vegetables, fruits, lean proteins, and fiber promote healthy bacteria. Plant based soluble fiber like that found in Small Molecule Technologies Prebiotic Fiber promotes the growth of healthy bacteria. The term prebiotics refers to nutrients that feed and promote the growth of healthy bacteria, com-



monly referred to as probiotics.

Supplementing Prebiotic Fiber

Small Molecule Technologies Pre-



biotic Fiber uses digestion-resistant maltodextrin (dRMD) that has been shown to increase beneficial bacteria like lactobacilli and bifidobacter in the human intestine. There are several other types of soluble prebiotic fiber including inulin (usually from chicory) and fructooligosaccharides (FOS), however Small Molecule Technologies Prebiotic Fiber uses dRMD, derived from corn, because:

- Slower fermentation than inulin or FOS in the intestines greatly reduces potential for gas and bloating^{28,29}
- Unlike inulin and FOS, dRMD does not break down into fructose or glucose when heated, frozen, or exposed to acids (like orange juice or tomato sauce) making it ideal for adding to a wide

variety of foods

- Dissolves quickly, and completely even in cold liquids with no noticeable flavor, texture, or odor

Additionally, dRMD has been shown to reduce blood sugar, insulin, and triglyceride levels after a meal on a single administration, while improving glucose tolerance, lowering serum triglycerides, and reducing visceral fat following long-term administration.³⁰ It has even been shown to improve the absorption of several vital minerals including calcium, magnesium, iron, and zinc.³¹

Unlike probiotic supplements,

Prebiotic Fiber does not contain live bacteria, but instead serves as a chemically stable food source that promotes probiotic growth in your intestines. This means the product does not have to be refrigerated and will not lose potency

over time - a common problem experienced with live-bacteria containing probiotic supplements. Start your road to better health today by boosting your beneficial bacteria with Small Molecule Technologies Prebiotic Fiber!



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