

Beta Glucan Synbiotic Formula

Brief

The Philosophy

Complex chronic diseases are a mounting problem worldwide with many factors giving rise to a pandemic concern. Pollution, life style choices, stress levels, dietary patterns, globalization and virulent pathogens have collectively weakened our immune systems. The major “Port-of-Entry” for these xenobiotics and pathogens is our GI tract, with one cell-layer of mucous membrane as the barrier that separates and protects us. Our body focuses its defense, communication and intelligence at this one-celled mucous membrane.

The Beta Glucan Synbiotic Formula is a part of a powerful range of Therapeutic Foods Synbiotic Formulas designed specifically to protect the integrity and functionality of the gastrointestinal system. The pedigreed Original Probiotic mix and the Therapeutic Foods chosen for the Beta Glucan Formula bring to life a magnitude of scientifically researched medicinal applications.

Properties

Amount per serving - 1 tablespoon provides 15 billion of the Original probiotic organisms and 5 grams of mixed fibers from patented oat bran (75%), red beet root powder (15%) and inulin from chicory root (10%). The Original Strain Probiotic bacterial organisms- pedigreed human strains with four decades of scientifically proven research backing their performance in protecting the integrity of the GI tract: ***Lactobacillus acidophilus (ATCC 4356), Bifidobacteria longum (ATCC 15707), Streptococcus thermophilus (ATCC 19258), Lactobacillus rhamnosus (ATCC 7469) and Lactobacillus plantarum (ATCC 8014).***

Technological Attributes

Microbiome Technology

Therapeutic Foods bacterial cultures are produced by the Microbiome Technology; a proprietary system that begins by feeding the bacteria with a strain-specific media

(special food) to stimulate accelerated cell division. The optimal nutritional profile of these media guarantees cells that are compact and have significantly stronger and thicker cell walls. These physical characteristics result in greatly increased viability and full potential for genomic expression for each probiotic organism. Dry Preservation Technology maintains ultra-low moisture content and ensures longer shelf life. Every batch is confirmed routinely by DNA sequencing to their original molecular identity from the ATCC Depository at Georgetown University and the Gene Bank in Bethesda, Maryland.

USDA Patented Oat Bran (#6,060,519)

The Therapeutic Foods oat bran is a patented oat beta glucan soluble fiber preparation. Under this USDA patented process the oat bran is subjected to a heat-shearing treatment that shortens the insoluble fiber and renders the whole product into a fine powder that is hydrophilic. During this process the beta glucan is freed in a very unique way to provide a highly efficacious product.

Clinical Application

The Original Probiotic Strain

The Original Probiotic mix successfully passes through stomach acid and GI tract bile, and effectively colonizes and protects the mucous membrane through their abilities to protect, counteract and neutralize dietary toxin, mutagen, carcinogens and infectious organisms. A detailed discussion of the Original probiotic bacterial organisms chosen for the Beta Glucan Formula is found in the BioImmersion Web Library. Look for the Therapeutic Foods Original Synbiotic Formula monograph and brief.

Therapeutic Foods

The Beta Glucan Matrix

Attempting to establish new colonies of friendly bacteria without improving the inner environment of the GI Tract leads to poor performance results. When bugs are too tightly packed, they will not grow. It is called the "density dependent growth inhibition process". Hence, the composition and structure of the organisms within the

mucus layer is critical. Composition refers to the mix of organisms selected per formula and structure refers to the proper spacing, the 3-dimensional matrix that creates a suitable environment for the bacteria to exponentially grow in. The structural component, the 3-dimensional matrix, is best achieved with the beta glucan molecules as they create a fibrous mesh within the mucus layer. The beta glucan matrix enables the organisms to successfully balance the function of multiplication with the function of performance enabling them to protect the mucosal lining and to serve as an important selective filter for the digestion process.

Colonic Food

The colonic mucosa is unable to nourish itself from the blood. Instead, its nutritive demand must be met from the lumen, where different nutrients, short-chain fatty acids, amino acids, polyamines, growth factors, vitamins and antioxidants are produced by the protective probiotic flora. Inulin is a carbohydrate belonging to a class of compounds known as fructans and is a soluble non-digestible dietary fiber. The viscous nature of inulin protects and improves the survival of the bacterial organisms crossing the upper part of the gastrointestinal tract, thereby enhancing their effects in the large bowel. Since inulin is resistant to digestion in the upper gastrointestinal tract it reaches the large intestine essentially intact, where it becomes the colon food for the important Bifido genera of indigenous lactic acid organisms. It is recommended that a minimum of 10% of ingested calories and about 20% of the food volume should be colonic food (food for the good colonic bacteria).

Activating the Mucosal Immune System

Beta glucan molecules come in varying lengths. The longer molecules create the matrix function, whereas the shorter molecules are effective at activating white blood cells: the macrophages and neutrophils. These are the immune cells that provide effective first line defense against foreign invaders. They also can recognize and kill tumor cells. It is well observed that the probiotic organisms also interact with the underlying immune system, on all levels- the cell mediated, the humoral and the cytokines levels. Much of today cutting edge microbiologic work is focused on the interaction between specific probiotics and the body's immune response.

Protection against Cancer

The byproduct of Beta Glucan and Inulin fermentation in the colon is butyric acid. Butyric acid stimulates stem cell differentiation within the crypts of the small intestinal and colonic epithelium, thereby reducing the development of colon cancer. Beets uniquely contain betalains, which are a new class of antioxidants that are 4 times more potent than Vitamin C. Betalains prevent blood cells from oxidative damage. Red beet extracts prevents skin and lung cancer. Research show that red beet fiber in the diet significantly reduced the incidence of precancerous lesions while tumors were reduced by 30%. Red beet root induces phase II liver enzymes to function efficiently, increasing the activities of glutathione peroxidase and glutathione-S-transferase. This is the body's internal defense system against dietary toxins and free radicals. Beets also reduce the level of conjugated dienes in the liver, plasma and erythrocytes, while increasing the activity of SOD and catalase, key players in elimination of free radicals in the body.

Cardiovascular Health

The USDA patented oat bran utilized in the Beta Glucan Synbiotic Formula provides sufficient levels of beta glucans per two tablespoons serving (.75grams) to qualify for the American Heart Association "Healthy Heart" Seal of Approval - *"Soluble fiber from the Beta Glucan Synbiotic Formula, as part of a diet low in saturated fat and cholesterol, may reduce the risk of coronary heart disease and lower blood cholesterol."* The scientific and medical community have long been aware that oat soluble fiber beta glucans contained in oat bran are capable of reducing serum levels of cholesterols, triglycerides and blood glucose. In studies with red beet fiber as part of a diet, a reduction of serum cholesterol and triglyceride levels by 30% and 40%, respectively, was observed as well as a significant increase in the fraction of cholesterol carried in HDL. Betalains are absorbed well into the blood and enter into the blood vessel wall and bind with LDL cholesterol molecules protecting them from future oxidation. Oxidized LDLs are recognized as a blood marker of cardiovascular problems. OxLDLs are very dangerous free radicals inducing heart disease, cancers and other inflammatory mediated conditions. The combination of beta glucan, red beet root and inulin is a power packed Therapeutic Food for a healthy heart.

Blood Sugar Regulation

The net glycemic value for the oat bran, red beet root and inulin used as the carrier in the Beta Glucan Synbiotic is 38. When taken with food this will lower the overall glycemic index of the meal slowing down the absorption of carbohydrate which assists all those conditions associated with blood sugar regulation. Research shows that dietary fiber improves the ability of diabetics to process blood sugar.

Healthy Weight Management

The Beta Glucan Synbiotic Formula reduces absorption of fat, slows absorption of carbohydrates, increases feeling of fullness and provides needed dietary fiber.

Therapeutic Foods Probiotic Formula are 100% Pure

BioImmersion Inc. utilizes 21st Century microbiological research, food chemistry and food technology science to develop and manufacture the Therapeutic Foods line of Synbiotic Formulas. All Formulas are manufactured without any excipients. Each powder or capsule contains only 100% pure probiotic bacterial blend and the special therapeutic foods. Our products are extensively and properly analyzed and documented to ensure consistent delivery of the highest levels of active ingredients.

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