BIOTICS RESEARCH CORPORATION
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Weekly Practice Builder

WPB 13/8

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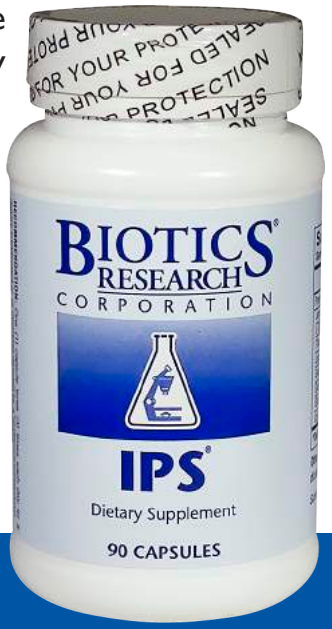
IPS®

IPS® is a comprehensive Intestinal Permeability Support supplement. With a total surface area larger than the size of a tennis court, the intestine represents the major interface between the body and the environment. This huge area is designed to assure efficient uptake of nutrients and paradoxically, it must simultaneously exclude many substances such as microorganisms, toxins, food allergens, and endotoxins in order to maintain health. As the largest immune organ with a full compliment of immune cells (T cells, B cells, mast cells and macrophages), the intestine secretes large amounts of a specific antibody, secretory IgA (sIgA). sIgA binds specifically to antigens and microorganisms to prevent their attachment and uptake by the gut mucosa. Imbalanced immune function can alter intestinal permeability due to inflammation, decreased sIgA, stress, and decreased nutritional status. When the intestinal epithelium becomes injured or compromised, chronic health disturbances may result. **IPS®** is a unique formula that was designed to address the specific issue of altered intestinal permeability, supplying a comprehensive array of nutritional factors to support healthy intestinal function. For example, L-Glutamine supports tissues that turnover rapidly, such as the intestinal epithelium and components of the immune system and has been found to promote sIgA production. D-Glucosamine sulfate is an amino sugar which is a key building block in the production of connective tissue and the basement membrane to which the intestinal mucosa is anchored. Glutathione helps to maintain the internal redox environment to inhibit the production of proinflammatory cytokines. In addition to being a powerful antioxidant, glutathione levels are linked with healthy (anti) aging and proper immune function. Gamma oryzanol supplies ferulic acid and phytosteorol, provides significant antioxidant activity, and supports the integrity of the GI tract while helping balance pro-inflammatory mediators and supporting the normal glandular activity of the stomach and intestine. Tillandsia contains many vitamins, minerals and other compounds such as coumarin and resins that support healthy intestinal mucosa. Jerusalem artichoke is a ready source of fructooligosaccharides which have been found to promote the growth of beneficial intestinal bacteria.



Research Pertaining to Other Topics of Interest

Vitamin D for Muscle Fatigue. New clinical research has demonstrated that vitamin D3 supplementation improves muscle function for those with low vitamin D levels. The research team from Newcastle University, led by Dr Akash Sinha, studied recovery times in patients with vitamin D deficiency by measuring phophocreatin dynamics in response to exercise before and after vitamin D3 supplementation. All study participants report a significant improvement following supplementation. The research demonstrated that vitamin D levels are correlated with muscle efficiency and that D3 supplementation improved muscle aerobic metaholism, providing a clear link between vitamin D and mitochondria in humans.

Sinha A et al. Improving the vitamin D status of vitamin D deficient adults is associated with improved mitochondrial oxidative function in skeletal muscle. Endocrine Abstracts, 2013; 1 doi: 10.1530/endotabs.31.OC1.6