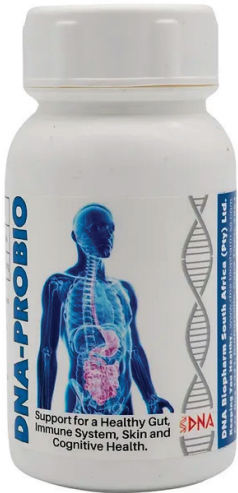


DNA-PROBIO

A patent-pending blend of protease enzymes, five probiotics species, and a prebiotic designed to promote optimal protein digestion, a healthy gut microbiome, and enhanced absorption of Branched Chain (BCAAs), Essential and Non-Essential Amino Acids.



WHY WE HAVE INTRODUCED A PROBIOTIC.

The DNA Biopharm range includes products for immune health (Gravi-C), Digestive health (Digesto-Fast and DNA Detox) and other conditions. DNA-PROBIO was introduced support and enhance the efficacy of our products by improving the health of the gut microbiome. This ensures that you get maximum benefit from your DNA Biopharm products.

Some probiotics don't survive the harsh acidic conditions of the stomach. Many don't reach the gut, limiting their efficacy. DNA-PROBIO Capsules use a patented slow release capsule (DRcaps®). The innovative DRcaps® capsule dissolves after an extended time period (approx 40 minutes), protecting ingredients from degradation in the stomach and delivering them into the small intestine where they are most effective.

Intestinal microflora balance can be disrupted by factors such as antibiotics, stress, alcohol, among others, which can lead to diarrhea, cramping, bloating and overgrowth of opportunistic organisms. Supplemental DNA-PROBIO promotes a healthy gut microbiome.

DNA-PROBIO contains the following:

Proteases

Proteases are enzymes that break the peptide bonds of proteins; they are divided into acid, neutral, and alkaline proteases. These enzymes can be obtained from plants, animals, and microorganisms in several conditions, such as high salt concentrations.

SEBiotic® (Bacillus coagulans LBSC)

Bacillus coagulans LBSC (formerly *L. sporogenes*^{*}) is a powerful spore-forming, shelf-stable probiotic.

- Stable at Room Temperature.
- Promotes Intestinal Homeostasis.
- Promotes Recovery from Diarrhea and Constipation.
- Supports Antimicrobial Compound Production & Competitive Pathogen Exclusion.
- Promotes Intestinal Barrier Function & Immune Modulation.
- Shows Promising Results on Inflammatory Bowel Conditions.

SEBtilis™ (Bacillus subtilis PLSSC)

- Source of probiotics.
- Helps support intestinal/gastrointestinal health.
- Helps support digestive health.

SEBclausii™ (Bacillus clausii 088AE)

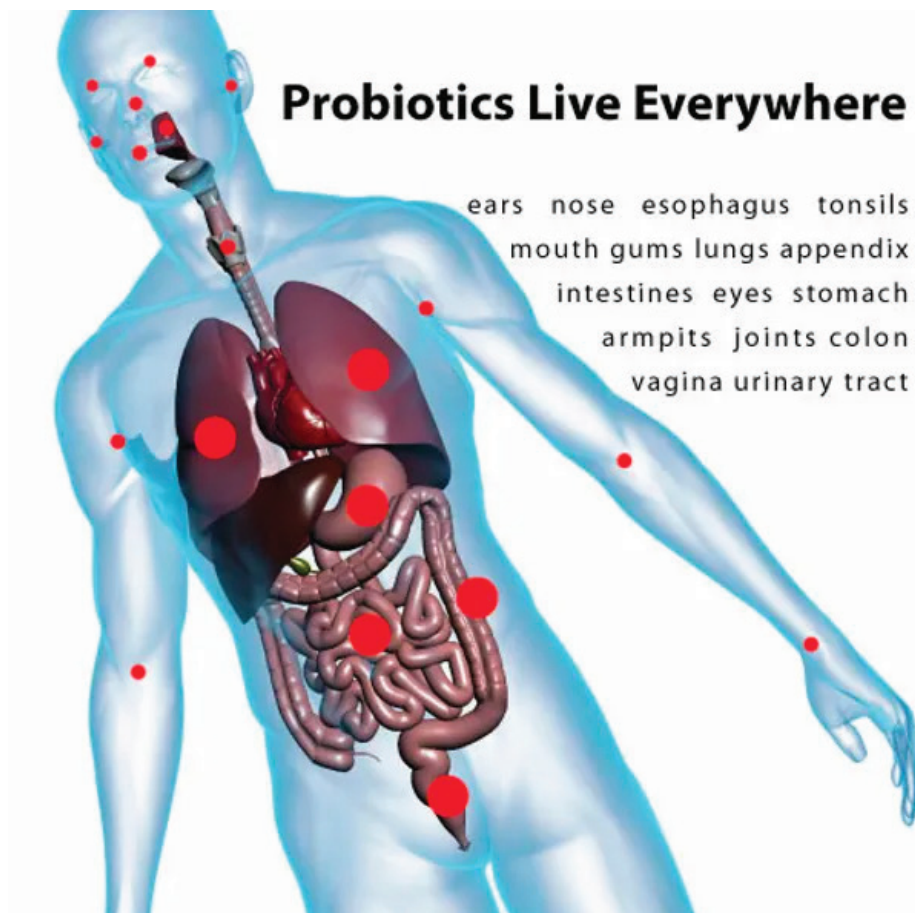
- Helps reduce the symptoms related to antibiotic-associated diarrhea.
- Source of probiotics.
- Promotes a favorable gut flora.
- Helps support the maintenance of digestive health.

Lactobacillus acidophilus

L. acidophilus is a species of beneficial microbial flora and has been proven to play an important role in many pathological and physiological processes. It has been shown to improve CVD (cardio-vascular disease), and lactose intolerance, prevent and treat cancer, regulate immunity, and improve gastrointestinal diseases.

Lactiplantibacillus plantarum

L. plantarum has been applied in medical fields for the treatment of various chronic and cardiovascular diseases such as Alzheimer's, Parkinson's, diabetes, obesity, cancer, hypertension, urinogenital complications, liver disorders, etc. (Woo et al., 2014).



Each Slow release 600mg DNA-PROBIO vegetable capsule contains 600mg of DigeSEB Sport™. Contains no fillers or preservatives

The largest number of probiotics live in the colon, but billions also live in the mouth, oral cavity, nasal cavity, the esophagus, around the gums, in the pockets of our pleural cavity (surrounding our lungs). They dwell within our stomach, our intestines, within the vagina, around the rectum. within joints, under the armpits, under the toenails, between the toes, urinary tract, inside our urinary tract and many other places!

A new clinical study shows DNA-Probio (DigeSEB Sport™) promotes protein digestion and nutrient bioavailability, a healthy gut microbiome, and the production of postbiotics, such as GABA and β-alanine.

The newly published study, titled "Metabolomics and Gut Metagenomics Profile of the Healthy Adults Supplemented with Enzymes-Probiotics Blend". Results showed the addition of DigeSEB Sport™, led to an increased rate of amino acid absorption and the augmentation of total absorption of essential and branched-chain amino acids within 30 minutes of protein consumption.

In addition, noteworthy changes were observed in the gut microbiota profile, with a significant increase in the abundance of several species of Bacteroides. Bacteroides are known to have prototypic activity and be beneficial to the gut microbiome.

An unexpected study result found that supplementation with DigeSEB Sport™ increased the production of postbiotics GABA, L-citrulline, β-alanine and L-ornithine. These postbiotics have been shown to offer a wide range of benefits – everything from supporting a healthy response to stress, anxiety and depression, to promoting skin health, physical endurance, healthy aging, anti-inflammatory effects and cardiac health.

Produces bioavailable postbiotics L-citrulline, β-alanine, L-ornithine, Anserine, and the neurotransmitter Gamma-aminobutyric acid (GABA) known to support;

Emotional well-being

Immune health

Gut health

Skin health

Cognitive Health (Stress, Anxiety, and Depression)

Digestive Health

Promotes healthy bowel movements ^{2,7}

Heat-stable and resistant to stomach acid ³

Promotes optimal protein absorption

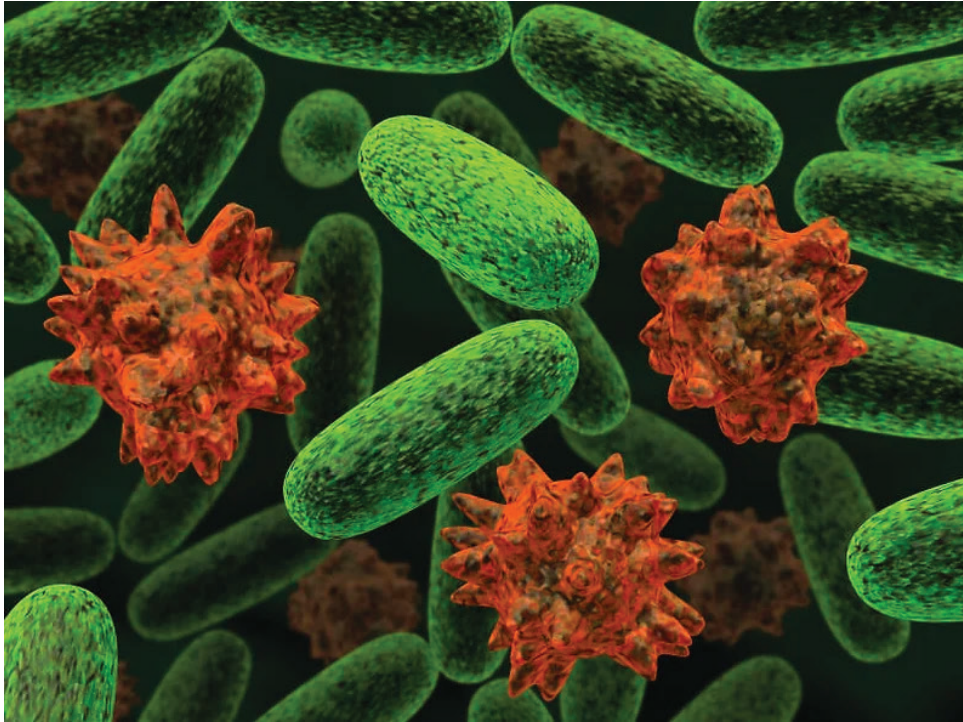
Promotes healthy microflora balance ³

Supports healthy inflammation levels ⁴

Helps support recovery from post-viral infection ^{5,6}

Helps stimulate tolerance of allergic rhinitis symptoms

Helps improve symptoms associated with upper respiratory tract viral infections



How probiotics might improve immune function

There are all sorts of things that can throw the balance of “good” and “bad” bacteria in your intestines out of whack. Something as simple as a week-long course of antibiotics can devastate a bacteria colony that’s been thriving in your body for decades. And that, in turn, can give you anything from diarrhea to chronic headaches, skin problems, the sniffles or worse. Some researchers theorize that an imbalance in the gut microbiome could be a cause of irritable bowel syndrome. It’s also been linked to an increase in depression or anxiety, multiple sclerosis flares and chronic kidney disease. While they’re not sure how it happens, all this research points to rebalancing the microbiome as a potential solution. And, in some small studies, using probiotics to do just that has resulted in a decrease of symptoms.

The link between your gut and your immune system

To get how probiotics affect your immune function, you first need to understand the relationship between the gastrointestinal tract and your immune health. In the last few years, scientists at the best research universities in the world have begun to figure out how bacteria in the gut impacts the immune system and your overall wellness. It turns out that much of the immune system is actually in the GI tract. There are cells in the intestines that secrete antibodies into your bloodstream, which help your body fight different illnesses and ailments. It turns out that the immune system is all about balance. If your body fights off too many “bad” cells, it can trigger a negative bodily response that can potentially cause other health complications. However, if it doesn’t fight off enough, you can become seriously ill. Your gut is all about balance, too. This balance is between “good” bacteria and “bad” bacteria, trillions of which reside in your intestines.

Some of these bacteria help you digest food, breaking it down into essential nutrients that your body can use as fuel. Other types of bacteria trigger an immune response, which could lead to the release of antibodies that we mentioned earlier. Scientists don't yet understand exactly how these bacteria work together to keep you healthy, or why certain types of bacteria are more prevalent than others. What they do know is that when the balance is off, people get sick.

Manufacturing

The manufacturing facilities are GMP-certified and include: clean room production systems; environmental controls to monitor temperature and humidity; food-safe wall panels and epoxy floors; refrigerated raw material storage; and much more as part of a complete quality control system.

Rigorous Testing

All products are tested in the in-house ISO-17025 certified laboratories in California. They test at every step of the process, from raw materials to finished goods. In addition to enzyme assays and probiotic counts, the testing capabilities include identity, heavy metals, and microbiological testing.

A Natural Product Number (NPN) is granted by Health Canada after a rigorous regulatory review of scientific evidence to provide consumer reassurance that the natural product is safe, effective, and high quality. Health Canada also approves specific health claims for product labeling and advertising. Health Canada has approved the following claims for SEBiotic®, SEBtilis™ and SEBclausii™.

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