Probio™

Probiotic combination

COMPOSITION

Each vegetable capsule/ Sachet contains *Lactobacillus acidophilus* (2 billion), *Bifidobacterium bifidum* (1 billion), *Lactobacillus bulgaricus* (1 billion) and Fructo-Oligosaccharides (100 mg).

DESCRIPTION

Probiotics are defined as live microorganisms, including Lactobacillus species, Bifidobacterium species and yeasts, which may beneficially affect the host upon ingestion by improving the balance of the intestinal micro flora.

Lactobacillus acidophilus is one of the several bacteria in the genus Lactobacillus. It gets its name from lacto- meaning milk, bacillus meaning rod-like in shape and acidophilus meaning acid-loving. *L. acidophilus* occurs naturally in a variety of foods, including dairy, grain, meat and fish. It is also present in human (and animal) intestine, mouth and vagina. These types of healthy bacteria inhabit in the intestines and vagina and protect against some unhealthy organisms.

Bifidobacteria are normal inhabitants of the human and animal colon. Newborns, especially those that are breast-fed, are colonized with bifidobacteria within days after birth. Bifidobacteria were first isolated from the feces of breast-fed infants. They are gram-positive anaerobes, non-motile, non-spore forming and catalase-negative. Their name is derived from the observation that they often exist in a `Y'-shaped or bifid form. To date 30 species of bifidobacteria have been isolated.

Lactobacillus bulgaricus is one of several bacteria used for the production of yogurt. First identified in 1905 by the Bulgarian doctor Stamen Grigorov, it is named after Bulgaria. Morphologically, it is a Gram-positive rod that may appear long and filamentous. It is also non-motile and it does not form spores. The bacterium feeds on milk and produces lactic acid which also helps to preserve the milk. It breaks down lactose and is often helpful to sufferers of lactose intolerance, whose digestive systems lack the enzymes to break down lactose to simpler sugars. While fermenting milk, Lactobacillus bulgaricus produces acetaldehyde, which perfumes yogurt.

MECHANISM OF ACTION

Studies of probiotic activity in recent years provide evidence that probiotics counter experimental and human gastrointestinal inflammation (human inflammatory bowel disease) by their effects on epithelial cell function, including epithelial cell barrier function, epithelial cytokine secretion and their antibacterial effects relating to colonization of the epithelial layer. It reduces gastrointestinal pH through stimulation of lactic-acid-producing bacteria; provide a direct antagonistic action on gastrointestinal pathogens. Moreover it competes with pathogens for binding and receptor sites. In addition, there is emerging evidence that probiotics induce regulatory T cells that act as a break on the effector T cells that would otherwise cause inflammation.

Lactobacillus acidophilus and *Bifidobacterium bifidum* appear to enhance the nonspecific immune phagocytic activity of circulating blood granulocytes. This effect may account, in part, for the stimulation of IgA responses in infants infected with rotavirus.
Lactic acid bacteria, like strains of *Lactobacillus acidophilus, Lactobacillus bulgaricus* have also demonstrated antioxidant ability Mechanisms include chelation of metal ions (iron, copper), scavenging of reactive oxygen species and reducing activity.

INDICATIONS AND USAGE

- Prevention and treatment of diarrhea
- Reduce digestive problems
- Alleviation of lactose intolerance
- Prevention of antibiotic associated illness

ADVERSE EFFECTS

Probiotics are generally well tolerated. In some cases constipation and flatulence may occur.

CONTRAINDICATIONS

Probiotics are contraindicated in those who are hypersensitive to any component of the product containing probiotics.

PREGNANCY AND LACTATION

No known problems.

DOSAGE & ADMINISTRATION

Adult: One or two capsules 1-2 times daily or as directed by the physician.
Children (6 months and above): One Probio™ sachet should be taken daily with milk/water or any other suitable liquid at normal temperature at once or as directed by the physician.

STORAGE

Keep the medicine away from direct sunlight & moisture. Keep the medicine out of the reach of children. Store in the refrigerator.

HOW SUPPLIED

Probio™ capsule: Each box contains 30 vegetable capsules in Alu-Alu blister pack.
Probio™ Sachet: Each commercial box contains 15 sachets.

Manufactured by
SQUARE PHARMACEUTICALS LTD.
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