

# All about Acidophilus Pearls

## How Does It Work?:

### Proprietary Probiotic Blend

Acidophilus Pearls™ is a probiotic dietary supplement designed to help support digestion and a healthy intestinal system. Probiotics, such as *Lactobacillus acidophilus* and *Bifidobacterium longum* are live microbial food supplements that are non-toxic and do not cause disease (non-pathogenic). Probiotics do not permanently colonize in the body. Therefore, they need to be ingested regularly for their health-promoting effects to persist. After ingestion, probiotics must adhere to the wall of the intestine. Once attached to the intestinal wall, the bacteria are capable of multiplying and colonizing in the gut, thereby enhancing the immune response.<sup>1-3</sup>

Oral probiotics help support the composition and metabolic activities of the large intestine microflora.<sup>1</sup> Microflora of the large intestine assist digestion through fermentation (making the intestines inhospitable to invading species), protection against pathogenic bacteria, and stimulation of the development of certain components of the immune system.<sup>3</sup> *Lactobacillus acidophilus* and *Bifidobacterium longum* occupy a central role in the gut microflora, thereby enabling them to influence the composition of the microflora to provide health benefits.<sup>4</sup>

### Breakdown of Lactose

Lactose is an important sugar that is converted to lactic acid by lactic acid-producing bacteria (such as *Lactobacillus acidophilus* and *Bifidobacterium longum*).<sup>6</sup> Lactose intolerance results from an inability to digest lactose.<sup>7</sup> Lactose intolerance may be due to genetics, age related declines in intestinal lactase (the enzyme that metabolizes lactose), or other reasons.<sup>8</sup> Lactase deficient people accumulate non-absorbed lactose in the gastrointestinal tract, which draws water and electrolytes into the gut and accelerates transit time, which can lead to diarrhea.<sup>2,8</sup> Lactic acid bacteria can help metabolize the non-absorbed lactose in the gastrointestinal tract.

In a randomized, controlled clinical trial, *Bifidobacterium longum* was shown to support the breakdown of lactose and reduce the symptoms of lactose intolerance (flatulence) in people with lactose intolerance. <sup>5</sup>

### Immune System Support

While a normal microflora is associated with good health, changes in intestinal health are associated with altered immune function. A well-functioning gastrointestinal immune system mediates immune responsiveness at mucosal sites and throughout the entire body via the control of the quality and quantity of foreign substances gaining access to the immune system.<sup>9</sup>

*Lactobacillus acidophilus* and *Bifidobacterium longum* have been shown to possess immunoprotective/immunomodulatory properties. These benefits include modulation of: cytokine and various interleukin production, autoimmunity, natural killer cell cytotoxicity, lymphocyte proliferation, and antibody production. <sup>3</sup>

In an open, randomized, controlled trial, *Lactobacillus acidophilus* and *Bifidobacterium bifidum* were supportive of colon health in older adults. In addition, B cell (important antibody producing immune cells) levels increased as compared with the untreated group. The probiotics were very well tolerated, with no significant side effects or variations in clinical chemistry or hematologic parameters.<sup>11</sup>

### **Decrease Occasional Constipation**

Constipation is defined as infrequent or difficult defecation that can result from decreased motility of the intestines. It is a common problem, particularly in older adults. When the feces remain in the large intestine for prolonged periods, there is excessive water absorption, making the feces dry and hard.<sup>7</sup>

Insufficient amounts of *Lactobacillus acidophilus* and *Bifidobacterium longum* may play a role in delayed bowel movement, which can favor the activity of undesirable putrefactive bacteria (bacteria that break down organic matter into potentially harmful compounds) in the intestines. Lactic acid bacteria contribute to the re-establishment of healthy intestinal flora (at the expense of pathogen growth) and stimulation of intestinal peristalsis via lactic acid.<sup>10</sup>

### **Support of Putrefactive Processes**

When unbalanced conditions are present in the intestines (ie, unbalanced diet, high acidity, and/or low levels of lactic acid bacteria), organic matter may be putrefied (decomposed or rotting) by certain bacteria and produce harmful substances such as ammonia.<sup>1,11</sup>

Microflora of the large intestine promote homeostasis (balance) in both the intestine and the vagina.<sup>1,12,13</sup> These activities are carried out via support of

direct production of antibodies, competition with adhesion to intestinal cells, or indirect modulation of the immune system.<sup>2</sup>

### **Support Digestion**

Normal microflora of the large intestine help support and complete digestion via fermentation.<sup>1,11</sup> The risk of diarrhea, for example, increases when the capacity of colonic microflora to ferment carbohydrates decreases.<sup>8</sup> Oral ingestion of probiotics produces a stabilizing effect on the gut flora. <sup>2</sup>

### **Additional Benefits**

The benefits of probiotics extend beyond digestion support and immune support. *Lactobacillus acidophilus* and *Bifidobacterium longum* also help support the better utilization and bioavailability of nutrients, including vitamins, minerals, proteins, fats, and carbohydrates. <sup>14</sup>

*Candida albicans* is a fungus that is a naturally occurring component of the normal gastrointestinal microflora.<sup>15</sup> However, *C. albicans* should be maintained at healthy levels. Probiotics have been shown to help retain healthy levels of *C. albicans* that are already within normal limits.

### **True Delivery™ Technology**

Recently, our Enzymatic Therapy® laboratory tested four leading probiotic nutritional supplements in the marketplace. These supplements were best selling brands, two of the supplements were enteric coated, and all had label guarantees about potency (guaranteed number of live bacteria). The laboratory scientists counted the levels of living bacteria found and compared these findings to the bacterial levels claimed by each manufacturer. The products were also subjected to a simulation of stomach acid conditions, after which the levels of living bacteria were re-counted.

The laboratory results found the probiotic supplements contained less than 50% of the number of living bacteria that they claimed on their labels. Furthermore, the laboratory results found that only 10% of the living bacteria claimed on the manufacturer's label survived the simulated stomach conditions.

*Acidophilus Pearls™* uses a revolutionary proprietary “pearl” encapsulating process called True Delivery™ Technology. The True Delivery™

Technology is a special type of natural coating that protects the probiotic bacteria.

The True Delivery™ is a seamless “pearl”, which consists of three layers. The inner layer is a paste of probiotic bacteria suspended in a protective oil suspension. The second layer actually “seals” the bacteria in the capsule, which protects them from air, moisture, and the effects of heat. Probiotic bacteria are anaerobic organisms (grow in the absence of oxygen) and the presence of oxygen can actually injure or kill them.

Because probiotic bacteria are injured or destroyed by the acids of the stomach, the third, outermost layer of the pearl is specially developed to only dissolve in the alkaline environment of the intestines. This patented gelatin pearl protects the probiotic bacteria from the acid environment of the stomach, so that they can successfully reach the intestine.

The patented seamless pearl capsule of Acidophilus Pearls™ assures that virtually all the bacteria remain uninjured and healthy to colonize in the intestine. In addition, the special pearl capsule's ability to seal the bacteria inside it eliminates the need for the nutritional supplement to be refrigerated – though they can be kept in the refrigerator, if desired.

### **Recommendations:**

One pearl daily. May be taken with or without food. Do not crush or chew. Store in cool dry location. May refrigerate if desired.

### **Precautions:**

None known.

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