



Intestinal Support

A proprietary blend of ingredients in vegetarian capsules to provide support for the intestinal tract by fighting bacteria, viruses and yeast (especially *Candida albicans*), reducing inflammation, repairing the gut lining and soothing the mucous membranes.

Pau d'Arco, the inner bark of the *Tabebuia impetiginosa* tree, is native to Central and South America where it is used to treat a wide array of conditions. The bark contains from 2 to 7% lapachol, a naphthoquinone derivative. Research performed at the Naval Medical Research Institute in Bethesda, MD has demonstrated that dietary intake of lapachol is protective against penetration and infection of the deadly parasite, *Schistosoma Mansoni*. Its antiparasitic actions on malaria and trypanosoma have been confirmed as well. Pau d'arco's active phytochemicals demonstrated strong in vitro activity in several clinical studies against 11 fungus and yeast strains including *Candida* and *Aspergillus*. Additionally, the anecdotal evidence for the anti-candida properties of Pau d'Arco is substantial, lending itself to gain acceptance as a good anti-fungal remedy for intestinal problems. Pau d'arco also demonstrated strong in vitro activity in studies against bacteria including *Staphylococcus*, *Streptococcus*, *Brucella*, tuberculosis and the bacteria associated with pneumonia, dysentery and gastric ulcers.



Supplement Facts

Serving Size: 2 Capsules
Servings Per Container: 30

	Amount per dose	% DV
Magnesium (from Magnesium Caprylate)	11 mg	3%
Proprietary Blend	697mgs	
Pau d'Arco Powder		*
Caprylic Acid (from Magnesium Caprylate)		*
Olive Leaf Powder		*
Chlorella Powder		*
Ginger Root Powder		*
Grapefruit Seed Extract 4:1		*
Licorice Root Extract (<3% DGL)		*
Marshmallow Root Powder		*
Slippery Elm Powder		*
Broccoli Powder		*
Fenugreek Seed Powder		*
Grape Seed Extract (95% Flavanoids)		*
Okra Powder		*
Turmeric Extract (95% Curcumin)		*
Enzyme Blend	326 mgs	
Cellulase	19920 CU	*
Hemicellulase	13200 HCU	*
Beta-Glucanase	90 BGU	*
Protease	3140 HUT	*
Protease	6 SAPU	*

* Daily Value (DV) not established

Other ingredients: Vegetable cellulose, Rice Bran and L-Leucine(for powder flow)





Pau d'arco and its chemicals have demonstrated in vitro antiviral properties against viruses such as Herpes I and II, influenza, poliovirus, and vesicular stomatitis virus. Pau d'arco strengthens and balances the immune system. A great deal of practical evidence shows that pau d'arco can successfully treat sore throats and colds. Studies show that pau d'arco reduces pain and inflammation, and has healing effects on psoriasis and cancer.

Caprylic Acid is a naturally occurring fatty acid derived from coconut. It is an anti-fungal, eight carbon, short chain fatty acid preferred by many doctors over the prescription drug Nystatin for the control of *Candida Albicans*. The anti-fungal effect of caprylic acid has been demonstrated in both clinical trials and in vitro studies. Caprylic acid exhibits high fungicidal activity against yeasts, especially *Candida Albicans*. It is postulated that caprylic acid dissolves the cell membrane of yeast, causing changes in fluidity and permeability that lead to membrane disaggregation. It is believed that *Candida* migrates into the mucosal wall. Because of its excellent lipotropic (fat solubility) properties (which allow it to penetrate the mucosal cells), caprylic acid is also believed to be effective against intramucosal *Candida*.

Olive Leaf Extract (*Olea europea*) - The leaves of the olive plant have been shown to have significant antimicrobial action. Oleuropein is the active constituent that seems to be responsible for olive leaf's vast healing powers, and is effective against many strong strains of viruses, fungi (such as *Candida*), bacteria and other parasites that cause disease. It has been shown in laboratory studies to be a very effective antioxidant that assists in recovering from arteriosclerosis, as well as enabling damaged tissue to better utilize vitamin E. Olive leaf contains at least three other antioxidants:

hydroxytyrosol, vanillic acid, and verbascoside. It is applicable in any chronic infection situation. Olive leaf extract has been shown effective in inhibiting the HIV virus, herpes viruses, and all flu viruses. Olive leaf has been used for centuries to treat wounds and hemorrhoids, to cleanse the liver, to reduce fever, and as a general antiseptic. Some modern uses for olive leaf extract include treating chronic fatigue, fibromyalgia, coughs, psoriasis, malaria, prostate difficulties, and parasites. It also treats things such as athlete's foot, botulism, encephalitis, lice, hepatitis, pneumonia, bladder infections, warts, and a long list of other afflictions.

Chlorella, a unicellular green algae, was chosen mainly for its high chlorophyll content, which provides detoxification effects. It is also a source of high-grade protein, B-complex vitamins, antioxidant vitamins and beta-carotene. It is a natural source of HGH (human growth hormone) and is rich in minerals. Chlorella is a hormone precursor and stimulates tissue repair. Gut lining repair is important especially in cases of Irritable Bowel Syndrome and other Inflammatory Bowel Diseases.

Ginger Root Powder is included for its ability to enhance peristalsis, calm and soothe the GI tract, and for its antioxidant properties, which aid in relieving inflammation and pain in conditions such as Irritable Bowel Syndrome. Scientists have found evidence to support ginger's wide range of medicinal actions. Ginger has a long history in aiding digestion and relieving diarrhea, constipation, stomach and intestinal upset and ulcers. In addition to morning sickness, ginger may prevent nausea, vomiting, motion sickness, and dizziness (including vertigo) and protect the digestive tract and liver against toxins and parasites. Ginger contains a proteolytic enzyme called





zingibain, which dissolves parasites and their eggs.

Ginger has been used to effectively treat schistosomiasis, a parasitic disease increasingly prevalent among tourists returning from lesser-developed areas of the tropics. Ginger inhibits cholesterol production in the liver, which makes up to 85% of the cholesterol in circulation in the blood stream. In a clinical trial in India, the consumption of 5 grams of dried ginger per day for 7 days reversed blood lipid elevation caused by daily consumption of 100 grams of butter. Ginger also decreases the activity of platelet-activating factor (PAF), a clotting agent that creates the clot that can result in heart attack or stroke. Ginger's ability to reduce PAF activity also makes the herb effective against allergies and asthma. Ginger relieves the pain of rheumatoid arthritis by stopping the immune system's production of inflammatory leukotrienes. Ginger's effects against infection have also been confirmed by laboratory science. One ginger compound kills cold viruses at a concentration of less than one part per million, a concentration to that found in raw ginger.

Grapefruit-Seed Extract (*Citrus paradisi*) -

Recent studies indicate that grapefruit-seed extract is effective against more than 800 bacterial and viral strains, 100 strains of fungus, and a large number of single and multicelled parasites. In vitro, with the aid of scanning transmission electron microscopy, it was revealed that grapefruit-seed extract disrupts bacterial membranes and liberates the cytoplasmic contents within 15 minutes after contact. It has been used with excellent results in patients with chronic intestinal candidiasis. Some of the protective plant chemicals found in grapefruit-seed include phenolic acid (which inhibits the formation of cancer causing nitrosamines), limonoids, terpenes, and monoterpenes (which induce the production of

enzymes that help prevent cancer), and bioflavonoids, which inhibit the action of hormones that promote tumor growth.

Licorice Root Extract (DGL) is included in this formula to help soothe the GI tract and in particular, the stomach. As a demulcent, licorice promotes the secretion of mucous and soothes any irritation of the gastrointestinal lining by coating the walls and mucous membranes. Licorice has been used very successfully for the treatment of peptic ulcers and is known to ease and modulate constipation and diarrhea. It lowers stomach acid levels and relieves heartburn and indigestion. Licorice acts as a mild laxative and has strong antioxidant properties to aid in reducing inflammation and helping with Irritable Bowel Syndrome. In this formula, we use a special extract of licorice known as deglycyrrhizinated licorice (DGL). The glycyrrhetic acid is removed to offer the benefits of licorice root without any known side effects. DGL has been shown to successfully treat gastrointestinal upset. In one study, licorice root extract was used to treat 100 patients with stomach ulcers (of which 86 had not improved from conventional medication) for 6 weeks. Ninety percent of patients improved; ulcers totally disappeared in 22 of these patients. Scientific studies show that DGL reduces inflammation and is as effective as some prescription drugs for gastric ulcers. In fact, DGL may offer protection against ulcer formation when taken with aspirin. Licorice (DGL) (root) has also been used as an expectorant and antitussive.

Marshmallow Root Powder (*Althea officinalis*) is used in this formula because it is generally soothing to the intestinal tract and reduces inflammation of the gut lining. The mucilage, a slippery fiber, is considered to be the active ingredient and is a demulcent which forms a soothing film over the mucous membranes. Its





soothing and anti-inflammatory properties can be particularly helpful with Irritable Bowel Syndrome, inflammatory bowel diseases such as Crohn's disease and ulcerative colitis and peptic ulcers. Another benefit of mucilage is that it slows down the absorption of sugar, leading to a more gradual release of sugar into the bloodstream where yeast could feed on excessive sugar. Marshmallow Root absorbs toxins, mildly potentiates the immune system and expands as it encounters water leaving you with a sense of fullness. The demulcent quality of this plant also relieves sore throat, coughs, laryngitis, bronchial asthma, bronchial congestion, and pleurisy.

Slippery Elm Powder (*Ulmus fulva*) soothes the gastrointestinal tract by providing slippery mucilage to coat and protect the gut lining. It also has antioxidant properties to reduce inflammation. The slippery elm's inner bark is used for medicinal purposes and has a long history of use based on clinical experience. Some of the conditions that seem to respond to slippery elm include diarrhea, gastritis, peptic ulcer, and other gastrointestinal conditions. This herb is thought to work for such intestinal problems because of its demulcent properties, which means that it coats and soothes the digestive tract. Recent laboratory research on slippery elm suggests that this traditional application may prove to have scientific merit in treating inflammatory bowel disease (namely, Crohn's disease and ulcerative colitis) due to its antioxidant properties. Native Americans used slippery elm in healing salves for wounds, boils, burns, skin inflammation, coughs, skin conditions, and as an eye wash. Slippery Elm has received recognition from the U.S. Food and Drug Administration as a safe and effective use for sore throat (pharyngitis) and respiratory symptoms, such as cough.

Broccoli Powder contains natural antioxidants, including flavonoids, Vitamin C, Vitamin E, and B-Carotene which serve as anti-inflammatory agents on the gut lining. They are also known to help protect cells from free radicals. Vitamin C is a major antioxidant which reduces oxidation by free radicals in blood. B-Carotene and Vitamin E are the major antioxidants found in cell membranes and are capable of reducing the free radicals in those structures. Broccoli also has strong antioxidant and detoxification properties due to its sulforaphane content and has antiproliferative effects due to its high content of Indols, including Indol-3-Carbal, the precursor to diindolmethane (DIM). Broccoli is also rich in minerals, fatty acids, amino acids and fiber.

Fenugreek Seed Powder has many benefits to the gastrointestinal tract including aiding the initial digestive process higher in the intestinal tract and providing mucilaginous fiber. One particularly important benefit is that it slows down the absorption of sugar, leading to a more gradual release of sugar into the bloodstream where yeast could feed on excessive sugar. Fenugreek is an herbal medicine used to treat type II diabetes and high cholesterol.

Grape Seed Extract (95% flavonoids) is included as a potent antioxidant to calm the inflammatory processes of Irritable Bowel Syndrome. Grape Seed extract has been shown to strengthen the immune system and support the mucous membranes.

It contains high concentrations of Vitamin E, flavonoids, linoleic acid, and an abundance of compounds called procyanidins (also known as condensed tannins, pycnogenols, and oligomeric proanthocyanidins). Proanthocyanidins are known to scavenge oxidants and free radicals, helping to inhibit the





process of tissue oxidation. Grape seed has also been reported to inhibit xanthine-oxidase, an enzyme that creates free radicals. A recent study of healthy volunteers found that grape seed extract substantially increased levels of antioxidants in the blood. Many health professionals use standardized extracts of grape seed to treat a range of health problems related to free radical damage, including heart disease, macular degeneration and cancer. Grape seed is also a source of the phenol Resveratrol, which has been shown to possess cardio-protective and anti-cancer properties. Its flavonoids and other plant phenolics are thought to possess anti-carcinogenic, anti-inflammatory, anti-mutagenic, and immune-stimulating properties.

These properties make grape seed extract an excellent antioxidant and anti-inflammatory for the gastrointestinal tract and for overall health.

Okra Powder allows the enzymes and other nutrients in this formula to slow down while passing through the gut and to adhere to the gut wall, providing more opportunity to act on the fibers and mucus along the gut wall. Okra has its own complement of vitamins and minerals to aid in supporting the repair necessary in bowel conditions.

Turmeric Extract (95% Curcumin) is added to this product to build the antioxidant profile in the gut in order to relieve inflammatory processes such as Inflammatory Bowel Disease (IBD). These processes require antioxidants to reduce inflammation and allow the intestinal lining to heal. Turmeric's anti-inflammatory properties work through inhibition of tumor-necrosis-factor-alpha and histamine, two inflammatory substances documented as major reactors in IBS. Curcumin, the active ingredient in turmeric, has shown reliable results as a potent antioxidant with the added benefits of directly

affecting ulcers, heartburn, gallstones and cholesterol levels. Research suggests that turmeric may be helpful for Digestive Disorders such as stomach upset, gas and abdominal cramps. Curcumin has been shown to stimulate the production of bile and facilitate the emptying of the gallbladder. Animal studies provide evidence that turmeric can protect the liver from a number of damaging substances such as carbon tetrachloride and acetaminophen. Turmeric accomplishes this, in part, by helping to clear such toxins from the body and by protecting the liver from damage. Because of its ability to reduce inflammation, turmeric may help relieve the symptoms of osteoarthritis. There has been a substantial amount of research on turmeric's anti-cancer potential. Evidence from laboratory and animal studies suggests that curcumin has potential in the treatment of various forms of cancer, including prostate, breast, skin, and colon. Laboratory studies suggest that curcuminoids may reduce the destructive activity of parasites or roundworms. Curcumin is being investigated for use in Alzheimer's disease due to its potent anti-inflammatory action (Joe 1997; Grilli 1999).

Curcuminoids are purported to have numerous other benefits, such as fighting infections (viral, bacterial, fungal), reducing fever, and supporting the immune system. Early studies suggest that turmeric may provide cardiovascular support by preventing the build up of atherosclerosis and inhibiting the oxidation of LDLs and by preventing platelet build-up along the walls of injured blood vessels.

Enzyme Blend: Enzymes are added to this product for a number of reasons. They aid in the breakdown and delivery of nutrients from the other ingredients, perform specific functions for GI health, and promote the general health of the body.





Cellulase is actually a complex consisting of three distinct enzymes that together convert cellulose (one of the basic components of cell walls) to glucose. It is theorized that *Candida*'s cell wall is partially composed of cellulose making it vulnerable to cellulase. In the presence of cellulase, the cell wall would be disrupted and the yeast would die.

Hemicellulase hydrolyzes hemicellulose, which is known to bind digestive enzymes and hinder effective breakdown and absorption of nutrients. It is theorized that, in addition to having a structural cell wall composed of cellulose, *Candida*'s fibrous factors can also be vulnerable to hemicellulase, allowing *Candida*'s cell wall to be more quickly and completely digested.

Beta-glucanase assists in breaking down the beta-glucan portion of the *Candida* cell wall. This enzyme acts specifically on the interior 1,4-betaglucosidic bonds of beta-glucans containing mixed 1,3- and 1,4- bonds.

Proteases also aid in the breakdown and delivery of nutrients from the other ingredients, but also serve as anti-inflammatory agents. Many researchers theorize that *Candida albicans* adheres to the host epithelium by a mannoprotein ligand. Adherence of *Candida*

to cell surfaces may be inhibited by the action of proteolytic enzymes. Therefore, this formula contains two broad-spectrum proteases. It is thought that these proteases damage the protein component of the *Candida* cell wall, leading to its destabilization. Proteases can also break down undigested protein, cellular debris and toxins in the blood. For example, protease breaks down undigested dietary protein that enters the blood through openings in the intestinal wall made by toxins and mycelia of *Candida*. This spares the blood's lymphocytes the task of cleansing the blood, allowing the immune system to concentrate its full action on controlling the invasion of *Candida* and other organisms. Proteases help destroy viruses. Proteases are able to dissolve almost all proteins as long as they are not components of living cells. Normal living cells are protected by an inhibitor mechanism, but the protein covering of viruses does not show any of these characteristics of life. Studies have found that the protein cover of viruses can be dissolved or inactivated by proteolytic activity, which leads to a loss of viral infectivity. Therefore, proteolytic enzymes in the blood and plasma represents an efficient means to control viral infections, including six different influenza Type A viruses and cold viruses.





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