

Immunol™

How Immunol™ Works:

The immune system is composed of many interdependent cell types that collectively protect the body from bacterial, parasitic, fungal, viral infections and from the growth of tumor cells. Many of these cell types have specialized functions. The cells of the immune system can engulf bacteria, kill parasites or tumor cells, or kill viral-infected cells. Often, these cells depend on the T helper subset for activation signals in the form of secretions formally known as cytokines, lymphokines, or more specifically interleukins.

Immunol™ works by enhancing the body's production of Immunoglobulin A (IgA), a sticky mucosal material, which is one of the most common of the five major classes of immunoglobulins and the chief antibody in the membranes of the gastrointestinal and respiratory tracts. IgA protects the body's mucosal surfaces from infection by binding to intruders such as allergens and preventing them from passing the surface layer of the body.

Immunol™ is mainly designed as an immune-modulator to help enhance and balance the entire immune system. When necessary, **Immunol™** helps activate the body's own defense systems against viral, bacterial, fungal, parasitic and other harmful organisms, while providing balanced nutrition and helping to relieve stress, thus improving and achieving optimal immune function. **Immunol™** also assists the body in fighting allergies.

Immunol™ is a unique combination of botanical extractions from date fruit, olive leaf and astragalus, which are then bio-enhanced with the patent pending **B.E.E.®** technology.

Applications

Immunol™ has been used to:

- Enhance and balance the entire immune system
- Act as an immune modulator
- Activate the body's own defenses against viral, bacterial, fungal and other harmful organisms
- Strengthen the body's natural immunity and resistance to allergies
- Promote liver and cardiovascular function
- Increase proliferation of bone marrow stem cells
- Increase antibody levels of IgA and IgG
- Potentiate the effects of interferon
- Help people with autoimmune disorders
- Enhance the body's ability to cope with stress

- Support adrenal gland function

Date Fruit B.E.E.®: contains maleic acid, oleanolic acid and abundant and balanced nutrients that work as an immune tonic to support the body's regulatory balance, adaptability and strengthen the body's natural immunity and resistance to allergies and other immune imbalances. **Date Fruit B.E.E.®** also promotes the production of blood cells. Dates may be considered as an almost ideal food, providing a wide range of essential nutrients and potential health benefits. Fruits of the date palm (*Phoenix dactylifera* L. *Arecaceae*) are very commonly consumed in many parts of the world and are a vital component of the diet in most of the Arabian countries. The protein in dates contains 23 types of amino acids, some of which are not present in the most popular fruits such as oranges, apples and bananas. Dates contain at least six vitamins including a small amount of vitamin C and vitamin A. They also contain in higher amounts thiamine, riboflavin, niacin, vitamin B-6, and pantothenic acid. These vitamins have a variety of functions that help maintain a healthy body. They help metabolize carbohydrates and maintain blood glucose levels and fatty acids for energy. They also help make hemoglobin, the red and white blood cells. Selenium, another element believed to help prevent cancer and important in immune function, is also found in dates. Dates are considered demulcent, expectorant and laxative and are used in respiratory diseases and fever. In ancient times, dates were highly medicinal. They had an enormous amount of use for infections and for tumors. The relationship between dates and humans goes back to antiquity, so it is not surprising that the fruit has been used in several dozen folk remedies. Ailments treated include everything from asthma and bronchitis to cancer and venereal disease. Saharan people that consume large quantities of dates have low cancer rates, which is claimed to be due to their high magnesium content. While debatable, there are several other compounds in dates known to have medicinal value: tannins used as astringents for coughs or sore throat, fiber for a digestive aid, serotonin which affects mood, emotion, sleep, and appetite, anthocyanins that act against cancer and as antioxidants, and estrones, which act as estrogenic hormones in mammals. Research today has even shown that dates can possibly reverse the progression of prostate cancer. Another preliminary study documents for the first time dates' antioxidant and antimutagenic properties in vitro. There was a dose-dependent inhibition of superoxide and hydroxyl radicals by an aqueous extract of date fruit. The results of the study indicated that antioxidant and antimutagenic activity in date fruit is quite potent and implicates the presence of compounds with potent free-radical-scavenging activity.

Olive Leaves B.E.E.®: contains oleuropein that can be converted into elenolic acid, which has antibiotic properties without being an actual antibiotic. It helps the immune system fight dangerous viruses, fungi, parasites, bacteria and other invaders without building antibiotic resistance and at the same time, helping to strengthen the immune system. Olive leaves (*Olea europaea* L.) contain the flavonoids: apigenin, luteolin, chrysoeriol, hesperidin, rutin, quercetin and kaempferol. Oleuropein, the monounsaturated fatty acid that is particularly concentrated in the leaves, is a potent antimicrobial that has inhibited the growth of every human pathogen it has been tested against, including viruses, bacteria, protozoa, fungi and yeast. The extract of olive leaves operates in a multifaceted fashion. It helps the body overcome microbial invasions by bringing about:

- * A critical interference with certain amino acids production procedures necessary for a specific virus, bacterium, or microbe to thrive.
- * Interference with viral infection and/or spread by inactivating viruses or by preventing virus shedding, budding, or assembly at the cell membrane.
- * Direct penetration into infected host cells and irreversible inhibition of microbial replication.
- * Neutralization of the retrovirus' production of reverse transcriptase and protease. These particular enzymes are critical for a retrovirus such as human immunodeficiency virus (HIV) to alter the ribonucleic acid (RNA) of a healthy cell.
- * Direct stimulation of phagocytosis as an immune system response to microbes of all types. This multifaceted approach is why Olive leaf extract is so efficacious against so many diseases that involve the immune system. But other diseases also respond to the extract. Coronary artery disease seems to respond well to the introduction of Olive leaf extract. According to laboratory and preliminary clinical studies, extract of Olive leaf alleviates numerous disorders related to insufficient arterial blood flow, including angina pectoris and intermittent claudication. It helps eliminate atrial fibrillation (arrhythmia), lowers high blood pressure, and inhibits LDL cholesterol from oxidizing.

Olive leaf extracts have been reported by leading clinicians to offer significant benefit when included as part of an immune system anti-aging enhancement program designed to combat microorganisms. **Olive Leaves B.E.E.[®]** contains a complex structure of active constituents, which act to directly inhibit the formation of resistance by disease causing organisms (that is, olive leaf extract weakens the organisms and makes them subject to effective attack by your body). **Olive Leaves B.E.E.[®]** also has a powerful immune system boosting effect by means of increasing phagocytosis in white blood cells (the effect is the destruction of foreign bacteria and viruses that are literally gobbled up).

Astragalus Root B.E.E.[®]: contains flavonoids, polysaccharides, triterpene glycosides, amino acids and trace minerals. It can promote immune, liver and cardiovascular function through its multiple effects. It may increase proliferation and differentiation of bone marrow stem cells and progenitor cells. It has antibiotic activities and increases antibody levels of IgA and IgG. It benefits immune function in a double-direction. Namely, it helps increase the immune response and potentiates the effects of interferon in people with weak immune systems, thus fighting and preventing bacterial and viral infections and other harmful factors attacks, while at the same time, decrease the immune response in people with some autoimmune disease, such as Systemic Lupus. Research confirms this herbs immune-potentiating actions. Astragalus appears to restore T-cell (a specific type of white blood cell that is part of the lymphocyte family) counts to relatively normal ranges in some cancer patients. In studies performed at the National Cancer Institute and five other leading American Cancer Institutes over recent years, it has been positively shown that while astragalus does not directly attack cancers, it does however

strengthen the cancer patient's immune system, thereby allowing the patient to recover significantly faster and live longer. Researchers believe on the basis of cell studies that astragalus augments those white blood cells that fight disease and removes some of those that make the body more vulnerable to it. In these same studies, both in the laboratory and with 572 patients, it was found that Astragalus promotes adrenal cortical function, which also is critically diminished in cancer patients. Astragalus also ameliorates bone marrow suppression and gastrointestinal toxicity caused by chemotherapy and radiation. Astragalus is presently being looked upon as a possible treatment for people living with AIDS and other viral conditions as it also increases interferon production and enhances NK and T cell function. Astragalus shows support for peripheral vascular diseases and peripheral circulation. Health practitioners have prescribed astragalus to treat shortness of breath, general weakness, and lack of appetite, and have recommended it as a diuretic as well as to treat colds, flu, stomach ulcers, and diabetes. Astragalus strengthens the body's resistance and invigorates and promotes tissue regeneration via photo chemicals in the plant such as polysaccharides, especially astragalans I, II, and III, and saponins and triterpenes. A number of clinical studies have been reported regarding the use of astragalus for colds and upper respiratory infections. A prophylactic effect against the common cold was reported in an epidemiological study in China involving 1,000 subjects. Administration of astragalus, given either orally or as a nasal spray, decreased the incidence of illness and shortened the length of its course.

Eleuthero Root B.E.E.®: is an extract from Siberian Ginseng and contains eleutherosides and polysaccharides that play a critical role in supporting immune function. Also, eleuthero is an "adaptogen" (an agent that helps the body adapt to stress). It helps support adrenal gland function when the body is challenged by stress, thus improving immune function, because stress can run the immune system down. In addition, it helps enhance intellectual and physical performance and promote general health. Chinese herbal tradition has Eleuthero as a defense against colds and flu. A recent Russian study of 13,000 auto workers given Eleuthero one winter showed that participants developed 40% fewer respiratory tract infections than they had in previous winters. A placebo-controlled study of the effect of an *Eleutherococcus senticosus* extract on the immune system was performed with 36 healthy volunteers utilizing quantitative multi-parameter flow cytometry with monoclonal antibodies directed against specific surface markers of human lymphocyte subsets. The most salient feature in the verum group was a drastic increase in the absolute number of immunocompetent cells, with an especially pronounced effect on T lymphocytes, predominantly of the helper/inducer type, but also on cytotoxic and natural killer cells. In addition, a general enhancement of the activation state of T lymphocytes was observed. Some researchers believe that *Eleutherococcus Senticosus* induces increased interferon biosynthesis (interferon is a powerful chemical which boosts immune-system activity), while others believe that polysaccharides (long-chain sugar molecules) naturally found in *Eleutherococcus Senticosus* stimulate the activity of special white blood cells called macrophages. These macrophages play a number of roles in the immune system, including the breakdown of infected cells and the stimulation of other immune cells. In perhaps the most convincing of these studies carried out so far, researchers in Heidelberg, West Germany looked at immune parameters in 18 individuals who took one tablespoon of

Eleutherococcus Senticosus extract three times daily and 18 placebo subjects who received no ES. Overall, the Eleutherococcus Senticosus group showed an absolute increase in all immune cells measured. Total T-cell numbers advanced by 78 per cent, T helper/inducer cells went up by 80 per cent, cytotoxic Ts by 67 percent, and NK cells by 30 per cent, compared to the control group. B lymphocytes, which are cells that produce antibodies against infectious organisms, expanded by 22 per cent in the Eleutherococcus Senticosus subjects, compared to controls. Most importantly, no side effects were noted in the Eleutherococcus Senticosus subjects up to five months after Eleutherococcus Senticosus administration ended.

SUGGESTED USE:

Take 2 capsules daily for the continuous support of the immune system. Take 2 capsules twice daily for at least 3 consecutive days when your immune system needs additional support.

Immunol™ can be taken with and may enhance the benefits of other products such as **Arthritol™**, **Fibromyol®**, **Respirol®**, **Gastrol™**, **Hepacol™** and **Glucosan™**.