

Glucans MY™ Mushroom Blend: Natural Support for Immune Defense

Introduction

Glucans MY™ is a blend of 7 mushrooms containing biologically active glucans. Glucans support immune defense by activating the complement system resulting in a positive impact on macrophages and natural killer cell function, interleukins and cytokines.

Active glucans help to provide a natural immune enhancer and modulator. While transfer factors facilitate this process by educating the cells, the mushroom blend speeds it up by providing the energy needed. The transfer factors and glucans, therefore, work together to enable the immune system to detect and fight against harmful antigens without attacking normal cells within the body (Hennen 2005).

Cordyceps

Cordyceps sinensis is a fungus that grows on insects, and it is traditionally used to support the immune system. It also has been shown to benefit the endocrine, cardiovascular, respiratory, renal, sexual, hepatic, immunologic, and nervous systems. Preclinical studies suggest that cordyceps may support normal immune function by increasing the number of T helper cells, which can have a positive effect on natural killer cell activity, interleukin and lymphocytes (Chen 1991). Some studies in animals with cancer suggest cordyceps reduces tumor size and lengthens survival time (Chiu 1998). Preliminary animal studies suggest cordyceps could be used in treating systemic lupus erythematosus (Chen 1993).

Agaricus blazei

The agaricus mushroom originated in Brazil, and it has two main applicable parts: the mycelia and fruiting body. The mushroom is now also produced in China and Japan, where it is used medicinally and consumed as food (extracts of the fruit bodies are approved food additives in Japan). This mushroom is used to help treat a variety of diseases and disorders, including diabetes, cancer, heart disease, hepatitis, and digestive problems.

The Agaricus mushroom is also used as an immunostimulant; the dehydrated mushroom contains proteins, carbohydrates, fibers, lipids, and B vitamins as well as ergosterol—a precursor to vitamin D and potassium. Some preliminary in vitro and animal research suggests it might stimulate the production of cytokines and the monocyte production of interleukin-12, which may result in anti-tumor activity (Kasai 2004).

Coriolus (*Trametes versicolor*)

Trametes versicolor is also known as the coriolus mushroom. Taken orally, coriolus mushroom is used for stimulating the immune system, as well as treating a number of conditions, from chronic fatigue syndrome, urinary tract infections and even promoting curative effect of chemotherapy in cancer patients (Maehara Y. 1993). Coriolus mushrooms have been used in folk medicine for many years, and now research is being conducted to determine the pharmacological properties of coriolus.

The mushroom is a source of polysaccharide peptide (PSP), which can improve immune function by increasing white cell, natural killer cell, and antibodies (Qian ZM 1997). A study conducted at the University of Pennsylvania looked at the median time of development or progression of abdominal metastases in dogs receiving 100 mg/kg/day of PSP. The study indicated that high doses of PSP could potentially provide higher survival rates and overall better results than using a standard chemotherapy treatment (Brown 2012).

Poria (*Wolfiporia extensa*)

Poria mushrooms have been traditionally used for intestinal problems, anxiety, insomnia, gastrointestinal tract bleeding, and many other similar conditions. It may also inhibit leukotriene B₄, which could be useful for treating skin conditions, such as psoriasis (Prieto 2003). Other studies may suggest that poria extracts have immunosuppressive effects, and isolated triterpene constituents point to evidence for antitumor and anti-emetic effects (Kaminaga 1996, Tai 1995).

Chaga (*Inonotus obliquus*)

Chaga (*Inonotus obliquus*) is a mushroom that has been traditionally used in folk medicine in Northern Europe for many generations. More recently, this mushroom has been in the spotlight in health news and popular media. Chaga mushrooms grow on Birch and similar trees in cold climates; the active constituents are thought to be a combination of triterpenes and polysaccharides. Studies indicate that Chaga has immune stimulating properties in vitro (Sun 2008), and inhibited tumor cell growth in animal models (Youn 2009). Accompanying modulated cell cycle progression, medicinal mushrooms, such as chaga, have been reported as having cytotoxic effects in cancer cells (Song 2003).

Maitake (*Grifola frondosa*)

Maitake mushrooms have been used in traditional Japanese herbology for hundreds of years. For food uses, maitake mushroom is edible and has been consumed in Asia for thousands of years. Maitakes have a high nutritional profile, and they appear to be active orally. They have been shown to enhance the immune system, help the body cope with stress, and normalize body functions. Maitakes are also rich in Beta-Glucans (Adachi K. 1987). These mushrooms have been used for HIV/AIDS, chronic

fatigue syndrome, hepatitis, diabetes, high blood pressure, weight loss, and polycystic ovary syndrome (PCOS) (Chen JT. 2010).

The beta-glucans in Maitake mushrooms (the "D-fraction" seems to be the most active and potent form) have been shown to possess antitumor activity, and they have also been used for cancer and chemotherapy support. Preliminary research suggests that maitake mushrooms can prevent metastasis of experimentally induced tumors and prevent tumor occurrence in normal cells. Maitake mushrooms are also known for their immunostimulant effects; they are shown to activate natural killer cells, cytotoxic T-cells, interleukin-1, and superoxide anions (Nanba H. 1995, 97).

Shiitake (*Lentinus edodes*)

Like maitake mushrooms, shiitakes are taken orally for their medicinal effects. The shiitake mushroom is used for boosting the immune system, reducing serum cholesterol levels, as well as plasma levels of free cholesterol, triglycerides, and phospholipids (Otsuka 1996). They have also been used as an anti-aging agent, and they contain very low concentrations of lentinan, which are known to have antitumor effects. Shiitake mushrooms have been used for certain cancers, such as breast cancer and prostate cancer (Wolters Kluwer 1999).

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