

THE HEALTH BENEFITS OF MEDICINAL MUSHROOMS

**Learn How Medicinal
Mushroom Supplements Can:**

- **Restore a Poorly Functioning Immune System**
- **Improve the Outcome of Serious Illness, such as Cancer & Hepatitis**
- **Support Kidney & Liver Health**
- **Improve Cardiovascular Function**
- **Help Treat a Variety of Other Health Conditions**

Mark Stengler, N.D.

ages thirty-three to sixty-eight, participated in this trial. Data was collected under the cooperation of their medical doctors in Japan. Patients were given either maitake beta-glucan with tablets only, or maitake beta-glucan and tablets in addition to chemotherapy. Cancer regression or significant symptom improvement was observed in eleven out of sixteen breast cancer patients, seven out of twelve liver cancer patients, and five out of eight lung cancer patients.

Maitake appears to be most effective against breast, prostate, and liver cancers. To date, it has been less effective against bone, blood, and brain cancers.

Supplement Facts

Amount Per Capsule

| | |
|--|---------|
| <i>Grifola frondosa</i> (Maitake) fruit body extract | 400 mg* |
| 20% Beta Glucan (polysaccharide) | |

*Daily Value not established

Minimum potency to look for in maitake.

Known active constituents: beta-1,3 glucan and beta-1,6 glucan

Clinical Use: Adjunctive cancer treatment, fatigue, high blood pressure, liver disease, and HIV, antioxidant.

Dosage: 300–2,400 mg of a hot-water extract daily, containing a minimum of 20% polysaccharide (beta-glucan). Take one to four capsules twice daily, morning and evening, on an empty stomach. Maitake fractions dosage: for immune support, take 0.5 to 1 milligram of MaitakeGold 404 per kilogram (2.2 pounds) of body weight per day.

Safety Profile: Extremely safe. As an immune modulator it should be used with extreme care or avoided in organ transplant patients using immunosuppressive agents.

6

Reishi



The reishi mushroom (*Ganoderma lucidum*) is one of the most revered herbs in traditional Chinese and Japanese medicine, with a documented history of over 2,000 years. Known as Ling Zhi in China, there are references to its use in that country as far back as 100 B.C. where it was referred to as the “Herb of Spiritual Potency” and the “Ten-Thousand-Year Mushroom.”

Reishi is one of the most highly regarded medicinal mushrooms and is probably the best choice when looking for a general health tonic to improve overall health and increase longevity. It is considered an adaptogen.

Modern clinical research also supports many of the uses for this mushroom as described in traditional medicine. It benefits immune health, cardiovascular health, and liver function. Reishi is also frequently used by mountain climbers to combat altitude sickness and is contained in many of the performance-enhancing herbal formulas used by Chinese athletes.

The fruiting bodies of reishi range from a reddish-orange to an almost black color. The fruiting body also has a shiny look to it (*lucidum* translates to “shiny”). Reishi is extremely difficult to find in the wild but is successfully cultivated for commercial purposes.

Research has demonstrated that reishi has several different active constituents. One group of active constituents is the polysaccharides. The various types of polysaccharides found in reishi have demonstrated immune-enhancing properties. This includes enhancement of several important interleukins.

Another major class of compounds is the triterpenes. These compounds have been reported to have adaptogenic, anti-hypertensive, and anti-allergy effects. Many of the important triterpenes are found only in the mushroom. They are extracted from the shiny red surface of the mushroom, a physical feature missing in the mycelium.

Cardiovascular Benefits

Reishi has been shown in some studies to inhibit platelet aggregation and reduce blood pressure. In one study of thirty-three people with hypertension researchers found blood pressure was significantly reduced over two-weeks' time with reishi supplementation.

Reishi is currently being used in Chinese medicine for the treatment of hypercholesterolemia. It appears to reduce cholesterol via two mechanisms. One is the inhibition of endogenous cholesterol synthesis by inhibiting HMG-CoA Reductase and by inhibiting cholesterol absorption from food sources.

Immune Benefits

Reishi is commonly prescribed by practitioners for long-term immune system support. This includes its use as an adjunctive therapy for cancer. For example, in one placebo-controlled study, forty-eight patients with advanced tumors were given reishi mushroom extract for thirty days. Researchers found a marked immune-modulating effect as demonstrated by an increase in T lymphocytes and decreased CD8 counts. Patients also reported reduced side effects due to chemotherapy or radiation as well as postoperation recovery.

Several studies have demonstrated antitumor activity in animals. More studies are required to confirm this activity in humans.

Studies in China have demonstrated a substantial improvement for patients with chronic bronchitis. In a study of over 2,000 patients with chronic bronchitis there was a 60 to 90 percent improvement within two weeks after beginning a reishi syrup.

Blood Sugar Balance

Animal and in vitro studies have shown reishi to have a blood sugar lowering effect. Much of this activity appears to be due to polysaccharides known as Ganoderans A, B, and C.

It appears there are three main mechanisms behind this hypoglycemic effect. This includes Reishi's ability to elevate plasma insulin levels, to enhance peripheral tissue utilization of glucose, and to enhance liver metabolism of glucose.

Anti-inflammatory Effects

Various animal and in vitro studies have shown that hot-water/ethanol extracts of reishi have anti-inflammatory effects. One study found that 220 milligrams of reishi extract and 50 milligrams of reishi powder had comparable effects to 5 milligrams of hydrocortisone.

Liver Protector

Reishi is commonly used for its hepatoprotective (liver protective) action. One small study of four patients with hepatitis B and elevated liver enzymes (SGOT/SGPT) and bilirubin were given 6 grams of reishi for three months. Significant reduction in SGOT and SGPT were noticed within one month. After three months all values were within normal range.

Altitude Sickness

One of the unique uses of reishi is for altitude sickness. Reishi appears to reduce altitude sickness by oxygenating the blood. This benefit was studied in Chinese mountain climbers that ascended mountains as high as 17,000 feet with minimal reaction. Daily use of reishi should be started ten to fourteen days before you climb the mountain.

Known active constituents: polysaccharides, triterpenes (Ganoderic acids), ergosterols

Clinical Use: Daily tonic to improve and maintain good health, long-term immune support, hepatitis C, hypercholesterolemia, altitude sickness, and diabetes.

Supplement Facts

Amount Per Capsule

Ganoderma lucidum (Red Reishi), fruit body 400 mg*
extract, 10% Beta Glucan (polysaccharide),
4% Triterpenes (ganoderic acids)

*Daily Value not established

Minimum potency to look for in reishi.

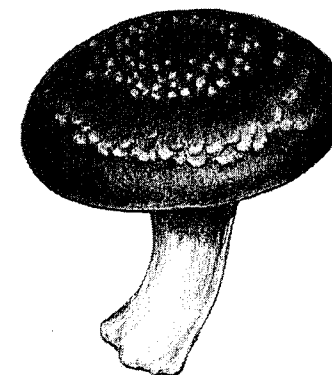
Dosage: 800 to 4,000 milligrams per day of a hot-water/ethanol extract, containing a minimum of 10% polysaccharide (beta-glucan) and 4% triterpene. Take one to five 400-mg capsules twice daily, morning and evening, on an empty stomach.

Decoction: 375 milliliters twice daily

Safety Profile: No toxicity reported. Occasional digestive upset or skin rash in sensitive users. Caution is advised for those currently using blood-thinning medications due to reishi's anticoagulant effects. Also, caution is advised for those taking hypoglycemic medication due to reishi's potential hypoglycemic activity. As an immune modulator it should be used with extreme care or avoided in organ transplant patients using immunosuppressive agents.

7

Shiitake



Shiitake (*Lentinula Edodes*) is regarded as a gourmet food in the West, while in Japan and China shiitake is known to be a valuable food and medicinal agent. Its name comes from the Japanese chestnut tree, *shii*, and the Japanese word for mushroom, *take*. It is also referred to as the "fragrant mushroom" or the "forest mushroom."

This mushroom is indigenous to Japan, China, and other areas of Asia. It is not found in the wild in America but is cultivated for commercial use. Shiitake is the second most common edible mushroom in the world. The fungi is found on dead and injured hardwood trees, including the chestnut tree, hence the prefix *shii*. Shiitake has a medicinal history of more than 1,000 years and was revered by Japanese emperors. It has been used in traditional Chinese medicine to treat colds, flu, and cardiovascular disease.

Shiitake is used medicinally in two forms in Asia and around the world. This includes lentinan, a purified polysaccharide extracted from the cell wall of the Shiitake fruiting body. The second extract is known as *Lentinula edodes* mycelium extract, better known as LEM. Both extracts have been shown to enhance immune activity. Both forms have been shown to have a beneficial effect orally but the majority of published data on lentinan has been with the injectable or intravenous forms.

Adjuvant Cancer Therapy

As with many of the medicinal mushrooms, Shiitake has been shown to be of benefit as an adjuvant cancer therapy. It has been shown to improve specific immune markers (including natural