Medicinal Mushrooms

MUSHROOMS THAT MAKE A DIFFERENCE TO YOUR LIFE

SOME FACTS ABOUT FANTASTIC FUNGI

THE GOOD-LIFE GOOD-HEALTH SERIES

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Mushrooms have been treasured as both medicine and food and medicine for thousands of years. Across the globe, many people enjoy hunting for wild mushrooms, appreciating the variety of colors, shapes, and sizes.

In Japan, street vendors sell many species of medicinal mushrooms to health conscious citizens who utilize them to maintain health and promote long life. Some Japanese people travel hundreds of miles in order to collect wild mushrooms that only grow on very old plum trees. Likewise, for thousands of years, the Chinese have valued many mushrooms for their healing properties, particularly tonics for the immune system.

Most medicinal mushrooms contain polysaccharides (complex sugar molecules) called beta-glucans that increase DNA and RNA in the bone marrow where immune cells (like macrophages and T-cells) are made. The combination of compounds in mushrooms is believed to target the immune system and aid in neuron transmission, metabolism, and the transport of nutrients and oxygen. Three mushroom varieties (reishi, shiitake, and maitake) have been studied intensively and have proven to possess strong medicinal properties.

**Reishi**

Reishi (Ganoderma lucidum) is, without doubt, one of the most famous medicinal mushrooms. The Latin word *lucidum* means “shiny” or “brilliant” and refers to the varnished surface of reishi’s cap, which is reddish orange to black. Traditionally, reishi was very expensive, because it only grew in the wild (on old plum trees), but it is currently both accessible and affordable due to cultivation techniques developed in the last quarter century. Reishi is renown for its cancer-fighting properties and immune-stimulating effect.

An example of reishi’s cancer-fighting potential occurred in the summer of 1986. A Japanese woman had been refused an operation by several hospitals due to the advanced stage of her lung cancer. Desperate, she returned home where she found her husband had collected reishi in the forests. He boiled the mushroom and gave it to her to drink as a tea.

While this was going on, she approached Dr. Fukumi Morishige, M.D., Ph.D, a renowned Japanese surgeon (and a member of the Linus Pauling Institute of Science and Medicine) for help in treating her cancer. When Dr. Morishige looked at her X-rays, he was amazed that the tumors had shrunk and only scar tissue remained.

That was the impetus for Dr. Morishige to begin his studies of reishi as a treatment for “terminal” cancer. He found that in addition to the beta-glucans, reishi also increases immunoglobulin levels (immunoglobins are specific types of antibodies) to produce an increased response to foreign “invaders” such as bacteria and viruses and also tumor cells.

After years of study, Dr. Morishige is now convinced that reishi is not only an excellent
cancer treatment, but also a very effective cancer preventative.

One interesting finding by Dr. Morishige was that the efficacy of reishi could be amplified by combining it with high doses of vitamin C, which helps the body to break down the huge polysaccharide molecules. In other words, vitamin C increases the bioavailability of reishi, and therefore, synergistically increases its anti-cancer and immune-stimulating properties.

As Dr. Andrew Weil writes, “Reishi is a purely medicinal mushroom, not a culinary one, both because it is hard and woody and because it tastes very bitter. But it is non-toxic and has been the subject of a surprising amount of scientific research, both in Asia and the West. Although most of the research has been in animals, the results are so promising that I think human studies will soon follow.”

He continues, “…reishi improves immune function and inhibits the growth of some malignant tumors. Additionally, it shows significant anti-inflammatory effect, reduces allergic responsiveness, and protects the liver.”

Another substance in reishi, called canthaxanthin, slows down the growth of tumors, according to author Phyllis A. Balch and other experts. As a result of these amazing anti-cancer abilities, the Japanese government officially recognizes reishi as a cancer treatment.

Besides cancer, reishi can help and treat cardiovascular disease, which is another of America’s top killers. Reishi is so effective at preventing heart disease due to it high content of substances like sterols, coumarin, ganoderic acids, and mannitol. Experts believe that the ganoderic acids lower triglyceride levels and blood pressure, remove excess cholesterol from the blood, reduce platelet stickiness, and even help correct arrhythmia.

**Maitake**

Maitake (Grifola frondosa) means “dancing mushroom” in Japanese. In ancient times, people who found the mushroom were said to dance with joy because it could be exchanged for its weight in silver. Maitake is a giant mushroom that often reaches 20 inches in diameter an that may weigh up to 100 pounds! In the USA, they also are known as “hen-of-the-woods” because the mass of mushrooms looks like fluffed-up feathers.

Maitake is common in eastern North America, Europe, and Asia. Until cultivation techniques were devised in the late 1970’s, maitake was harvested from the wild. But today, maitake is mass cultivated on a global scale.

Maitake contains grifolan, an important beta-glucan polysaccharide, which has been shown to activate macrophages in the immune system. In China, a maitake extract was shown to have an anti-cancer effect in patients with stomach cancer, lung cancer, and leukemia. Dr. Joan Priestley, MD reports that her patients with Kaposi’s sarcoma and other symptoms of AIDS show improvement when administered maitake extract. Maitake’s antiviral activity against the
HIV/AIDS was confirmed by the National Cancer Institute in 1992.

But maitake not only helps with immune deficiency diseases, it seems to be able to reduce resistance to insulin in people with type 2 diabetes and lowers blood glucose. And if that’s not enough, researchers have suggested that it’s a good adjunct to chemotherapy, especially since it can help relieve chemo’s serious side effects. Maitake also potentially benefits people with hypertension. And like reishi, the efficacy of maitake can be amplified by combining it with high doses of vitamin C.

**Shiitake**

Shiitake (*Lentinula edodes*) is a prized mushroom with a delicious taste and texture that can be found on fallen hardwood trees. The caps have nearly ragged gills and they are covered with a delicate white flocking. Indigenous to temperate Asia, they are not found in the wild in the USA but are widely cultivated.

A vast amount of research into shiitake’s medicinal properties has been completed and shows that it has the ability to fight tumors and viruses and enhance the immune system. It is also used medicinally for treating AIDS, Candida, and frequent flu and colds.

Shiitake is also beneficial for soothing bronchial irritation and inflammation, reducing high cholesterol, treating liver ailments, and even regulating urine incontinence.

According to one prominent Japanese researcher, lentinan (a cell-wall constituent extracted from the fruiting bodies of shiitake) is an “immuno-modulating” agent which may be useful both as a general rejuvenative (for the elderly) and also to protect healthy, physically active young people from overwork and exhaustion.

Commercial preparations of shiitake are available in natural food markets. Standardized extracts are preferred because the amount of lentinan present is clearly stated on the bottle. Although fresh shiitake can be a valuable dietary supplement, the amount one would need to eat for medicinal doses is so high that it might cause digestive upset, so I recommend the extract. And like reishi and maitake, the efficacy of shiitake can be amplified by combining it with high doses of vitamin C.

**Conclusion**

Reishi, maitake, and shiitake mushrooms have many overlapping properties: all boost immune function, all support cardiovascular health, and all show promise in lowering the risk of (and treating) cancer. However, reishi promotes respiratory and cardiovascular health; maitake is specifically recommended for the stomach and intestines, as well as blood sugar levels; and shiitake treats nutritional deficiencies and liver ailments.

And remember that all mushrooms must be cooked to get the nutritional value. The cell walls cannot be digested unless they are tenderized by heat.