

Ganoderma: A Potent Medicinal Mushroom

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Ganoderma is the name of the fungus *Ganoderma lucidum* (Ling zhi or Reishi). It is the first ever mushroom known to be used for health benefits. It is also called Reishi mushroom or in Chinese *Ling zhi*. According to Chinese medicine, *Ganoderma lucidum* can penetrate into and work on the five key human organs for impairment of the heart, lung, liver, pancreas, and kidney. It is one of the most popular medicinal mushrooms in China, Japan, and United States. The cap, spores, and mycelium are all used medicinally. Reishi is a polypore mushroom, growing in damp, dark forests and the occasionally rotting log or tree stumps.

Commonly known as reishi mushroom, *ganoderma* is the most alkaline food in the world. Its scientific name is *Ganoderma Lucidum* and it is species of red mushrooms. It has a documented history of over 200 years and is the most revered herb in traditional Chinese medicine. *Ganoderma* or reishi mushroom was earlier referred to as “Herb of Spiritual Potency” and the “Ten Thousand Year Mushroom”. Wealthy people in ancient times used this wonder mushroom in the hope of obtaining immortality and calmness.



Now this wonder herb is called the “King of the Herbs”. *Ganoderma* is believed to promote health and longevity. It has been long used in Chinese medicine for treating a number of diseases like body aches, cancer, and liver diseases. It is also prescribed for various psychiatric and neurological diseases.



The taste is sweet and the property is neutral, therefore it is suitable to be consumed by anyone. In the Chinese medical concepts, the essence of the Ling Zhi is able to penetrate the organs and its meridians to improve the conditions of the lung, heart, spleen, liver and kidney. This natural herb protects our immune system, and boosts immunity, prevents a wide range of sicknesses and promotes self-healing.

Constituents of *Ganoderma*

It includes an array of alkaloids, triterpine acids, ergosterols, fumaric acid, coumarins, lactone, mannitol, proteins and amino acids and many water-soluble polysaccharides.

Nutritional Value

Ganoderma contains a whopping 400 nutrients! The nutrients present in this amazing herb promote health and vitality. Some of the important nutrients are polysaccharides, antioxidants, adenosine, protein and alkaloids. It contains potassium, phosphorus, calcium, Vitamin A, C, E, D and B complex vitamins.

Parts Used

The whole mushroom top, with as little shaft as possible. The larger the mushroom the better.

Typical Preparations of *Ganoderma*

Different preparations are made using mushroom cap, spores, and the mycelium. A common dose is 1,800–2,400 mg capsule form per day.

- Tea: Tea decoction from the dried mushroom, which Chinese medicine usually call for 1-8 grams of dried mushroom per cup of tea.
- Liquid extract: Powdered mushroom sprinkled on food or in beverages.
- Encapsulated (non-standardized) product from whole mushroom tops.
- Capsules
- Tablets
- Tea bags
- Tea granules
- Tinctures

So what's so good about *Ganoderma*?

- It is non-toxic and can be taken daily without producing any side effects.
- When it is taken regularly, it can restore the body to its natural state, enabling all organs to function normally.
- Immune modulator - regulates and fine tunes the immune system.

Benefits of *Ganoderma*

Improves liver function

Ganoderma is primarily composed of complex carbohydrates called water-soluble polysaccharides, triterpenoids, proteins and amino acids. These water-soluble polysaccharides are the most active element, that have anti-tumour, immune modulating and blood pressure lowering effects. Another major active ingredient found in *Ganoderma* are triterpenes, called ganoderic acids. These ganoderic acids helps to alleviate common allergies by inhibiting histamine release, improve oxygen utilization and liver functions.

Effect on Tumor

Ganoderma lucidum can best regulate and activate the immune system. It prominently enhances the body immune function and increase self defense capability against tumor. It enhances the function of monocytic macrophage *via* activating synthesis of interleukin H. It also enhances blood synthesis capacity, particularly white blood cells level. Combining with the inhibitory effect on cancer cells provided by certain

ingredients in *Ganoderma lucidum*, it becomes one of the most effective medicines for anti-tumor, prevent cancer, and supplement to cancer treatment.

Enhance our body's immune system

Regular consumption of *Ganoderma* can enhance our body's immune system and improve blood circulation, thus improving better health conditions. Generally, Reishi is recommended as an adaptogen, immune modulator, and a general tonic.

Effect on Cardiovascular

Ganoderma lucidum can effectively dilate coronary artery, increase coronary vessel blood flow, and improve circulation in cardiac muscle capillaries, thus increase the supply of oxygen and energy to cardiac muscle. Therefore it helps to protect the heart from shortage of blood supply, and it is ideal for both curing and preventing heart diseases like nausea. *Ganoderma lucidum* can obviously reduce the level of blood cholesterol, lipoprotein and triglycerides in hypertensive patients. It prevents the formation of arterial atheromatous patches. If patches are already formed, *Ganoderma lucidum* will reduce cholesterol in arterial wall and soften the blood vessel to avoid further damage. It also partially improves blood circulation, and inhibits platelet aggregation. All these effects contribute to preventing various kinds of stroke.

Aging Prevention

The polysaccharides and polypeptides found in *Ganoderma lucidum* can effectively delay aging by the following mechanisms.

- To enhance and regulate immune function: Such enhancement and regulation can effectively delay aging in adult and aged people. For the youngster, the immune system will be optimized to ensure healthy growth.
- To regulate metabolism and enhance synthesis of nucleic acids and proteins: *Ganoderma lucidum* enhances synthesis of nucleic acids and proteins in blood plasma, liver, and bone marrow, hence effectively prevent aging.
- Effect on Free Radicals: One cause of aging is the reduction of self-originated antioxidant or antioxidant-like material (such as SOD) in the

body. These antioxidants are essential for encountering damage to the body by free radicals. Ganoderma lucidum polysaccharides possess the properties that are very similar to SOD which can remove the free radicals and prevent its damage to the body by stopping over-oxidation of lipid. Such action protects the cells and delays their aging.

- Ganoderma lucidum polysaccharides prominently enhance DNA synthesis in cell nucleus, and increase the number of cell divisions, which results in delayed aging.

Neuralgia and insomnia:

Using this herb for nerves can also help you to improve sleep and appetite, enhance energy, improve memory, and regain vitality.

Treatment of Diabetes

The constituents in *Ganoderma* that reduce blood glucose are *Ganoderma* B and C. The principle is by enhancing utilization of blood glucose by body tissues. It serves as a substitute to insulin to inhibit release of fatty acids. It thus improves symptoms in high blood glucose and high urine glucose patients.

Effect on Chronic Bronchitis & Bronchus Asthma

Ganoderma can stop coughing, clear sputum, and suppress asthma. It also relieves the symptoms of the related illnesses. Since, it can activate the immune system, it can prevent from flu, and thus above syndromes.

Effect on Beauty Care

Ganoderma has been named the "Medicine of Eternal Life". It is mainly contributed to the effect on skin protection, and delaying aging. It can retain and regulate the water in skin and thus can keep the skin elasticity, hydrated and smooth. It also inhibits the formation and deposition of melanin in skin. Today, the beauty care products made from *Ganoderma lucidum* are becoming the new stars in the industry. To add Ganoderma lucidum into the bath will not only keep the skin smooth and lustrous, but also prevent it from bacterial infection.

Antioxidant benefits

Regular use of *ganoderma* supplements may increase your levels of antioxidants, compounds thought to protect against disease and aging.

Weight Loss

It rapidly oxygenates your body and automatically adjusts your PH to a healthy balance at the cellular level.

Fibroids (uterine myomas)

Ganoderma keeps the uterine lining from making both basic fibroblast growth factor (bFGF), a chemical that promotes fibroid growth, and histamine, a chemical that causes inflammation.

Stress

Ganoderma can reduce emotional outbursts during long-term stress.

Prevents and fights cancer

Ganoderma stimulates the body's production of interleukin-2, which fights against several types of cancer, and it contains compounds called ganoderic acids, which act against liver cancer.

Side effects of *Ganoderma*

Large doses (2–9 g) of *Ganoderma* taken regularly over the course of 3–6 months may result in Abnormal bleeding, Low blood pressure, Stomach upset, Liver damage and other side effects viz., allergic reactions can cause dizziness, dryness of the mouth, throat, headaches, mild irritation of the skin, which may manifest as skin redness and rashes.

Ganoderma Mushroom Benefits for Health

Heart Health

Researchers in China and Japan have found that the ganoderic acid present in *ganoderma* improves blood flow and lowers oxygen consumption in the heart muscle. It also lowers cholesterol and inhibits platelet clumping, which often leads to heart attack. *Ganoderma* prevents the buildup of plaque in the arteries. Plaque restricts blood flow by narrowing the passage within the arteries, resulting in atherosclerosis. A study has found that consuming *ganoderma* for 2 weeks can significantly lower blood pressure.

Anti-Allergic

Ganoderma extract can significantly inhibit different types of allergic reaction, including asthma and dermatitis. Triterpenes, a compound found in ganoderma provides anti-viral and anti-allergic effects. It inhibits the histamine release, making the herb potentially useful for allergies. Polysaccharides improve the ability of antibodies to fight bacteria and viruses that cause allergic reaction. Ganoderma is useful for treating allergies caused due to atopic shock, dermatitis, hay fever, hives, and food and drug allergies.

Healing the Liver

This potent herb protects the liver from damage caused due to physical and biological factors. It also treats alcohol induced fatty liver and cirrhosis. Ganoderma can help people in the early stages of alcoholic liver diseases especially those who have not experienced severe loss of liver function. It also helps patients suffering from hepatitis B and elevated liver enzymes. Hepatitis B is quite difficult to clear from the body and its recurrence after treatment is high. The powerful compounds present in ganoderma accelerate the clearance of drugs and chemicals stored in the liver. The antioxidants present in ganoderma combats the free radicals, promoting liver regeneration.

Detoxify the Body

Ganoderma eliminates the toxins accumulated in the body due to excess intake of medicines and junk food. It promotes the efficient synthesis of bile and fatty acids, promoting faster detoxification of the chemicals from the body. Moreover, it enhances the body's ability to take in more than 1.5 times oxygen. Ganoderma rapidly oxygenates the body and adjusts its pH value.

Cure for Kidney Disease

Kidney disease includes chronic nephritis, diabetic renal syndrome, and nephritis. It occurs due to high blood sugar and cholesterol levels in the body. Overloaded kidney prevents the blood from reaching the renal capillaries. This causes fatigue, urine retention and uremia. Ganoderma lowers proteinuria and cholestyrolmia, maintaining proper renal function.

Sound Sleep

Chinese herbalists have traditionally recommended Ganoderma for its sleep promoting properties. Regular usage of ganoderma can promote a slow wave of sleep.

Mental Health

In Japan, dried Ganoderma is recommended for the treatment of neuroses caused by environmental stress. A study also found that regular intake Ganoderma can help patients suffering from Alzheimer's disease. It provides a calming effect, which is neither a narcotic nor hypnotic.

Muscle Relaxant

Ganoderma has been used widely for its muscle relaxing and pain inhibiting properties. It is believed that the herb can also treat anorexia and debility following a chronic disease.

Immune System

Ganoderma is very useful in boosting the body's immune system. Reishi mushrooms not only stimulate the immune system, but also regulate it. It regulates metabolic balance and promotes a synthesis of nucleic acid in the body. Polysaccharides raise the levels of interferon in the body by promoting the release of protein from the white blood cells. These white blood cells assist in inhibiting the spread of diseases. Studies have shown that patients taking ganoderma show fewer side effects from chemotherapy and radiation. The post-operative recovery is also smoother.

Ageing

The polysaccharides in ganoderma promote nuclear DNA synthesis and increased cell division, delaying the onset of ageing. It also contributes to longer life spans. This wonder herb helps to manage some of the most life-threatening age conditions and autoimmune diseases like cancer and other neurodegenerative diseases.

Weight Loss

Oxygen is very essential for burning fat for fuel. High levels of oxygen boost the body's metabolism, leading to weight loss. It increases the rate at which the body provides blood to the oxygen,

giving you extra energy. Increased energy levels help you to work out for longer, aiding weight loss

Antioxidants

Ganoderma is a potent source of antioxidants. It contains one of the highest sources of antioxidant found in herbs. Ganoderma Lucidum peptide is the most powerful antioxidant found in this herb. Other antioxidants include polysaccharide, polysaccharide peptide complex and phenolic components.

Cancer

Ganoderma is touted for its anti-cancer benefits. It strengthens the immunity and combats cancer cell proliferation. It stimulates the production of interleukin-2, which helps to fight several types of cancer. Ganoderic acid, a compound found in ganoderma, helps to fight liver cancer. It counteracts suppression by stimulating the creation of protein in the bone marrow. In a trial, 34 people with advanced stage cancer were given ganoderma three times a day for 12 weeks. The results showed a significant increase in the T-cells.

Lack of oxygen is one of the major causes of cancer. Cancer cells are known to thrive in oxygen-depleted environment. Conversely, cancer cells cannot thrive in an oxygen rich environment. Several laboratory studies have shown that ganoderma can prevent cancer metastasis. It inhibits the migration of cancer cells and angiogenesis. The extracts of ganoderma are used in pharmaceuticals to suppress cancer cell proliferation. Furthermore, combining ganoderma with green tea augments its power to retard the growth of cancer cells.

Infection

Ganoderma stimulates the maturity of immune cells called macrophages, which digest infectious bacteria. This further prevents the development of secondary infection. It is also active against yeast infection.

Stress

Ganoderma has been prescribed since centuries to people suffering from stress and anxiety. It can effectively reduce emotional outbursts during chronic stress and depression. Ancient Chinese monks

used reishi mushroom to calm their minds for meditation.

Skin Health

Topical application of ganoderma can be very effective for healing skin wounds, eczema, psoriasis, bug bites, stings, and scrapes.

Urinary Tract Infection

Ganoderma can also provide relief from urinary tract infections. In a study, 88 people suffering from urinary tract infection were given ganoderma for 2 weeks. The researchers found that ganoderma was significantly superior to placebo in providing relief from urinary tract infection. It inhibits 5- alpha reductase, an enzyme that converts testosterone to Dihydrotestosterone. These 5 alpha reductases can lead to swollen prostate and the health problem that accompanies it. It also improves urine flow in men with mild to moderate urinary tract symptoms.

Inflammation

Ganoderma extract is very effective for decreasing post-herpetic pain, which occurs soon after the herpes lesions heal. A combination of ganoderma with San Miao (a mixture of several Chinese herbs) may help reduce rheumatoid arthritis. It helps to reduce the swelling associated with rheumatoid arthritis. Ganoderma is also effective for stiff neck and arms.

Blood Sugar

Ganoderma also provides blood sugar lowering effect. It contains polysaccharides known as Ganoderans A, B and C, which provides hypoglycemic effect. It elevates plasma insulin levels to enhance peripheral tissue utilization and liver metabolism of glucose.

Radiation

Ganoderma augments the effects of radiation therapy while acting directly against tumors. It strengthens the immune system, which helps the body to manage radiation therapy and chemotherapy. It also eases the symptoms of radiation therapy like nausea, vomiting, fever, infection, and hair fall and weight loss.

Dosage

Natural products are not completely safe. A specified dose is very important to make the most of these herbs. Ganoderma is available in capsule and tincture form in most health stores. You can take ganoderma in tea and coffee also. However, the addition of ganoderma to the tea and coffee can make them very bitter.

The dosage of ganoderma depends on several factors like age, health and several other conditions. 2.6 grams of concentrated ganoderma mushroom extracts can be taken with meals three times a day. For adults suffering from cancer, chronic hepatitis and diabetes, doses of 600 to 1800 milligrams should be taken daily. For high blood pressure, 55 milligrams of ganoderma is recommended. For the treatment of proteinuria (protein in the urine), 100 grams of ganoderma boiled in 300 ml of water is recommended.

Do not forget to consult your doctor before going ahead with the treatment.

Side Effects

- Some people might experience dry throat and nose, nose bleeding and gastrointestinal problems when consuming ganoderma. Other side effects include bloody stools and itchiness in the nasal area.
- Some users may also experience constipation and diarrhea. Constipation may disappear within a few days of consumption.
- Do not take ganoderma if you are suffering from autoimmune diseases.
- Pregnant and lactating women should avoid taking ganoderma. Do not take ganoderma before or after surgery or childbirth.

- There is a possibility that ganoderma can make low blood pressure worse and can even interfere with the medications. Individuals suffering from this disease should consult their doctor before consuming this herb.
- High doses of ganoderma can increase the bleeding in people suffering from thrombocytopenia. Ganoderma contains adenosine, a substance that prevents the blood platelets from sticking together and forming clots.
- It may also lead to gastric bleeding in people suffering from stomach ulcers. Refrain from taking this herb until the ulcer heals.
- Dizziness is another possible side effect of reishi mushroom. It is often caused due to low blood pressure. It may also cause light-headedness and fainting spells.
- Ganoderma is known to cause breathing problems. Nasal discomfort along with difficulty in breathing and chest pain are common. These problems are usually caused due to allergic reactions. Get immediate medical help if you face any of these allergic reactions.
- Itching is another common side effect of this herb. It can lead to rashes all over the body. Itching is commonly accompanied by body aches and pain.
- Excess consumption of ganoderma can also lead to acne breakouts.

Fortunately, most of these side effects are temporary and subside with time. With right medical supervision, you can reduce these adverse reactions.

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