

# Mushrooms Boost Your Immunity

Nature provides an amazing array of resources to improve our health and boost our immunity. Mushrooms are a type of fungus that are enjoyed by people all over the world and renowned for their nutritional benefits. These have been used in tonics, soups, teas, prepared foods, and herbal formulas to promote health and longevity. In recent years, scientists have studied the medicinal benefits of mushrooms on the immune system.

There are thousands of different types of mushrooms with a small percentage being poisonous if consumed. Most mushrooms are edible and include white mushrooms, morels, truffles, portabellas, chanterelle, shiitake, maitake, agaricus, reishi, oyster, and enoki. While all of these mushrooms have nutritional benefits, some are far denser in unique immune stimulating compounds than others.

The most common nutrients found in the majority of mushrooms include thiamin (B1), riboflavin (B2), niacin (B3), folate (B9), phosphorus, iron, pantothenic acid (B5), zinc, potassium, copper, magnesium, pyridoxine (B6), zinc, potassium, copper, and selenium. All edible mushrooms are healthy for the body but some contain high levels of beta glucans, which are an extraordinary molecule that scientists are just beginning to understand.

## **Beta Glucan and the Immune System**

Beta glucan is a powerful immune stimulating compound found in several mushrooms, yeasts, and other foods. Beta glucan is a polysaccharide that is made up of multiple sugar molecules linked together. The different types of beta glucan include 1,3-D glucan and Beta 1,6-D glucan,

Beta glucans are known by scientists as “biological response modifiers” that bind to the surface of innate immune cells,

which allows the cells to have better coordination in their attack. This reduces the tendency towards auto-immune reactions and hyperinflammatory activity when the body is under attack. This compound activates certain immune cells such as key T-cells, macrophages, natural killer (NK) cells and the cytokines interleukin (IL) 1 and 2. Studies have shown that it inhibits the growth of cancer and strengthens the immune response to microbial invaders.

Beta glucans have been studied for their ability to mitigate cancer cell growth and reduce the symptoms of the common cold. In one report by the Montana Center for Work Physiology and Exercise Metabolism they studied firefighters and tracked their cold/flu symptoms. Firefighters have very physically and emotionally stressful positions that demand a lot out of them. The results of the study showed that those who took beta glucan instead of the placebo had a 23% reduction in upper respiratory tract infections. "These results are consistent with previous clinical research involving marathoners, individuals with high stress lifestyles and the general population," wrote Brent C. Rudy, the director of the Montana Center for Work Physiology and Exercise Metabolism.

## **Maitake Mushrooms**

Maitake means "dancing mushroom" in Japanese. It is said that people danced for joy when they found these mushrooms because they were worth their weight in silver for their remarkable healing properties. Maitake has been found to contain high levels of the immune modulating molecule Beta 1,6-D glucan.

## **Agaricus Blazei Murill Mushroom**

This mushroom commonly referred to as the ABM mushroom is grown in the rain forest of Brazil and is nicknamed "The Mushroom of God." Studies have revealed that the ABM mushroom has the greatest density of beta glucan in the world. When human subjects were given ABM in their diet, they saw a 3000%

increase in NK cells in the blood within 2-4 days.

## **Reishi Mushroom:**

Reishi is rich in Beta1,3-D glucan which boosts macrophages, T cells, and cytokinetic activity. Reishi is especially good at increasing the production of tumor inhibiting cytokines IL-1 and IL-2. Reishi has powerful analgesic, anti-inflammatory, anti-oxidant, and anti-microbial effects in the body. It also acts to protect the liver and detoxify the body of ionizing radiation.

### **Sources For This Article Include:**

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