

Mushroom: Nutritional Value and Medicinal Importance

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INTRODUCTION

A mushroom is the fleshy, spore-bearing fruiting body of a fungus, typically produced above ground, on soil, or on its food source. The standard for the name "mushroom" is the cultivated white button mushroom, *Agaricus bisporus*; hence the word "mushroom" is most often applied to those fungi (Basidiomycota, Agaricomycetes) that have a stem (stipe), a cap (pileus), and gills (lamellae, sing. lamella) on the underside of the cap. "Mushroom" also describes a variety of other gilled fungi, with or without stems; therefore the term is used to describe the fleshy fruiting bodies of some Ascomycota. These gills produce microscopic spores that help the fungus spread across the ground or its occupant surface. Mushrooms have been consumed since earliest history; ancient Greeks believed that mushrooms provided strength for warriors in battle, and the Romans perceived them as the "Food of the Gods." For centuries, the Chinese culture has treasured mushrooms as a health food, an "elixir of life." The most cultivated mushroom worldwide is *Agaricus bisporus*, followed by *Lentinus edodes*, *Pleurotus spp.*, and *Flammulina velutipes*. Mushrooms production continuously increases, China being the biggest producer around the world. However, wild mushrooms are becoming more important for their nutritional, sensory, and especially pharmacological characteristics. Mushrooms could be an alternative source of new antimicrobial compounds, mainly secondary metabolites, such as terpenes, steroids, anthraquinones, benzoic acid derivatives, and quinolones, but also of some primary metabolites like oxalic acid, peptides, and proteins. *Lentinus edodes* the most studied species and seems to have an antimicrobial action against both gram-positive and gram-negative bacteria.

THE NUTRITIONAL VALUE AND MEDICINAL IMPORTANCE OF MUSHROOMS:

Mushrooms contain protein, vitamins, minerals, and antioxidants. These can have various health benefits. For example, antioxidants are chemicals that help the body eliminate free radicals. Free radicals are toxic byproducts of metabolism and other bodily processes. They can accumulate in the body, and if too many collect, oxidative stress can result. This can harm the body's cells and may lead to various health conditions. Among the antioxidant agents in mushrooms are: selenium, vitamin C and choline.

White button mushrooms: White button mushrooms are low in calories and sugar. They are rich in protein and due to their exposure to sunlight, mushrooms are a natural non-animal source of vitamin D₂; it helps in the absorption of calcium in your body and helps keep your bones strong. It is also rich in vitamin B₁₂ which is an animal-obtained vitamin and so mushrooms are a good option for vegetarians. White mushrooms are also known to have cancer-fighting properties and help in reducing blood sugar levels and improve insulin resistance. Also, it is prebiotic and helps improve gut bacteria.

Oyster mushrooms: Oyster mushrooms are mostly fat-free and a good source of essential minerals and vitamins including niacin, riboflavin, vitamin B₆ and thiamin. It also has numerous health benefits such as it lowers cholesterol, boosts heart health, better immune function, and improved metabolic health.

Enoki Mushrooms: Enoki Mushrooms is rich in several minerals and vitamins such as vitamin B₃, vitamin B₅, vitamin B₁, vitamin B₂, phosphorus, iron, selenium, thiamin, calcium and copper. The mushrooms also

contain healthy amino acids and dietary fiber and are low in cholesterol which helps to improve the immunity system, reduces body fat and increases metabolism. It also improves digestion and reduces the chance of developing allergies.

Paddy straw mushrooms: Paddy straw mushrooms are cold and good for the summer season. They are rich with protein, fibre, iron, vitamin B and vitamin C also has mineral extra folic acid, potassium and copper. Paddy straw mushroom's health benefits include reduced cholesterol in the digestive system. It has natural insulin which is good for diabetics, the beta-glucan prevents the growth of cancer cells and vitamin D strengthens bones. It also prevents anaemia and is good for heart health.

Shiitake mushrooms: Shiitake mushrooms are good for boosting the immune system, lowering blood cholesterol levels, hardening of the arteries, diabetes and as an anti-ageing agent. Also, it has promising antibacterial and antiviral effects.

CONCLUSION

Mushrooms are valuable resources for food, medicine and nutraceuticals. They contain a large array of nutrients and other natural phytochemicals that have a wide range of nutritional and health benefits. These benefits will have potential implications such as boosting the immune system, providing an anti-cancer function as well as controlling blood lipids and glucose levels in humans.

REFERENCES

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