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MUSHROOMS: MERITS AND DEMERITS

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Abstract: *The fact that, not all mushrooms are safe to consume due to their associated negative side effects, is not as popular as edibility of mushrooms itself. Nowadays, mushrooms are produced commercially and considered generally safe for human consumption. However, some species of mushrooms grown commercially are associated with serious side effects which manifest differently among individuals. This paper highlights some effects of mushrooms with emphasis on common side effects.*

Key Words: *Mushrooms, hallucinogens, food poisoning and allergic reactions.*

1. INTRODUCTION:

Mushroom cultivation, an age-long practice was first precedented in China, the current major producer and consumer of both edible and medicinal mushrooms. Mushrooms provide nutritious protein-rich food and effective medicinal products, among other myriads of importance associated with them (Wasser, 2014). They are very common condiments applied to many dishes, salads and sauces, or eaten as a side dish in many countries of the world. The fact that, not all mushrooms are safe to consume due to their associated negative side effects, is not as popular as edibility of mushrooms itself. Nowadays, mushrooms are produced commercially and considered safe for human consumption. However, some species are characterised with serious side effects which are often dependent on the nature of the consumers.

It is widely accepted that, mushroom cultivation helps in reducing the level of pollutants in the environment through their biological activities which makes them undoubtedly a vital agent bio-remediation in polluted environments. For example, the bioconversion of lignocellulosic biomass to food and useful products has had a significant impact on national and regional pollution levels and will continue to increase. (Chang and Buswell, 2003; Koutrotsios et al., 2014). Some species of mushrooms contain powerful immune system boosters, serum-cholesterol regulators and interferon stimulators. For example, *Lentinulaedodes* (Shiitake mushroom) is known to possess anti-cancer and interferon stimulating properties.

Another influential role of mushrooms in the ecosystem is bio-remediation, which involves the use of mycelia to remove and break down contaminants (pollutants) to digestible forms which can be easily assimilated through biosorption process (Dai, 2016).

2. NEGATIVE SIDES :

Common demerits associated with mushrooms according to Caroline Thompson article on Negative health effects of mushrooms on livestrong.com include:

Food poisoning

Campylobacter jejuni, a bacterium commonly found in commercially grown mushrooms are often responsible for poisonous nature of some mushrooms. Mushroom contamination with strains of C. jejuni could result from improperly cleaned, cooked or processed plant or animal materials or products which we consume as foods. Consumption of C. jejuni infected mushrooms usually produce symptoms such as nausea, diarrhea or abdominal pains.

Death

Well packaged mushrooms from supermarkets or stores are safe for consumption provided that the consumer is not allergic to the species. However wild mushrooms can be deadly because many of them resemble edible mushrooms, such as button mushrooms, or chanterelles, but are toxic and can be hazardous to health. Hence, hunting of wild mushrooms is often discouraged. cautions the Bluebonnet Master Gardener Association in its February 2007 issue of "The Blooming News." Deadly mushrooms -- such as the amanitas, false morel and little brown mushrooms -- should not be eaten

Psychosis

Psilocybin is a psychedelic compound produced by many species mushroom commonly referred to as magic mushrooms. Literature shows that more than 200 species of mushrooms are known for the production of this euphoric or psychedelic compound. This psychedelic compound causes hallucinogens which renders mind-altering, irrational behavior, distorted sight or sound perceptions, dissociation from people or surroundings according to National Institute on Drug Abuse.

Psilocybin-containing mushroom species are typically dark-spored fungus that are native to tropical and sub-tropical habitats. They grow primarily in areas ridden with plant debris and composite breakdowns. Psilocybin use as drugs has continued throughout history in Mexican ceremonies as well as through the 1960s when hallucinogenic drugs were widely popular throughout the United States. Nowadays, many teens and young adults explore magic mushrooms for its hallucinogenic and psychedelic effects.

Allergic Reaction

Spores produced by some mushrooms might cause extreme allergic reactions in some people. Certain people might have mold allergies that are triggered by eating mushrooms. Mushroom spores, also called mold spores, are released into the air in damp environments and can cause allergic reactions. Mold allergies can cause respiratory infections, asthma or lung disease. For this reason, federal and state regulations on mold and indoor air quality are in place.

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