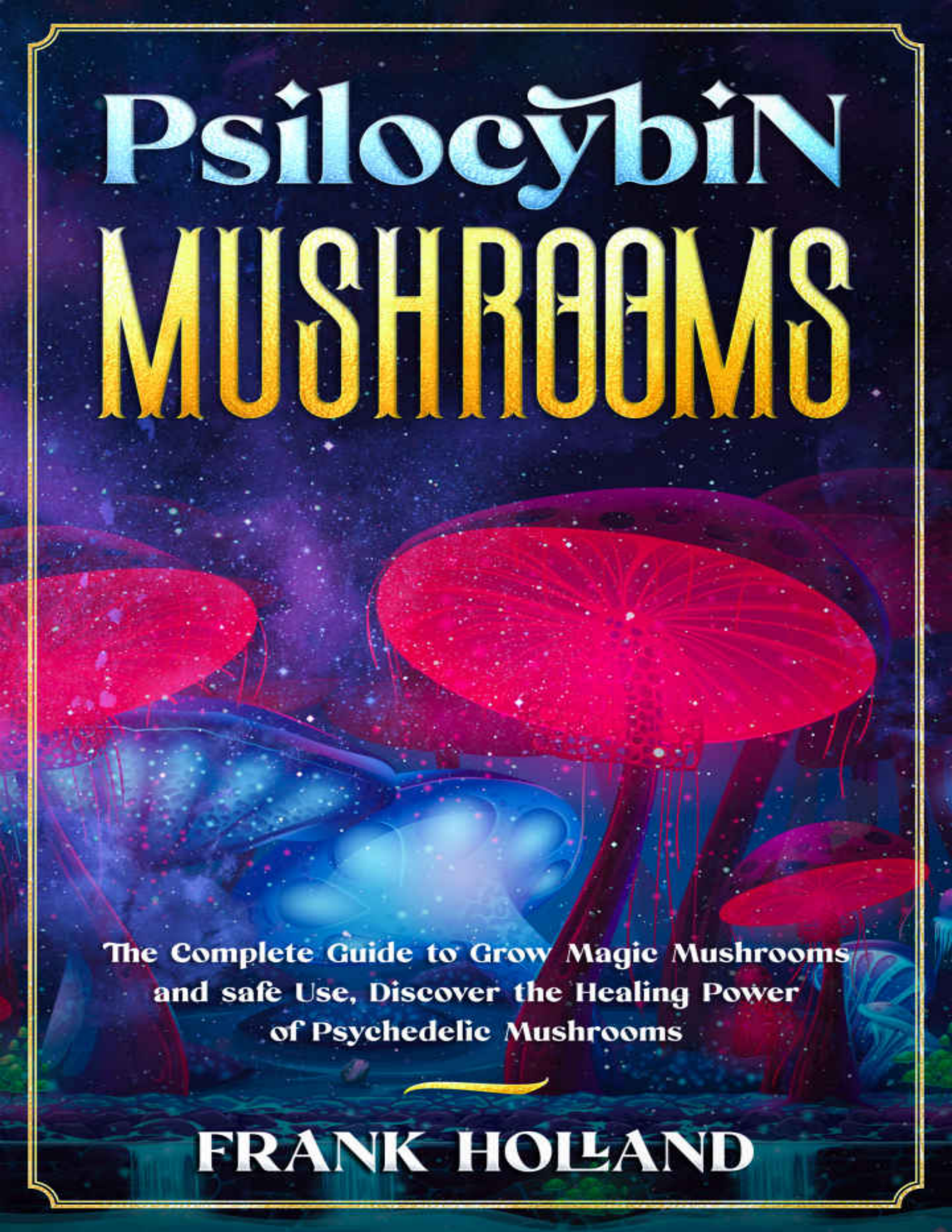
Psilocybin Mushrooms



The Complete Guide to Grow Magic Mushrooms and safe Use, Discover the Healing Power of Psychedelic Mushrooms

FRANK HOLLAND

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Introduction

It seems descriptive of our nature that humanity, in any natural and psychological condition, that they may consider themselves, feel an impulse to pursue communication with the fundamental mystery that underlies the reality of being. Nevertheless, the whole adventure of our species, both taxonomic and historical, may be seen as a molesting to some glimpsed numinous actualization. The narrative of the rest of humanity-our art, science, philosophy, civilizations, and religions-is mainly the story of this quest for contact with the holy, numinous, and self-transcendent. Archeological evidence clearly shows that human beings have been at home with the idea of the divine long before the emergence of literature, cultivation, civilization, or science. It is a principle that has existed in our imagination, leading us from the earliest infancy of humanity, synonymous with, and probably anticipating the first use of axes, light, and even communication itself. The world of non-literate people is one in which nature appears as the predominant state of existence; one is engulfed by it; one is submerged in it; one depends on it for one's survival. The search for food and the basic needs of life must be a relentless and never-ending one for human beings in nature, a pursuit in which any plant and animal that one meets falls under the watchful gaze of intense curiosity. In this condition, it became likely that sooner or later, in pursuit of food, women, and men might unintentionally eat those plants comprising substances impacting the central nervous systemand find themselves transported to the world of the most sublime rapture and strangeness.
Besides, the unintentional ingestion of a hallucinogenic herb, perhaps a mushroom, represented the first contact of human beings with the numinous. It directly contributed to the creation of the idea of a deity and the supernatural. This idea is not without a particularly strong argument. There is reason to believe that the wild, wandering eyes of human beings, searching nature for new sources of food, will quickly seek out the peon mushroom, so unusual in shape, and so unlike the rest of the plants, they were acquainted. Provided a few thousand years of spontaneous exploration (a relatively short period in the prehistory scale), they will eventually discover and consume fungi containing centrally active compounds, encounter hallucinogenic activity, and create a bond with the numinous.

A mystic tradition based on the ceremonial consumption of psychedelic mushrooms has persisted in the mountains of Central Mexico, at least since before the Conquest. It is perhaps much more widespread than that, having forgotten its real source in the mists of prehistoric times. The actual perception of the supernatural gas and is having a profound effect on human culture, and even on human existence. It is this desire that has created the Great Pyramid, Stonehenge, and the Gothic Cathedrals. The same impulse propelled feeble ships through the trackless seas to the coast of a distant planet, and the same desire in our day has guided humanity to travel a tiny bubble of light and air into the vast and howling gloom of space that divides our earth from the moon. It is the same urge that stirs the shudder along our spines as we look with wonder and longing at the star-dusted sky on a clear winter night. Today, we are standing on the threshold of the stars. It slowly emerges in global consciousness that the next step in evolution forward will transform humanity in such a way that all that has gone before will seem but a precursor. We stand at the edge of history ready to accelerate our human experience into the massive gulf of the night that encircles our planet, the lessons of our ancient career still repeating through the passageways of time. We were just about to proceed on the most significant journey we've ever experienced, one that will transform our entire notion of what it's like to be human, but we do not forget that between us as we climb the ramp of the starship.

This book is generally a manual for those who have the attention, time, and persistence to cultivate "magic mushrooms" in their homes. This study is about those who believe as they will already experience more from seeing the primeval dreams of their ancestors. It feels deeply enough that they can spend a little energy, resources, and commitment to understanding the invention. The word "black mushroom" applies to the mushrooms, which are part of the Psilocybe genus and the closely associated genera Stropharia, Conocybe, Panaeolus, and Copelandia. Many of the members of these genera produce psilocybin compounds. Phosphoryoxy-N, N-dimethyltryptamine) and psilocin (4-hydroxy-N, N-dimethyltryptamine) as potential hallucinogenic agents. Such substances comprise the essential indole structure typical of several of the hallucinogens present in nature. It includes numerous amides of lysergic acid (in which LSD is a semisynthetic agent) N-dimethyltryptamine, harmine, and its analogs, and ibogaine.

What is a Mushroom?

Mushrooms are fungi with a network of root-like filaments. (called mycelium) rising underground joined over the earth by a Stick to the cap. The cap has a skin on top and gills underneath, from which spores ('seeds' for reproduction) are released. While most people believe of mushrooms, they imagine either the soft and harmless toppings on their pizza, or the extravagant, ornamental dandelions of fairy tale and legend, the simple taste of which drives one mad, if not kills him. To the vast majority of North Americans, mushrooms are either terrifying toxins or inoffensive plants. In any case, they are not worth much consideration. Even if you're in that small number for which mushrooms offer fascination, wonder, and joy (probably due to one or more experiences with the Psilocybe species), you've learned little or nothing about them in your high school or college biology courses. So what's a fungus, exactly? A mushroom is only one portion of a fungus, and not the same thing as you and your left elbow, but it can hardly be said to be the same.

Technically accurate, mushrooms are the reproductive systems of certain fungi, approximately similar to the flowers on an apple tree that holds the "seeds" of potential plants. Said that the fungi are neither plant nor animal, although they have similarities to both. Not unexpectedly, there has also been a great deal of uncertainty concerning the correct description of these elusive and hidden species. Many of us like to think of mushrooms and fungi as a peculiar type of plants, as they always pop up from the ground like trees, and are reluctant to get up and walk (or dance or swim) about as we lucky animals can do. This is the main misunderstanding that most of us have about the fungi and the one that you can give up right away. And here it is: fungi are not plants, and producing mushrooms is not gardening. Also, fungi are not mammals either, but they are far more closely related to animals than to plants, despite appearances. Plants, fungi, and certain bacteria synthesize their food from sunshine, carbon dioxide, and soil, and are also classified as autotrophs. Many other species, including fungi, are heterotrophs, meaning that they receive nutrition from plants or things that eat plants (say, fish) or stuff that consumes plants. That's quite much where the parallels between the animals and the fungi end, however.

Fungal Naming and Taxonomy

To learn how the fungi fit into the "food, vegetable, mineral" Order of things, you need to understand the more systematic biology of the machine uses for identifying species classified as Linnaean taxonomy (named Carolus Linnaeus, 18th-century Swedish botanist, and physician who first proposed it). Within this scheme, a special two-part (or binomial) Latin term is assigned to each species, such as Psilocybe or Homo sapiens. Such two names apply to the last two divisions, Genus, and Species, in an eight-part hierarchy, which, through their biological similarity, organizes all living things together. The classes, in order between the largest and the smallest, are Country, Empire, Phylum, Class, Order, Family, Genus, and Species. The best way to make sense of this program is to see it in action:
Examples in the Linnaean Taxonomy Scheme

RANK FRUIT FLY HUMAN PEA P. Cubensis E.coli
DoEukarya main
Eukarya Eukarya Eukarya Bacteria
KingAnimalia dome
Animalia Plantae Fungi Monera
Phylum Arthropoda
Chordate Magnoli

ophyta Basidiomycota
Eubacteria

Class Insecta Mamma

lia
Magnoliopsida
Hymenomycotina
Proteobacteria

Order Diptera Primates Fabales Agaricales Enterobacteiralis

Family Drosophilidae Hominidae

Fabaceae Stropharia

ceae
Enterobacteriaceae

Genus Drosophila
Homo Pisum Psilocybe Escherichia
Species Melanogaster Sapiens Sativum Cubensis Coli

As you'll see in the table, the higher you go in the list, the higher the number of species contained in each group. Fruit flies, carrots, dogs, and Psilocybe mushrooms are all located in the same group, Eukarya, and are thus much more closely related to each other than bacteria. Conversely, the further down in the ranks you go, the more animals you continue to deviate from each other. Regarding our purposes, the most significant levels to mention here are the Kingdom, the Genus, and the Species. There are five kingdoms, and the fungi live within their own, the Fungi kingdom. Although there are various variants on the subject, the one thing all the fungi have in common and what distinguishes them from other species is that they consume their food outwardly and then ingest the constituent nutrients into their cells. All the fungi species described in this book are in the Psilocybe genus. Ultimately, each species has a special binomial, including Psilocybc Cubans is or Psilocybc azurcsccns.

The life cycle of Fungus

It helps to consider what they're doing for a living, how they're going to get about, and what kind of love they 're having. A decent way to get a grip on this is to follow the course of fungal life, the path from birth to death, repeated continuously with each successive generation. Knowing the life cycles of species is an ideal way to figure out what is unique to each of them since no two species do things the same way. Sexual reproduction is a recombination of the genetic information from two-parent individuals into a new one. The packet of gene material donated to each parent is recognized as a gamete. Fungi gametes are called spores. A spore is a compressed, sheltered cell capable of remaining alive but dormant for an extended period until it finds a suitable home. Both the fungi we 're going to examine in this book are known. Because Basidiomycetes, they grow their spores on basidia, small baseball-shaped protuberances lining their gills, blade-like structures arranged in a circular pattern on the underside of the cap, or pileus. The pileus is placed high at the end of the cylindrical base, known to mycologists as a needle.

Parts of the Mushrooms

• Spore discharging

Many microstructures baseball-shaped basidia cling to out of the flat faces of the gills lining the bottom part of the parasol, and four oval, purple-black spores stand at the complete end within each basidium. Every other spore is positioned like a top on a small horn-shaped protrusion at the outer end of the basidium, identified as a sterigma. The air across the gills is wet and much cooler than that around the mushroom. Thanks to the wonders of evaporative cooling on the cap's solar-beaten edge. When the temperature drops, the water condenses around the spore and its tiny frame, and a droplet starts to form at the spot where it enters. The droplet begins to grow until it can no longer support its structure, the surface tension shatters, and the water from the particle propagates across the body of the spore. The strength of this action gives a spark to the sterigma. The stigma, being kind of elastic, drops somewhat below the spore's weight, only to move up with the same yet opposite force and propel the spore from its perch into the open space above the gill 's face. The intensity of force is precisely measured to damage the spore far enough. It is not to the point that it flickers into the facing one to remove the surface of one's gill. Instead, it consents to gravity and is pulled down and out. When the breeze in our field abates, two spores of our mushrooms have settled down on a patch of turf, where they wait quietly for someone to put them back together.

• Fungal growth

Growing fungi comprise of hyphae networks: tubular, filamentous cells that extend and differentiate at their forward tips, branching regularly to create fork-like or tan-like configurations. Volumes of hyphae

are commonly known as the mycelium of the FungusFungus. Fungal mycelium sometimes looks to the naked eye as thin, fluffy, or hair-like growth on the surface of the food supply (or substrate), as you would see on the underside of the upturned leaf. Many fungi spend most of their days as undifferentiated mycelium, only rarely creating specialized, complex structures like mushrooms. Hyphal development is often intrusive, which means that it happens throughout sometimes in the soil. Digestive enzymes secreted from the tips of the moving mycelium in their environments convert the substrate into simpler organic molecules to be consumed or swallowed by mycelium as it goes along. Besides, the fungi are digesting on the outside. Although we choose to prepare our meals in the safety of our internal organs, the fungi like to consume. All the fungi we address in this book are saprophytes, which means that they obtain their nutrients from non-living organic matter, in this context, dead or rotting plants. This is in response to the parasitic fungi that colonize and eat living species, often consuming their hosts in the process and the mycorrhizal fungi that exist in a symbiotic relationship with their hosts.

• **Fungal sex: mating**

As a result, spores now formed into two separate mycelial colonies. Start to discover the cow pie, gradually entering and swallowing its ingredients. Ultimately, their mycelium colonies touch each other, and finally, the two lovers meet each other. Still, all their good fortune so far is no guarantee that they will make decisions to tie the knot because the fungi are just as picky as we humans when it comes to whom they choose as mates. Fungi develop several mating spores to prevent interbreeding and encourage genetic diversity. Mating styles are approximately similar to our two sexes, except that the number of various "genders" can be anywhere from two to several thousand! "In general, for two strains of monokaryotic fungi to reproduce, they must be of different mating forms. Luckily for our lovers (and for our story), they are very compatible. Through until this level, the cells of each independent mycelium have been monokaryotic: their products possess only one haploid nucleus and just half the genetic material of a matured fungus.

Monokaryotic mycelium, which is nascent, is small and stringy and develops gradually. When the two colonies detonator, they produce mycelium made up of cells includes two nuclei, known as dikaryotic mycelium. Dicaryotization is a condition peculiar to most Basidiomycetes, where two sections are compatible. Games come together in one cell type, but their nuclei stay separate. Organisms, each containing a single core of diploid nucleus, Basidiomycetes Reside most of their days with two seats per cell, one of each "parent" Monokaryotic mycelium. The only duration that Basidiomycetes integrate all their genetic information into a diploid nucleus is during a single, short instant inside each basidium before the spores are formed. In a way, these fungi begin sexual activity at the very beginning of life, only to end up much later, to live their lives in what corresponds to a constant act of mutual masturbation. Finally, two mycelia are merged into a single organism, a mature fungus, and now that our FungusFungus is healthy. The FungusFungus infiltrates the cow patty substrate with thick, ropey mycelium threads. It will proceed to do so until the food supply is drained from the available nutrients, or some other environmental change causes it to grow mushrooms or berries.

• **Fungal sex: fruiting**

All that persists now to carry us back to the full circle where we started is for our FungusFungus to yield mushrooms, containing a new generation of spores. Precisely why and when fungi decide to form mushrooms, remains somewhat of a puzzle, and the reasons vary significantly between species. Many do this because of a change in environment, including heavy rains, an increase or decrease in temperature, or both in particular. Others germinate seeds only after the soil has been completely colonized, and the available nutrients have been depleted. The organism is likely to be triggered to reproduce by the rising likelihood of its mortality. Many other animals wait years for seed, even after a slight environmental transition has occurred. Luckily for us, Psilocybe cubensis is a promising species and does not need a lot of guidance and support. Robust P. cubensis strains can grow quickly and efficiently under a wide range of environmental conditions. Many fungi, including Psilocybes, want to guarantee the properly aligned of their caps to maximize the increase and efficiency of the release of spore. Of this purpose, the fruit on the upper surfaces of the soil, using sunlight as a catalyst.

When the mycelium of FungusFungus has entered the surface layer, tiny knots of entangled hyphae develop in various places on its exposed surface. Shortly afterward, these hyphal knots grow into primordia (singular, primordium), also known as the pins or pinheads: remotely controlled, perfect copies of the full-size mushrooms they will eventually produce. It is at the pinning point where the FungusFungus starts to distinguish and to develop several distinct cell types. The upper surfaces of the tiny caps are darkened, while Inside the primordium, the cells that will make up the cap, the spikes, the gills, and the veil divide and locate themselves properly. Their nucleus divides and accumulates, while membranes (or septa) form around them, creating a thick matrix of compacted cells. A mature primordium comprises all the sections that would be found in the fully-grown mushroom; all that remains to be done is to suck up water and extend. When that does, it happens instantly, practically bursting into being.

In a rapid growth spike, the typical characteristics of the mushroom tend to develop shape. The stem elongates, the cylindrical cap broadens and then flats, uncovering the partial veil, a thin membrane that protects the delicate, growing gills. The cap extends as the gills are fully developed. This allows the cover to be removed from the outside of the hat. Often, the traces of the veil remain attached to the stem, hanging loosely like a little gown, generally known as an annulus. Elongating mushrooms use light, atmospheric conditions, and gravity to direct their caps as vertically as possible, allowing maximum production of the spore as soon as the gills expand. Millions of basidia are produced on the gills' vertical faces, in a thick layer of cells known as hymenium. When the basidium reaches maturity, the haploid nucleus fusion becomes a single diploid nucleus, and the sex act that started when two spores first met is fully complete. This phase is short-lived, however, as the nucleus divides rapidly, shaping its contents to form four genetically distinct, Haploid daughters’ nuclei. They pass to the stigmata, where they are wrapped and deposited as spores at the end of the basidium.

CHAPTER 1

Psilocybin Mushrooms

There are about thirty thousand known species of mushroomproducing fungi in the world. Approximately one hundred plants or varieties are reported to possess psilocybin or similar compounds. Some of these are found within the genera Psilocybe and Panaeolus, with others occurring elsewhere in Inocybe, Conocybe, and Gymnopilus land. Of note, not all plant in these genera produces psilocybin, and even those that do so will only generate psilocybin in trace quantities. In this text, we present methods for the cultivation of two forms of psilocybin mushrooms. This study also gives the chance of indoor (with P. cubensis) and outdoor agriculture (with some of the organisms in the P. azurescens complex). Although there are undoubtedly many well-known plants that do follow these requirements, the two varieties we

have selected will yield a significant quantity of psilocybin for every conscientious grower. The purpose of this chapter is to familiarize you with these animals, including their natural environment, distribution, and behavior, to appreciate their basic biology before you begin interacting with them. This book is not intended to be a "farm guide" and will not train you to identify and collect such animals from the wild. Foraging mushrooms, either for food or for psilocybin, needs a great deal of information and abilities. To be infected as a result of misidentification is a severe and possibly dangerous possibility. If you are interested in growing your mushrooms, we recommend that you familiarize yourself with at least a few useful field guides to check directly with experts who already know the mushrooms in your region. Chances are you have a friendly mycological society or group where there are people who will show you what you need to learn to find wild mushrooms. A psilocybin mushroom, also identified as magic mushrooms or psychedelic mushrooms. It is one of a polyphyletic community of fungi comprising psilocybin and psilocin. Psychedelics are a genetically complex class of medications distinguished by their capacity to create dramatic hallucinations and significantly alter behavior and thinking processes. Which contain compounds from a broad range of human and industrial origins and are structurally considerably different. Natural psychedelics can be present in fungi. Plants (for example, hemp, peyote cactus, ayahuasca, morning glory, iboga, Salvia Divinorum, etc.) and even animals (for example, toads and fish) and are believed to be used for social, therapeutic or medicinal reasons in different parts of the world for thousands of years. More than 100 recognized psychedelic mushrooms the difficulty of their mycological classification, along with their specific chemical composition and the effects of various psychedelic mushrooms, can lead to discrepancies and uncertainty in their definition. The topic of this thematic analysis is psilocybin, and psilocin derived fungi, primarily belonging to the Strophariaceae family (Psilocybe genus), the Bolbitiaceae family (Conocybe genus), the Coprinaceae family (Copelandia and Panaeolus genera) and the Cortinariaceae family (Inocybe genus). The inventory of organisms and their geographical range is also essential.

Mycologists have been revamped. Nevertheless, the Psilocybe group predominates in terms of therapeutic usage accompanied by the Panaeolus group. Of the latter, the more common ones are Psilocybe cubensis (also known as Stropharia cubensis), Psilocybe semilanceata (liberty caps), Psilocybe cyanescens (wavy caps), etc., the most common of these are the cubensis varieties (Mexican, Thai, Colombian, Amazonian, etc.). Some types, such as Psilocybe Mexicana and Psilocybe tampanensis, form sclerotia and are classified as truffles or philosophic stones. Almost all psilocybin producing mushrooms are tiny brown or tan mushrooms, which may be confused for a variety of non-psychoactive, inedible or toxic mushrooms in the wild. The primary distinguishable characteristic of most psilocybins is that they bruise blue when treated. A variety of mushroom-containing psilocybin species is found in Europe, especially in central and northern Europe. Habitats include moist grassland and uncultivated pastures. Psilocybe semilanceata (liberty caps) is the most popular wild European hallucinogenic mushroom. These mushrooms can be found in the United Kingdom, Norway, and Germany, for example. Other varieties of psilocybin drugs growing wild in Europe include Psilocybe cyanescens (spiky caps), Psilocybe bohemica, and Psilocybe Moravia, which have been mostly recorded to develop in the Czech Republic. Many hallucinogenic mushrooms not directly discussed in this case study are those in the Agaric family (Agaricaceae)—Amanita muscaria (fly agaric) is the best-established example. The active chemicals in this group — muscimol, ibotenic acid, and muscarin — are entirely different from psilocybin-containing mushrooms and are known to pose significant toxicity risks. In comparison, certain closely related Amanita species are extremely poisonous and may cause lethal poisoning, which could help explain the low reputation of these organisms.
Two closely associated substances of psilocybin are elements contained in more than 75 recognized species of mushrooms. These mushrooms are specific to tropical and subtropical regions of South America, Mexico, Southeast Asia, Europe, and the United States. The efficacy of mushrooms differs. But most contain between 2% and 4% psilocybin and small quantities of psilocybe. As per the DEA, while street demand fluctuates, psilocybin mushrooms cost considerably $20 per 1/8 ounce and $100 to $120 per ounce. Moreover, synthetic psilocybin and can be made, but this procedure is uncommon since the method is complicated and costly, and the final product is difficult to store. Psilocybin is a white crystalline powder in its pure form.

History of Psilisybin

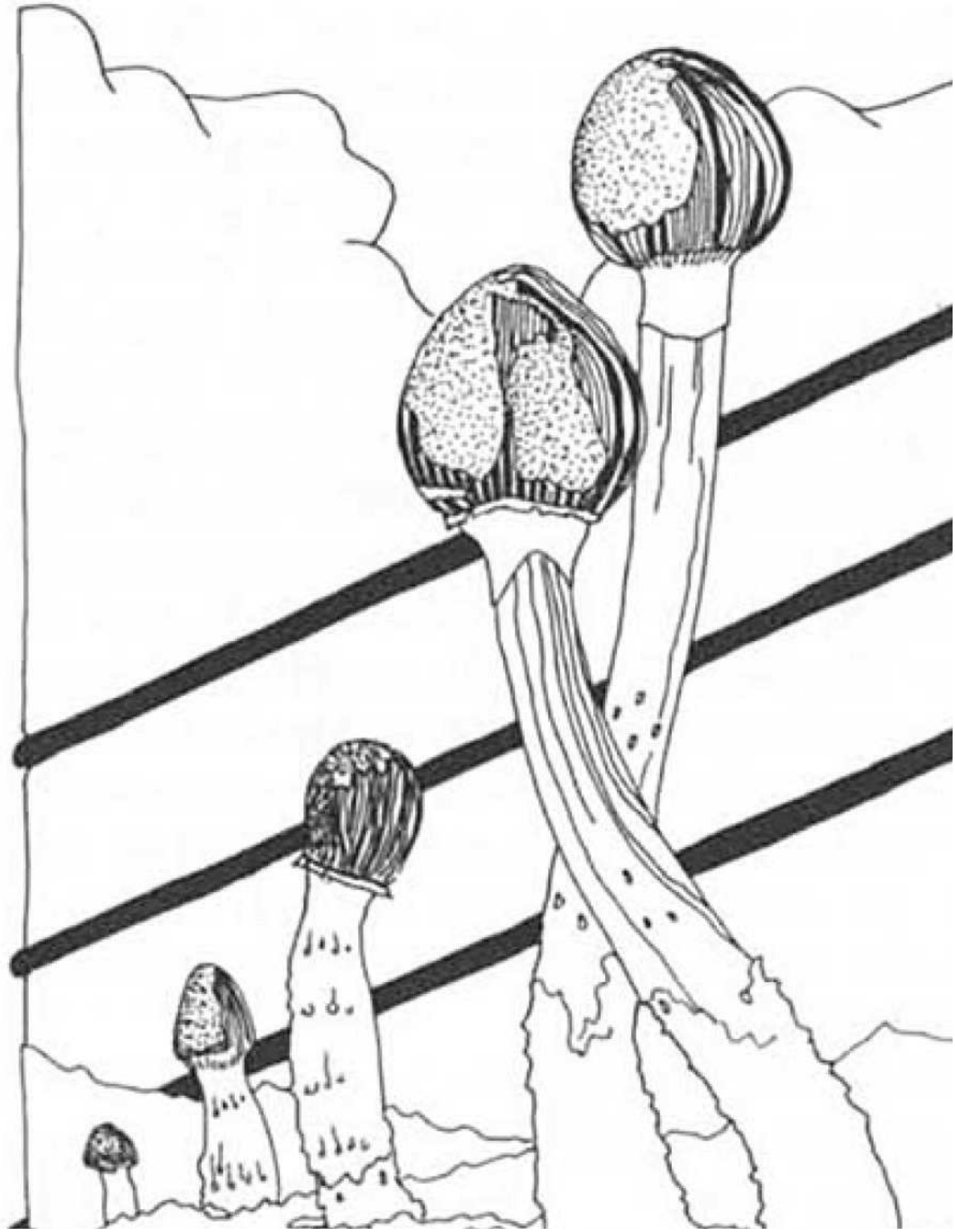
Traditionally, Central and South American Indians believed hallucinogenic mushrooms, dubbed "God's food," to be holy. Mushrooms have been used in social and religious ceremonies to create dreams that help cure ailments, fix issues, and allow communication with the spirit world. Throughout the mid-1950s, the researcher identified the active ingredients of mushrooms and concluded that psilocybin was the primary hallucinogenic factor in the mushrooms and that psilocybe was a minor component. When in the bloodstream, psilocybin is toxic and transforms into psilocybe. Psilocybe, which is 1.4 times as potent as psilocybin, is believed to be the cause. There are a lot of physical and neurological effects of hallucinogenic mushrooms. By 1968, psilocybin mushrooms have been declared unlawful because of the massive levels that had been exploited. While psilocybin is listed as Schedule Drugs under the Controlled Substances Act of 1970, mushrooms themselves are not listed.

What do magic mushrooms look like?

Magic mushrooms look much like ordinary mushrooms. There are many different types of magic mushrooms. The most common ones in Australia are called golden tops, blue meanies, and liberty caps.2 Magic mushrooms look similar to poisonous mushrooms that can cause a person to become very sick and can result in death. They can also come as dried material in capsules. Synthetic psilocybin appears as a white crystalline powder that can be processed into tablets or capsules, or dissolved in water.

CHAPTER 2

Why Are Some of the Mushrooms Called “Magic”



Some mushrooms are known 'magic' because they induce significant changes in human perception and awareness when consumed. For others, the consequences are mysterious, spiritual, and informative. Individuals can have an encounter that induces distress or terror, which is considered a bad ride. Generally, the 'magical' concept centers on events and beliefs that are out of the ordinary or profoundly transforming or both. Scientists still use the term 'spell' to explain the results since little is understood about the introduction of chemistry and biology. The power of magic mushrooms to change consciousness is the product of the various molecules inside them. These compounds are digested by the body and connect with the brain in a particular way. There are also different types of magic mushrooms, and they have varying concentrations of these psychoactive compounds. The ultimate influence of magic mushrooms depends on which molecules are involved, how many, and how they communicate with each other. At present, most of this biochemistry is not understood and is not being actively investigated by scientists. Also, a way to set and establishing where a person uses magic mushrooms has a significant impact on the effects.

How to identify magic mushrooms?

There are 100 varieties of enchanted mushrooms. Many of these magic mushroom varieties (about 80) are in the Psilocybe family. There are many other magic mushroom genera, such as Inocybe, Conocybe, Panaeolus, Gymnopilus, and Pluteus. These plants possess psilocybin (and possibly other psychoactive compounds) and can appear very distinctive from one another. Psilocybe and Panaeolus mushrooms are "fairly safe to handle." This is because these two genera have no known poisonous organisms. Conocybe and Inocybe are the most difficult genera to recognize. One of the most common magic mushrooms is Psilocybe cubensis, also known as "cubies" or "golden tops." When young, the cap is conical and flattens into the plane as the mushroom ages. The color is reddish-brown cinnamon when young. It becomes lighter with maturity, becoming a golden brown one. R. Cubensis likes to rise in the dung. It is found in spring, summer, and fall across the southeastern United States, Mexico, Cuba, Central America, South America, the Far East subtropical, and parts of Australia. The best pick times are in the southeastern US, May, and June.

Based on study results, when grown indoors, these magic mushrooms are typically more potent than wild mushrooms. This is possibly due to soil dietary conditions and protection from toxic ultraviolet radiation. Another example of a magical mushroom is the Psilocybe semilanceata (also known as the liberty cap or witch's hat). The color of this mushroom varies as it retains and loses its nutrients. It's deep brown when it's wet. It turns into light brown or yellow when it dries and can have an olive color. Many members in the Genus Psilocybe appear entirely different, such as P. cyanescens. This mushroom is russet brown when it's young and gets more caramel color as it matures. One distinctive characteristic of psilocybin-containing mushrooms is that they frequently have blue bruises. Blue scarring appears to arise from the oxidation process of psilocin to an unspecified blue compound. Another distinctive feature of Psilocybe mushrooms is their signature purple-brown spore print. Spore printing is achieved by cutting the cap and leaving it on a sheet of paper or foil for a few hours. Amanita muscaria, also known as the fly agaric or fly amanita, is another distinct and potentially 'magic' species of mushroom. It does not contain psilocybin or derivatives but has psychoactive effects due to other compounds. The adult mushroom has a very distinct look.

Molecules of magic mushrooms

There are several psychoactive chemicals (chemists call them compounds) in magic mushrooms. Psilocybin is most generally referred to as an active ingredient of magic mushrooms. There is a widespread myth that psilocybin is an active ingredient in magic mushrooms. Technically, psilocybin is a psilocin prodrug. Once eaten, psilocybin is quickly metabolized to psilocin. Psilocin is the primary psychoactive bioactive ingredient. Magic mushrooms do contain a small amount of psilocin. Psilocybin derivatives are compounds that have a psilocybin-like chemical structure. Psilocin is a psilocybin analog. Other combinations of psychedelic mushrooms are nor psilocin, aeruginascin, biocytin, and norbaeocystin. There are also other psilocybin metabolites in nature that can or may not be present in magic mushrooms. These include bufotenin and 5-MeO-DMT toad venoms, dopamine, melatonin, tryptamine, Ntoad venoms, dopamine, melatonin, tryptamine, N Bromo-DMT. In the fly agaric mushroom described above, the psychoactive effects are attributed to two compounds called muscimol and ibotenic acid. To some people, this mushroom can be magic, too.

How magic mushrooms work?

The chemical composition of magic mushroom substances, such as psilocin and other derivatives, looks like the neurotransmitter serotonin. Serotonin is known as the "pleasure molecule" or "confidence molecule" because it produces possibly the best-being when it binds to specific serotonin receptors. Serotonin receptors in the brain are also the primary targets for magic mushroom substances. But even though magic mushroom compounds bind to the same serotonin receptor, they have different effects than serotonin. So 'magic' is at least partly due to other molecules = different drugs with different binding properties. There are seven recognized groups of 14 subtype serotonin receptors. Magic mushroom substances (or their metabolites/derivatives) induce psychedelic effects mainly by binding to the 5-HT2A subtype.

Dosages of magic mushrooms

The quantity and type of psychoactive chemicals in magic mushrooms vary depending on the type. There are also significant differences between different samples of the same species. Specific portions of the mushrooms may also contain more / specific psychoactive chemicals. Preparing reliable and precise doses of fresh or dried mushroom flesh is also difficult and often incorrect. Professional mycologists believe that calculations using a person's body mass are best used to evaluate dosages. For eg, it is commonly stated that 0.25 mg of active ingredients per kilogram of body weight is a 'manageable dosage' for a person of 176 lb (80 kg) (i.e. 0.25 mg/kg x 80 kg = 20 mg). When body mass is taken into consideration, doses may be changed up or down to match personal intolerances and previous experience.

The maximum dose for most people is roughly 0.5 mg of active ingredients per kilogram of body weight (40 mg). According to the scientists, the "severe dose," which is too significant for most magic mushroom veterans, is 1.0 mg per kilogram body weight, which is about 80 mg of active ingredients. There are a variety of blogs with dose guidelines. Terminology varies between these locations and ranges for low, medium/moderate, large, etc. doses. Besides, online dose recommendations may be focused on personal observations recorded by consumers who are frequently subjective.

The dosage categorizations for dried Psilocybe cubensis are as follows:

Threshold = 0.15-0.25 g. Light = 0.25 – 1.0 g. Standard = 1.0 – 3.0 g. Good = 3.0 – 6.0 g. Heavy = > 6.0 g.

The Third Wave gives the genera.

What do magic mushrooms do?

Magic mushrooms are hallucinogenic substances that allow you to see, hear, and sense hallucinations that sound possible yet not actual. The results of magic mushrooms are incredibly unpredictable and are

assumed to be affected by environmental conditions. Mushrooms have a strong tradition of being connected with mystical insight and self-discovery. Many believe that natural drugs, such as magic mushrooms, weeds, and mescaline, are sacred herbs that allow people to attain higher spiritual states. Others take magic mushrooms to feel euphoria, a sense of love, and a warped perception of time. Psilocybin present in shrooms is transformed to psilocin in the body and is thought to affect serotonin levels in the brain, contributing to altered and irregular experiences. Acts take 20 to 40 minutes to start and can last up to 6 hours — the same period it takes for psilocin to be metabolized and excreted. A variety of variables affect the effectiveness of magic mushrooms, including dose, age, weight, temperament, emotional health, climate, and history of mental illness.

What different varieties are there?

Every type of mushroom has one or more common names, and the 'official' name is centered on two Latin terms (in italics), suggesting their general category (Genus) and the particular form (species). Due to differences between experts, some mushrooms have more than one Latin name. There are over a hundred common forms of psilocybin mushrooms, several of which have various strains depending on the region of origin (e.g., Mexican, Colombian). Some grow wild in Britain, although some grow wild indoors. It is not feasible to describe all of them in this section, but we will concentrate on the five varieties that are most widely available and used here. They include two native species; Liberty cap and Fly Agaric and three foreign mushrooms: Cubensis, Hawaiian, and Truffles.

Are they legal?

Yes and no-depends on the type of mushroom and, in certain situations, its 'health.' Fly Agaric is entirely safe. Neither the FungusFungus nor its major active ingredients-muscimol and ibotenic acid-are protected by the 1971 Misuse of Drugs Act (MODA) or some other British drug regulations. With Liberty Hat, Cubensis, Hawaiian and Truffl, things get more complicated. Psilocin and psilocybin are the two fundamental medicines present in these and several other magic mushrooms. If harvested from or synthetically generated mushrooms, they are regulated substances in class A and are unlawful for consumption or supply. But because psilocin and psilocybin are naturally present, either live or fresh.

Mushrooms are usually legal as they are deemed to be "natural things." It is legal to purchase spores and growing packs, produce and select these mushrooms, and consume and sell them whether they have just been collected or are already 'new.' But psilocin-containing mushrooms are unlawful if "they have ceased to be in their normal state and have in any manner been altered by man's side." In 2002, the Home Office announced that it was safe to distribute 'freshly selected mushrooms, given that they were not processed in any way.' This Processing Policy often extends to certain other regulated substances as in the natural state. Plant type, such as mescaline (in peyote and San Pedro cacti) and cathinone (in khat shrub), which does not cover opium poppy, the coca leaf or cannabis plant.

How are they stored and preserved?

Magic mushrooms remain fresh for 5-10 days, especially if they have a low moisture content (like Cubensis and Truffles do) and are kept cool in the refrigerator. After that, to avoid decay, they must be dry, frozen, or otherwise stored. They can last several months to a year if they are frozen (in a ziplock container in a freezer), but thoroughly drying the mushrooms helps them to last forever. Drying decreases the efficacy (drug content) of psilocin-based mushrooms just marginally, thus potentially rendering Fly Agaric's mushrooms more potent (and less toxic). They can be dried generally by leaving them on paper at room temperature for a few days. Still, in order to minimize the risk of decomposing, some people speed up the drying process by putting them next to the radiator or in an open-air oven (350F) for up to half an hour. Cooking in a sealed-door oven requires a maximum temperature of 95F (36C) for psilocin-based mushrooms and 200F for Fly Agaric. They are all completely dry when they change to powder when they're crushed. It's better to break them down and blend the paste to make it

much thicker. Once retained for later use, the 'energy' of the 'mushrooms' slowly declines over time, exceptionally though it is preserved in a cold, safe, dry, air-tight glass jar that increases its storage life.

How are they being processed and consumed?

Many other magic mushrooms can be ingested raw (fresh or dried) or blended in food / drink-with the exception of Fly Agaric, which is best eaten roasted or at least dried. New seedlings are soft and moist to the touch and, before chewing them, they should be washed quickly in cold water and smelled/examined to ensure that they are not stagnant or maggot. Eating them combined or cooked in food (especially spicy dishes) is not advised due to potential vomiting and diarrhea. A much more appetizing technique is to ferment 'mushroom tea,' to boil in hot water for at least 10 minutes. Try to drink the liquid (flavored supplements can be added to make it taste delicious, although sugar and vitamin C should not be added). If swallowed dry, it is best to chop larger 'shrooms' into smaller pieces (they generally don't taste good enough to chew) and remove any straw-like stalks (to prevent them from sticking in your throat) before washing them with water. Some consumers tend to break down the dried shrooms and chew the powder in pellets or paper wrapping. Although they cannot be sniffed or ingested, some people smoke-dried mushrooms (especially Fly Agaric), although opinions differ as to whether this 'works.' But few people are using the two most common ways of taking musks, namely: turning them into ointments and adding them to membranes (such as genitals or anus) or consuming the urine of someone who has consumed Amanita muskaria.

Which substances are mixed up with magic mushrooms?

Mixing other medications with magic mushrooms is usually not recommended. Still, individual patients prefer smoking cannabis as it has an anti-inflammatory effect-it prevents nausea and vomiting, the most damaging side effects of mushrooms. Few users often take a half-to-full dose of ecstasy right before they choke their 'shrooms,' to make a nice, 'focused' journey, and to reduce the chance of a short ride. Some people, on the other hand, smoke cocaine or pace, or take other triplet drugs like LSD or harmaline while they're on mushies-often to get more extreme experiences, or even to get more energy (mushies may often be 'money' on their own). Some mushroom patients use suicidal drugs to help 'come down' into ordinary consciousness afterward, such as medication or tranquilizers, though this is not recommended.

How does it make you feel?

The resilience of magic mushrooms varies depending on their freshness, their season, and where they grow. It's tough to predict the strength of magic mushrooms. For certain men, when they take fungi, the image seems distorted. Colors, smells, things, and even time may all look quite different. Some may have moderate visions, which are often called 'visuals.'

Taking the mushrooms will make you feel like:

• Very blurry-eyed
• The euphoric
• In the dread of the people and the things around you.
• Energized
• Aroused
• It will make you feel:
• The suspicious
• Anxiety
• Panicked
• Frustrated
• The same vomiting

How you think is going to be affected by how often you take, your surrounding areas, which you are with, and how relaxed you are with them, as well as your emotions. So, if you're in a bad mood, worried or discouraged, magic mushrooms may make those feelings worse.

How is it going to make people behave?

It depends on how many magic mushrooms a person takes. If you take a small dose of mushrooms, you may not even notice that they are on it. People who take larger quantities of mushrooms will behave unpredictably. They can laugh a lot, they can get stuck on other things, they can be angry, or they can get nervous.

Duration

How long the effects last and the medication remains in your system depends on how much you have taken, your age, whether you have eaten, and what other drugs you may have taken. When you feel like you have – or are about to have – a terrible ride, let your buddies know and get their support. Go to a peaceful quiet place where you can feel safe and relax. Psilocybin can be detected for up to 8 hours. How long a drug can be detected depends on how much is taken and which test kit is used. It's just a general guide.

CHAPTER 3

The Effects of Magic Mushrooms

Psilocybin influences the central nervous system by disrupting the regular activity between nerve cells and regulating the neurotransmitter serotonin, which is structurally identical. The results of psilocybin are extraordinarily subjective and rely on various variables, including age, form, and dose of the mushroom used, mushroom environment, patient preferences, previous drug interactions, and temperament. The symptoms of synthesized psilocybin and psilocybe are more reliable. Mushrooms will take minutes to 2 hours to fall into effect and stay for 3 to 6 hours.

Physical consequences include the following:

• Fatigue, pain, stomach cramping, and diarrhea.
• It was relaxing with joints, fatigue, and cramps.
• Yawning, drowsiness, dizziness, lightheadedness, and loss of

balance.
• Eye dilatation, splitting, dry mouth, and face flushing.
• Elevated pulse rate, blood pressure, and temperature of the

body.
• Trembling, accompanied by chills and shimmering.
• Feelings of fullness or lightness and sense of floating.

Psychological consequences shall include:

• Increased sensory perceptions and auditory disturbances (i.e., vivid colors, better visual perception, improved listening acuity, more recognizable taste).
• Auditory, sensory, and visual hallucinations.
• Synesthesia (a melding of the senses: watching music or seeing colors).
• Managing challenges, keeping concentration, planning, and learning.
• Poor judgment and care for irrelevant feelings, events, or objects.
• A feeling of distance from the body and environment and a lack of separation between the two.
• Altered understanding of time and space.
• Unable to differentiate fiction from reality.
• The integration of previous interactions with the present.
• Feeling of solidarity with the environment;
• Feeling of deep spiritual awareness.
• Tension, fear, and restlessness.
• Incredibly unpleasant effects ('bad trip'), like horrific hallucinations.
• Confusion, disorientation, anxiety, anger, stress, nausea, or fear.

What's going to happen in your body when you eat psychedelic mushrooms?

When magic mushrooms are ingested, they are absorbed in the stomach and intestines. The bioactive compounds can be slightly changed in the liver (e.g., psilocybin is converted to psilocin) before being transferred to the heart-lung system. In the brain, psilocin acts similarly to LSD by enhancing a different form of serotonin (5HT2A)-a neuromodulator implicated in regulating other neurotransmitters and influencing mental functions such as anxiety, vision, memory, consciousness, and appetite. On the other hand, muscimol, the critical ingredient in Fly Agaric, acts in brain cell muscarin receptors, influencing acetylcholine, GABA, and glutamateneurotransmitters implicated in speech, memory, learning, and emotion. That is why Liberty Cap and Travel Agaric make particular styles of trips.

What's the feeling of a magic mushroom trip?

Someone's mood, previous personal characteristics, and where it takes place, have a significant impact on what kind of trip you've got. The dose is also essential, with full-blown hallucinations that typically involve higher doses. One magic mushroom ride is as different from another as the effects of one drug vary from another. On the same trip, you can feel like you're sharing with a friend of yours experience a moment, and then be in a world of your moments later. The critical thing to remember is that a trip is an active experience, not a passive one. In brief, it's not about going to the cinema, paying for your card, and seeing a particular movie. A good metaphor to appreciate this idea is to see a journey as if you were riding on a horse and heading through a different environment. You can let the horse take you where it wants, drive you up the hills and back down into the valleys, gallop for miles, and then stop and graze-or even run round and round in circles.
Conversely, you can take hold of the reins and direct the horse into those parts of the landscape that interest you the most, riding at your speed and in your style. The more focused your mind becomes, and the more you plan for the journey, the more possible it is that you will be able to manage your travel-instead of influencing you. The unique experiences of tripping the four psilocin-based mushrooms and Fly Agaric are listed below. The trips they make are more likely to include moist, romantic feelings, dreamy and trance-like states of mind, spiritual and supernatural experiences, and natural, organic 'visuals'-such as animal features, plant imagery, and imaginary beings.

Is there a downturn or some kind of after-effects?

Comparison to the ugly come-downs that people get from drugs like cocaine, and alcohol, there's no real hang-down from magic mushrooms. The day after the trip, people sometimes feel slightly tired or confused, but significant side effects or mental problems are implausible. Flashbacks-experiences of having to relive the travel days or months later-are always rare; even when they do occur, it tends to be short, one-off, and relatively easy to manage. Psychotic symptoms related to the use of magic mushrooms are even rarer. Symptoms are similar to paranoic illness and are typically seen in individuals with a family history of psychiatric disorder except for drug-related diseases. Psychoses usually clear up after a couple of weeks, as long as a person avoids taking drugs. The main after-effect of mushroom trips, especially fly agaric, is amnesia-the the memory of such strange experiences is rapidly fading away.

A Background OF PSILOCYBIN Mushroom cultivation

In the 1950s, the study of cultivating mushrooms was still very much in its inception. In the meantime, the only species of mushroom under production, at least in some areas, was Agaricus bisporus, a popular white-button mushroom. The production methods used were more or less the same as those invented in France during the 17th century: growers gathered mycelium-rich soil from wild areas where the mushroom was located and transported to rows of horse manure in naturally climate-controlled tunnels. This approach was successful, but since it used a new, unpasteurized base, it left a lot to chance, and the beds frequently succumbed to contamination. These primitive methods remained mostly unchanged until the 20th century, when a series of gradual developments were discovered, finally setting the stage for the effective cultivation of Psilocybe cubensis in the 1960s.

Many of the toxicity issues commonly identified with the processing of mushrooms. Were avoided with the use of horse manure, which had been heating sterilized before being inoculated with Agaricus mycelium. This method produced what became the first mere "seed" mushroom. Finally, by 1930, Mycologist noticed that sterilized wheat grain provided an even more efficient and resilient spawning substrate. Whole grain will, in time, prove to be an almost universal spawn medium and has remained the preferred method for the production of several varieties of mushrooms. In the early 1950s, the French mushroom hunter was the first to effectively cultivate a range of Psilocybe species to establish the optimal conditions for fruiting, evaluating each species obtained on a variety of sterilized substrates. With Psilocybe rubensis, he found that the best fruiting was on the cased, sterilized horse dung. However, the utter obscurity of the Psilocybe mushrooms and their full results.

Methods of use

Fresh and roasted psilocybin mushrooms can be eaten either whole orally (often served with a food element, such as peanut butter or pizza, to mask their bitter taste), spread on top of the rice, or fermented to create a tea. Dry mushrooms may also be ground into a powder and packed in capsule shape. Psilocybin should be stored in its pure powder form in pills, tablets, or a solution. Psilocybin ingested swallowed, sniffed, burned, or administered.

Tolerance, Dependency, Removal

Regular and prolonged consumption of psilocybin mushrooms can result in immunity to results. Cross-tolerance exists for other medications, including LSD and mescaline. After a time of mushroom abstinence and certain other drugs, no number of hallucinogens can cause a psychedelic result. Nevertheless, after a duration of abandoned use, actual results will again be observed. There are no claims that psilocybin mushrooms are mentally or physically toxic and do not contribute to dependency. For several days after the usage of mushrooms, patients can undergo a phase of neurological withdrawal and have difficulties discerning reality.

CHAPTER 4

Psilocybe Species

Psilocybe cubensis

Psilocybe cubensis is the most commonly used genus of psilocybin mushrooms, both for historical and biological purposes. It is one of the most common psilocybin organisms found in the wild, and thus one of the most widely-used and well-documented organisms. It is one of the simplest to grow as it grows fruit on a broad spectrum of substrates and under several environmental conditions. It grows exclusively on dung, and under cultivation, it produces fruit from just about any substrate reasonably rich in carbon and nitrogen: cereal straws, seeds, grasses, com, wood, paper, or carton, if supplemented with any sort of Protein. Most mushroom species are magnificent in their growth and fruiting needs, but not P cubensis. This reality, coupled with its adequate strength, makes it one of the best species for the inexperienced cultivator to cultivate. We continue with Psilocybe cubensis as it is both the simplest to grow and the species of psilocybin-containing mushroom that people are most familiar. After you've interacted with P cubensis for a while and been acquainted with the mushroom life cycle, you'll be able to deal with organisms that act in more subtle ways. Psilocybe cubensis is a griddle-tropical mushroom that thrives.

The dung of sheep, goats, and elephants, or deposits comprising their waste. It can be found everywhere globally in a hot, mild climate, like Southeast Asia and Australia, India, Mexico, Central America, northern South America, and the Caribbean. In the United States, it is usually distributed in the southeastern United States in late spring and early summer, from Florida to the Gulf Coast of Texas. It is one of the giant psilocybin-containing plants, with caps from 12 to 5 inches wide and dense stems up to 8 inches in thickness. It is typically low when grown on grain or rice, but it may develop large, plump fruit on manure or compost. It creates deep, thick, purple-brown spore prints. When treated, Psilocybe cubensis also gets dark blue bruises. While a bluing reaction sometimes suggests psilocybin in a mushroom, such findings can not, on its own, be deemed a conclusive proof, because other different fungal compounds behave similarly. The scowling response happens as psilocin oxidizes to an as-yet uncharacterized deep blue molecule. Mushrooms producing small amounts of psilocin, but with massive levels of psilocybin, do not turn blue given their operation. P cubensis is known to be relatively significant relative to other active ingredients.

This can produce up to 1.2% (dry weight) of psilocybin, psilocin, and Baeocystin, with a level of about 0.5 or 0.5 mg/gram. Although these averages are helpful indicators for comparing one fungus to another, it is necessary to bear in mind that the potency can differ significantly between mushrooms of the same genus. Some strains or strains of the same plant, grown under specific conditions or on different substrates, can exhibit significant variability in potency. Only the same community may differ from one flush to another, with the second and third flushes typically the most effective.

The Woodloving Psilocybes

While Psilocybe cubensis is very simple to develop, there is one form of house cultivation to which it is not well suited: outside. In the forest, of course, it grows naturally, so it can be planted in a greenhouse or a wooded area, although there is little particular value. The two key advantages of putting up an

outdoor mushroom garden are that it can be both seasonal and discreet. You set it up in an out-of-the-way spot, throw it about until it bears fruit, harvest the mushrooms, and then think about it all over again before the cycle repeats itself the following year. When developed, the hidden mushroom patch should be more or less autonomous and imperceptible except when fruiting. Psilocybe cubensis does not suit the bill with this kind of setup for a variety of reasons. First of all, it develops rapidly and continuously until its soil is depleted by nutrients and does not survive long enough to be called perennial. Third, it develops on, and fruits from a broad range of substrates, but so does a whole host of other undesired species. If the fruiting substrate is kept sterile (or at least incredibly clean), it can be colonized by molds and bacteria well before the mushroom can be grown entirely.

This is why it's almost often grown indoors in very closely regulated conditions. Ultimately, as a tropical plant, it does not grow well in colder environments and probably can not withstand the low-freezing conditions typical in certain areas during the winter months. Luckily for the Mushroom Gardener, many other Psilocybs are up to the challenge. These are lignicolous, or wood-loving fungi, a genus of similar psilocybin-containing mushrooms that grow on wood pellets or bark mulch. That group includes as many as ten species, like Psilocybe cyanescens, P. azurescens, and P. cyanofibrillosa. Many of which are endemic to the Pacific Northwest of the United States, the Eastern European species P. serbica and P. bohemica, and the Australian and New Zealand species P. subaeruginosa and P. tasmaniana.

In contrast to their similarities in nature and size, these mushrooms share another significant characteristic: they are among the most common. Efficient of established psilocybin-containing fungi. Of all, Psilocybe azurescens, with all its species epithet alluding to the extreme bluing reaction after its handling, is supreme, producing up to 2.5 percent (dry weight) psilocybin alkaloids, more than twice as high as that contained in P. cubensis. Other wood lovers are somewhat more modest in potency, with maximum concentrations reported in 1-2 percent. However, when compared to Psilocybe cubensis, what the ligneous species of Psilocybes lose in quantity and size? They more than make for in energy, and a reasonably small garden bed of only one of them will quickly provide enough psilocybin to last a long time, or at least until the next year's fruiting. While these specimens are all reasonably close in form, there are variations between them. In agriculture, though, they all act more or less in the same way, and the methods we include later in the book will work.

Psilocybe cyanescens

Psilocybe cyanescens is a highly active fungus usually contained in the existing Northwest Ocean site, from San Francisco to Quebec. Its most distinctive feature is the undulating cap margin (the mycological term for the outer edge of the cap), which gives its mushrooms the nickname "wavy caps." It grows on wood chips or woody debris in lawns, garden beds, and mulched pathways. When immature, the mushrooms have a large, "web-like" partial veil that disintegrates rapidly at maturity. P. cyanescens has a reasonably strong psilocin output, so blues is easily bruised.

Psilocybe azurescens

Psilocybe azurescens is the most active Psilocybe mushroom known. It's close to the presence of P. cyanescens, except that the latter species is missing. The wavy margin often displays a pronounced nipplelike bump at the center of its cap, a feature known as umbo. In the wild, it is usually found on wood fragments in sandy coastal areas, sometimes under dunes of vegetation. P. azurescens has a relatively large content of biocytin, which may account for its unusual mystical "signature;" consumers generally say that it creates a profound and highly imaginative influence, with no apparent physical pain correlated with it.

Psilocybe cyanofibrillosa

Psilocybe cyanofibrillosa is a tiny, wood-loving psilocybe popular to the U.S. Pacific coast, from San Francisco to British Columbia. That is not Considered particularly strong, having just about 0.25 percent

alkaloids by dry weight. However, there is an indication that a higher proportion of alkaloids is lost when this species is dried than with others, rendering fresh P cyanofibrillosa more active than anticipated.

Psilocybe bohemica

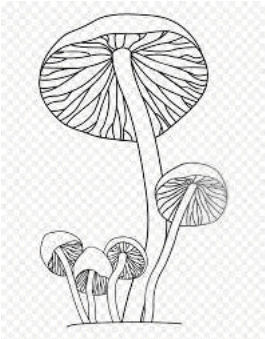
Psilocybe bohemica is a Central European Psilocybe found in Germany, Austria, and the Czech Republic. It is identical to P azurescens and P cyanofibrillosa and somewhat close in appearance to P azurescens. Less active than P cyanescens, with an estimate of around 1.1 percent alkaloids dry weight.

Psilocybe subaeruginosa

Psilocybe subaeruginosa is a descendant of P cyaHescens and P azurescens. It's common to Australia and Tasmania. It's similar in appearance to P azurescens, While significantly smaller in size, its environment is identical to that of P cyanescens. Chemical studies of this species are small, but generally speaking, considered to be mild to beneficial insect, it is profoundly blue in handling.

CHAPTER 5

Sterile Culture Technique



Mushroom powder (correctly known as the substrate) is just like rice. For humans: a nutritious mixture containing a carbohydrate balance, Protein, nutrients, and vitamins. Like our food, it is quite delicious to a variety of microorganisms, as a piece of bread left out of the countertop for more than a few days will quickly prove. Fungi, unlike humans, are also microorganisms and will fight for food with all other organisms in the area. There, bacteria and molds have a competitive advantage because they can replicate thousands or millions of times faster than the typical species of mushrooms. Any material that contains only a single mold spore or bacterium is likely to end up with a moldy or mushy mess. Moreover, the average square centimeter of air in the middle room comprises more than 1 00,000 particles. The unseen, silent rain of mold spores, dust particles, and pollen grains is perpetually settled on every solid surface in your home, no matter how meticulously clean you believe it is. The only way of keeping these insects from derailing your mushroom cultures is to make sure they 're never caught in the first place.

There are two simple methods to accomplish this: systematically destroy any molds or bacteria there are, to begin with, and remove others by operating in a completely clean (i.e., sterile) area. We extract pollutants from our materials by sterilizing or auto-saving them in a pressure boiler where practically no living being can withstand high temperatures (1210 C/255' F) and pressures (15 psi) within. Therefore, we create a clean working atmosphere by cleaning the air in our office and sterilizing it with chemical disinfectants. Such two techniques represent a sterile or aseptic cultivation process, which is by far the most important thing you need to know to excel in the cultivation of mushrooms. Let me repeat this for focus: sterile culture methodology is the essential thing. If you don't find this out, no cultivation methods can work, no matter how closely you follow the directions. If you're very fortunate, maybe you're going to cultivate a mushroom or two, but most of the time, you 're going to produce a stunning assortment of blue, green, and black molds and a slimy, smelly set of bacteria. That most would-be mushroom growers have struggled, and those who succeeded, Know-how hard, and why to use a sterile culture method.

Cleaning up your work environment

The first step is to set up a clean workstation. Presumably, you should only devote a room or space to your mushroom designs, such as a spare bedroom or an empty walk-in closet. If no such capacity is required, a large part of the lab work can be completed in an average kitchen, but this requires you to establish and maintain a new level of cleanliness. The kitchen competes with the bathroom for the filthiest and most biologically active room in the home, and the mold counts appear to be very high there. On the other side, working in the kitchen gives you easy access to clean water sources and top of the stove. When you're going to devote a different area to the fungus work, make sure you are next to the kitchen. There's no point in sterilizing the products to drive them to the lab through a filthy room. The workplace will have a wide bench. Ideally, one with a stable quickly cleaned upper surface. Formica or enamel is optimal, as you will need to clean the workstation with alcohol before each use. If you have a

wooden board, consider putting a piece of thin hardboard with a plastic chipboard surface or a portion of heavy, thick material.

Likewise, the workplace floor would be easy to vacuum (linoleum or tile) and easy to clean. Carpets are reservoirs of spores and pollen, millions of which are thrown into the air every step of the way, which should be stopped if at all necessary. The walls should be hygienic (a fresh coat of paint would not hurt), and any other areas and surfaces in the room should be adequately cleaned. Using a disinfecting agent if possible (orange-oil based products are perfect because they are mild but efficient chelating agents and environment friendly). Presumably, if you're working in your kitchen, you can't disinfect every surface whenever you intend to use it, so you can also give it a regular, thorough cleaning and disinfection as much of it as you can before-usage. Space will be free from efforts to limit the flow of air across the communities. Doors should be securely locked, heating or air conditioning ducts should be sealed, and entries should be shut down even before you start working. Eradicate all forms of waste from the space where possible. Plant pots, water beds, cat food bowls, litter boxes: get them out of there.

Using an air-filtration system in the room is also useful. Nowadays, better ones cost less than $100, and they're silent and powerful enough to run continuously. Make sure the unit you 're buying is HEFA-rated. HEPA calls for High-Performance Air Particulate. It is an authorized filter ranking that indicates that it collects particles of 0.1 microns (1/1 OOth of a millimeter) and greater than 99 microns—97 % of the solid objects in the atmosphere. We keep our filter down at all times and run it up for nearly an hour before working in the lab to give the air in the room a thorough scrub. Eventually, you have to purify the air in your working environment. You can do this by working inside a glove box, an insulated area that can be rigorously sanitized and free of draft, or in front of a stream hood. This large HEPA filter unit blows a constant stream of pure, sterile air over your workstation, excluding all pollutants. A glove box can be developed cheaply and efficiently, but it's less efficient because the air from the room can find its way inside. The flow hood charges much more, but the money is well invested, as it helps you to work out in the open while also retaining the aseptic technique.

Personal hygiene

Now that you've washed and equipped your area, it's time to recognize the other primary source of contamination in your improvised lab. Your body, hair, and clothes are the Amazon forest of bacteria, viruses, and fungi, mostly invisible to your eyes and usually harmless to you or anyone, but dangerous to mushroom cultures. This thing indicates washing, drying off with a freshly washed towel, and dressing in a clean set of clothes instantly before working. The clothing choice is also essential; don't wear long-sleeved shirts or loose fittings that could flop around as you use. When you've got long hair, clip it back to your head. Wash your hands and lower arms with isopropyl alcohol and always wear disposable surgical gloves while working (also wipe the outside of your gloves with alcohol).

Mental hygiene

Just as you've prepared your workspace and your body, make sure you're done. Also, take care of your state of mind before you work. Mental hygiene is just as important as personal hygiene. After all, your state of mind will affect how you perform because, whether you're overwhelmed or hasty, you 're likely to make mistakes or Implement pollution into the communities. Your actions in the lab should be cautious, calculated, and thoughtful. Prevent unnecessarily fast or dumb motions, because they simply generate excessive air currents. If you're in a hurry, slow down, or save the project for a day when you've got more time. In the same way, ask your spouse, children, dog, or cat not to enter or disturb you while you work and disconnect the phone. Play soothing, uplifting music if you like, but avoid Stockhausen or frequency metal, unless you find it relaxing in your ears.

Keep records

Holding a comprehensive and accurate record of all experiments is key to every successful laboratory technique. Most mushroom cultivation steps expand upon previous ones; for instance, each agar plate can inoculate ten new plates or six jars, each jar can inoculate six bags, and so on. It's easy to produce

hundreds, perhaps thousands of different cultures. Finding a way to recognize each culture quickly and efficiently would save you a lot of time and energy in the longer term. It will also enable you to evaluate the quality of your work, help you recognize achievements and mistakes, and trace both of them back to the source. The culture container is labeled with a coded numbering scheme and

records the laboratory's work and the codes in the scientist notebook. Any notebook can do so, while lined or graph-ruled pages are useful for separating data and creating tables or diagrams. Any time you construct a new series of experiments (for simplicity's perspective, every individual culture jar should be regarded as one experiment), begin with a blank screen. Top of the page, write a date, and a note about what experiments you have carried out ('MYA plates' or 'rye grain jars'), including any relevant information, such as specific recipes followed or unusual methods used. Under this, build three simple columns named from left to right: the initiating cultures, the theoretical numbers of the day, and the details. They use a variety of phonetic numbers to mark the experiments manually. They are in the following format: XX-YY, with XX becoming the current page number, and YY identifying each specific experiment in increasing order.

CHAPTER 6

Materials & Chemicals Required for Growing Magic Mushrooms

The growing of mushrooms includes supplies, including several advanced instruments. Many of these products are so unique that they can only be bought from mushroom growing supply houses, but can more commonly be sold in several local markets. Many of the products you need are often available for some other, more mundane purpose; while making shopping more straightforward, this has the incidental advantage of providing good cover for those who wish to maintain a low profile of their cultivation activities. Drug stores, kitchen and restaurant supply stores, pet stores, home brewing suppliers, and farmers' markets are the significant sources of a covert action (or merely frugal), mushroom cultivator.

Apparatus

• Pressure cooker

This is going to be one of the most used things in your growing equipment shed, so it's critical to have a good one right from the beginning. Because you're using it to sterilize reasonably large objects, and in abundance, size is essential. If you can manage a larger unit than you initially need, get it, because you'll probably want to upgrade later at all. The largest factor of what size you can get is the number of gallon jars that can be sterilized at one time. Since mason jars are irregularly shaped, comparatively few can fit comfortably inside even the most immense pressure cooker, restricting the amount of material that can be processed at one time. We also remember that we have a system that can accommodate seven or more specimen jars simultaneously.

There are two common categories of pressure cookers to pick from: those with a vapor-release valve of some kind, and those with a metalweighted "knob" that releases steam if the pressure reaches a certain level. This latter form is to be prevented, if necessary because this sudden release of tension will cause liquids within the boiler to spill over, damage the media, and create a big mess. Pressure cookers are available, but to prevent such mishaps, more vigilant monitoring is needed during operation. Whatever the product and version of the pressure cooker you select, make sure that it is in good working condition and understand its function and its safety features. Please ensure that both the seals and valves are in pretty good condition and that the lid fits securely. There will be no moisture flowing through the seals as pressurized. If available, shut off the heat source, allow the cooker to cool down completely, and reset the lid appropriately. Running the Vessel bead around the interior of the metal-on-metal style cooker should maintain a close fit and help prevent the top from being grabbed at the base during use.

Before each use, remember to add an adequate amount of water to the bottom of the cooker, at least enough to bring the depth to 1/2. Never put objects directly on the bottom of the pressure cooker or enable them to reach the outside walls where temperatures are high. .Most pressure cookers provide a shelf or silicone spatula built to carry their contents above the surface of the water. All American models have bowl-shaped liners to protect products from direct contact with the cooker itself. Allow the pressure cooker to rise slowly to the temperature at the beginning. Excessively-rapid or uneven heating can cause vessels to crack or explode. Usually, push the range to the full head of steam by shutting the

stopper to dislodge the cooling air pockets. This can take a long time, particularly on larger stoves. Before closing the valve, you should see an unbreakable flow of steam escaping from the stopcock valve. Never end up leaving a pressurized boiler unsupervised. The temperature and pressure inside the cooker can fluctuate unpredictably, especially during the early stages of heating, before the range has yet to be wholly equalized. To avoid an explosion and ensure maximum sterilization, it is essential to maintain the cooker at the optimal pressure for the entire cycle.

Inspect it every ten minutes or so to ensure it's not under-heating or overheating, and adjust the heating element as needed. Every time allow the cooker to cool down steadily and on its own. Never reach the surface of the range as it is pressurized, and do not use cold water to cool it faster. This might cause the cooker to collapse and spill its contents violently completely. At the very least, it can contain a great deal of harmful steam. To avoid the sterile air from escaping into the pressure cooker when removed, tie the alcohol-soaked paper towel around the valve before ventilating to relieve any residual gas. Pressure cookers are potentially dangerous things. They are producing high temperatures and steam that could cause injury. Like a wellhaired knife, a pressure cooker is a device that needs care and patience and a significant benefit.

• **Petri dishes**

Agar plates are small, specific plastic or glass dishes with a loosefitting lid. They available in a multitude of sizes, but the most beneficial size for fungal crop production is 100 x 15 mm. Recyclable glass or Pyrex plates are long-lasting and autoclavable but relatively costly. Before the-sterilized plastic polystyrene dishes come in 20 to 25 shells, they are inexpensive. Still, because they are built to be used only once and then discarded, they are not necessarily environmentally sustainable. Both types of Petri dishes can be maintained using hydrogen peroxide and a microwave oven.

1. Wash the dishes well with a dishwashing detergent, taking extra care to absolutely remove any residual agar.
2. Pour a small amount of 3% hydrochloric acid into each dish and turn it around to expose it throughout the container's surface. Repeat with the cover and put on the plate.
3. Put the dishes in the microwave and steam on medium heat until all the peroxide on the plates has been removed.
4. Use the containers promptly, or place them in a clean plastic bag until required.

This method is most effective in combination with the use of isopropyl alcohol in agar plants. When working with peroxide-free agar, it is better to use pre-sterilized plastic or autoclaved glass dishes. Whenever necessary, we suggest applying hydrogen peroxide to your culture to mitigate pollution and encourage you to work with agar in a less-than-pristine atmosphere. However, peroxide can not be used in other cases, including spores germinating. In these instances, we have found that the 50 mm diameter plates are more comfortable to keep sterile due to their reduced surface area. If agar plates are not available, you can use 4-ounce jelly containers or similar jelly jars or heat-proof glass bottles. These have the advantage that it is reusable, but they lack eye-catching lids and take more than twice as much room as culture plates.

• **Media flasks**

Media flasks are also used to keep liquid media during disinfection and pouring of Petri dishes. Any dense, autoclavable glass bottle will do so, try to find one with a relatively narrow neck to make it easier to pour. One and a half liters of apple juice or sparkling water bottles with screw top caps are suitable for this reason.

• **Mason jars**

We use conventional mason-style ball jars, often in quart sizes. They are easily accessible, robust, and can be reused permanently. The narrow-mouth (70 mm) quart jars are optimal for grain incubation. If you want to try the so-called "P.F." technique, you'll need straightsided, half-pint jelly jars. Point of caution: mason jars are robust, but often they crack. Always check them carefully before breaking,

discard odd-looking ones instantly, and be especially careful when shaking grain bottles. Don't hit them on the palm of your hand to segregate the grains; a broken jar can take a finger right away. Instead, just grasp the pot to the lid end and shake things up and down. If the grain is very firmly wrapped, and you have to split it violently, gently smash the container against a clean towel protected by a massive cushion or against a partly used sheet of duct tape before it softens. (Ensure your lid is securely sealed as well; you don't want your delicate spawn to escape everywhere.) Always encourage your pressure cooker to heat up progressively; excessive heating will cause jars to break due to the temperature differential between inside and outside.

• **Mason jar covers**

Don't mess with the two-piece metal lids supplied; save them for canning tomatoes. For culture research, we use an another-piece plastic cover that is heat-resistant and simple to adjust to allow proper gaseous exchange. You will carefully drill or cut an inch hole in the middle of each cap to change these lids. When fitted with a filter disk (see next entry), these adjusted caps allow gasses (but not contaminants) to flow in and out of the jar so that the cultures can circulate freely.

• **Filter disks**

The filter disks enable the exchange of gas without the emergence of contaminants. They are made from synthetic fiber that is heat tolerant and can be frequently sterilized. They are several millimeters thick and are well before-cut to fit the appropriate jar-and-lid mixture. Sometimes they decolorize when in touch with substrate or spores. In that case, simply soak in a 1/4-strong bleach solution overnight. Tyvek, which can be shaped to fit over the top of the container, is an inexpensive alternative to such disks. Tyvek is a composite substance used in several applications. Since Tyvek is lighter and more compact than the consumer filter disks, it should be cut in circles more considerably than the jar mouth and at least one inch away from the bottom of the pot. Tyvek is also reusable but can be recycled after three to four applications.

• **Filter patch bags**

These are apparent, heat-resistant, snug-fitting flexible plastic bags used for carrying large amounts of spawn. They are autoclavable and also have a tiny rectangular filter on one end for the exchange of gases. They are filled with a mortar, sterilized, inoculated, and then sealed with a heat cover. They are suitable for increasing massive numbers of spawns because they are versatile, and the internal contents can be quickly modified or inspected for pollutants. These lose their elasticity when warm and usually suitable for single-use, but well-formed bags can be adequately washed and sterilized again. We've seen producers use "oven bags" (or spawns). Although these are autoclavable and can be designed to work, they miss a filter pocket, providing less than a desirable gaseous exchange, and are too small to heat the cover. One way to give this sort of bag some abrasion resistance is to firmly wrap the neck around a dense plastic bag full of polyfill or cotton and cover it securely with a heavy rubber band.

• **Impulse sealer**

Impulse seals are used to seal spawn containers. Be sure you buy one long enough to straddle the whole bag when it's laid out, at least 12 inches across.

• **Spirit lamp**

This is a glass lamp with a plug of cotton and a metal coat. Loaded with gasoline, it gives a clean flame to sterilize needles and inoculation loops while you work. Conversely, you can use a sold in kitchen utensils for crust caramelization on cream Brulee, and auctioned in retail stores for wiring These mini butane torches are useful for sterilizing tools as you work. A high-quality one will have a strong foundation to keep it straight while it sits on the top of the bench.

• **Electronic balance**

Mechanical or electronic versions are just as fine. The significant characteristics found in the balance are the accuracy of at least 0.5 g, the ability to weigh up to a minimum of 250 g (1 kg is better), and wide enough to fit heavy objects.

• **Scalpel**

Scalpel blades are used for the cutting and transfer of agar and tissue cultures. A thin dissecting scalpel with disposable # 10 sized-blades is optimal. If you didn't find these, another all-aluminum Xacto-style blade would fit great, even though it may be a little easier to navigate in confined spaces.

• **Inoculation loop**

This wire loop at the end of a metal or wooden handle is being used to transmit spores or small quantities of mycelium to agar media. It can be identified in scientific or brewing supply stores or made from a piece of plywood and a thin, rigid wire. There is no need for an inoculation loop if you use the "cardboard plate" form of fungal growth.

• **Sharpies**
These persistent, documented-anywhere markers are essential for labeling culture bottles of all types.
• **Funnels**

It is good to have different forms of plastic or metal enamels: a restrictive-neck enamels for pouring liquids and fine powders, and wideneck enamel for filling bottles.

• **Measuring pipettes**

If you're going to deal with agar, you'll need to quantify small amounts of liquid (1-15 mL) to add to your seeds. Ten-milliliter glass measuring pipettes are suitable for this reason, as they are autoclavable, durable, and have labels on them for quick volume calculation. A rubber plug is used to drain and distribute liquids from the pipette. Each can be sold in science retailers and some homebrew shops. For this reason, a glass 10-millimeter measuring cylinder or a series of metal-measuring spoons may be used, but it may take more handling and caution to prevent contamination of your cultures.

• **Graduated cylinder**
This is used to measure liquids precisely. Cylinders will fill all bases in l-liter, 100-milliliter, and 10-milliliter volumes.
• **Measuring spoons and cups**

Quantifying cups and spoons may be used instead of graduated tubes, but are slightly less precise. Use Pyrex for 1-cups (250rnl) to 8-cups (2L) and metal ones for smaller quantities. Both types may be autoclaved or disinfected in boiling water (5 minutes at a rolling boil) when sterility is needed.

• **Syringes**

Syringes are used for microbe mass inoculum. Ten or twentymilliliter sizes are used, with broad (18-gauge) needles. They can be sterilized by autoclaving frequently in a pressure cooker or fixed in hot water. Syringes can be acquired from surgical and veterinary supply companies and some online mushroom suppliers. However, their sale is controlled in many U.S. states, and they can sometimes be challenging to find regionally. If you buy pre-filled spore needles, clean the syringe and the needle after each use. They are autoclavable and can be reused several times.

Chemicals

• **Hydrogen peroxide**

This antibacterial is applied to cultures to shield them from infection. It is sold in most pharmacies or supermarkets. The exact concentration of hydrogen peroxide solutions often differ, so ensure the date

on the bottle is a recent date. At this dosage, peroxide is relatively harmless to human health and requires no special handling procedures other than wearing gloves. It's a gentle bleaching agent, so be careful not to spill it onto your clothes. More concentrated (8-35%) solutions are available from different sources, such as pool supply shops, and online. Concentrations of hydrogen peroxide

More than 3% can cause severe burns and is presumably flammable, so be very cautious when working with it. Peroxide deteriorates reasonably quickly, so to ensure that it remains at the right concentration, use the flask as soon as possible after opening. Between use, wrap the neck and cap in parafilm or plastic wrap and store the bottle in a clean plastic bag in the refrigerator. Clean with alcohol, and take particular caution not to touch any portion of the container or equipment with your hands. Every time was disinfecting pipettes and measuring cylinder that comes into direct contact with peroxide, either in a pressure cooker with your solution or by soaking them in boiling water for 5 minutes.

• **Isopropyl alcohol**

This is used for the decontamination of hands, substrates, and containers, and fuel alcohol lamps. It is sold in grocery stores and pharmacies at 70% or more.

Alerting: Isopropanol is very explosive. Please keep it away from open flames. Make sure that whatever alcohol you use is completely evaporated before you illuminate your alcohol lamp.

• **Bleach**

Frequent-strength cleaning bleach is sufficient for the cleaning of substrates and instruments. Avoid using products with additional detergents. Dilute to at least 1% healthy before use. A 10% intensity solution in a spray bottle is an effective surface and air antiseptic.

• **Parafilm**

Parafilm is a porous, paraffin-based film used to cover Petri dishes. It is absorbent to gas, which means that it enables gas exchange while trying to keep pollutants out of culture. Some garden manufacturers market a versatile shape of 1-inch long rolls as "Grafting Film." If you can not afford Parafilm, you should replace polyethylene plastic wrap, such as Glad Wrap (but not Saran Wrap or related products, which are manufactured of polyvinyl chloride and are not gas resistant). Cut the 1-to 2-inch-wide section cautiously using a very sharp knife out of the end of the whole roll.

• **Surgical gloves**

Disposable rubber gloves are necessary for maintaining grubby hands away from your own pure cultures. You don't need to be presterilized. Just clean your hands and arms well before placing them on, then clean the outside of your gloves with an alcohol-soaked clean cloth (always enable them to dry thoroughly before going near to an open flame).

Substrates & Case products

• **Whole grains**

The most commonly used substrate for spawning is whole grain. Whole grains are the ideal medium for spawning for several reasons. Each grain behaves like a mini capsule of nutrients, minerals, and water that is conveniently colonized by fungal species. At the same time, its spongy corpse partially protects it from contamination by other microbes. Upon settlement, the grains are quickly isolated from each other. Eventually, as colonized grain spawn is used to inoculate broad substrates, each grain is used as a compact container of mycelium and nutrient resources. It is a distant outpost from which the fungus will jump into a new medium. Although about any cereal grain will work as spawning, we suggest mild winter (white) wheat, as it has started working excellently for us and seems to be free from microbial contamination that may be present on rye and other grains. You could use whatever grains are readily

available to you, although we suggest using larger grains such as rye, wheat, or corn instead of small grains such as millet or rice that tend to clumps together when roasted.

We've seen some farmers use a wild bird mushroom compost with positive results, which has the immediate benefit of being cheap and widely available. However, since it is a combination of various grain sizes, it is more difficult for birdseed to rehydrate adequately. It can also be pretty sticky when it's wet. To mitigate these problems, hydrate the bird seeds with a 24-hour cold-soaking instead of hot water, and clean and drain well before loading into the tanks. You can consider using organic crops whenever possible because this is the best way to ensure that they have not been contaminated with fungicides.

• **Malt extract**

This is a dried extract of grains that have been 'malted' or sprinkled to facilitate the gradual transformation of their starch into sugars. Malt extract is used as the primary nutritional source of agar products. It is widely available from brewing manufacturers. Be careful to choose light or brown malt. Dark malts have been caramelized, and mushrooms do not grow well on sugars that have been caramelized.

• **Yeast extract**

A dried extract of yeast cells, rich in vitamins, minerals, and calcium, is introduced into the agar media as a dietary supplement. Brewer's yeast, which is sold in many health food retailers, is an appropriate alternative, but not as successful as the genuine yeast extract.

• **Calcium carbonate (CaCo3)**

Calcium carbonate is also recognized as lime, hydrated lime, limestone flour, oyster shell flour, and chalk. It is used to balance the pH of the casing soils and solvents to prevent degradation and to provide calcium to the growing fungus. Fungi appear to favor mildly austere (i.e., pH > 8) material, while bacteria and certain other pollutants do not. Check the packaging to make sure that the calcium carbonate you purchase is low in magnesium < 1%) since certain fungi do not thrive well on substrates containing large concentrations of it.

• **Calcium sulfate**

Calcium sulfate, commonly known as gypsum, is used to trap excess water in substrates, make it easy to shake or remove, and to avoid waterlogging and degradation. It is effectively pH-neutral and has no buffering capabilities.

Hardwood sawdust and chips

These are derivatives of Psilocybe cyanescens, P. azurescens, and similar lignicolous (wood-inhabiting) organisms. While most of the hardwood species would do, alder, cottonwood, oak, maple, and beech are ideal. If you have any of these tree species growing in the vicinity, you could get fresh chips from your regional highway or garden core, or you might want to chip your own. Chips produced from trees in winter or early spring are better because they would be the lowest in sugars and have a minimum of leafy matter, which can be a source of pollution in beds. Sometimes you might get dependable wood processors locally through barbecue suppliers who sell them for use in food smokers. If you don't have direct exposure to hardwoods locally, you can buy wood chips online. Perfectly chipped beech or maple wood chips are sold as animal bedding, but they are generally too sufficient to be used on their own and must be correlated with larger chips of some kind.

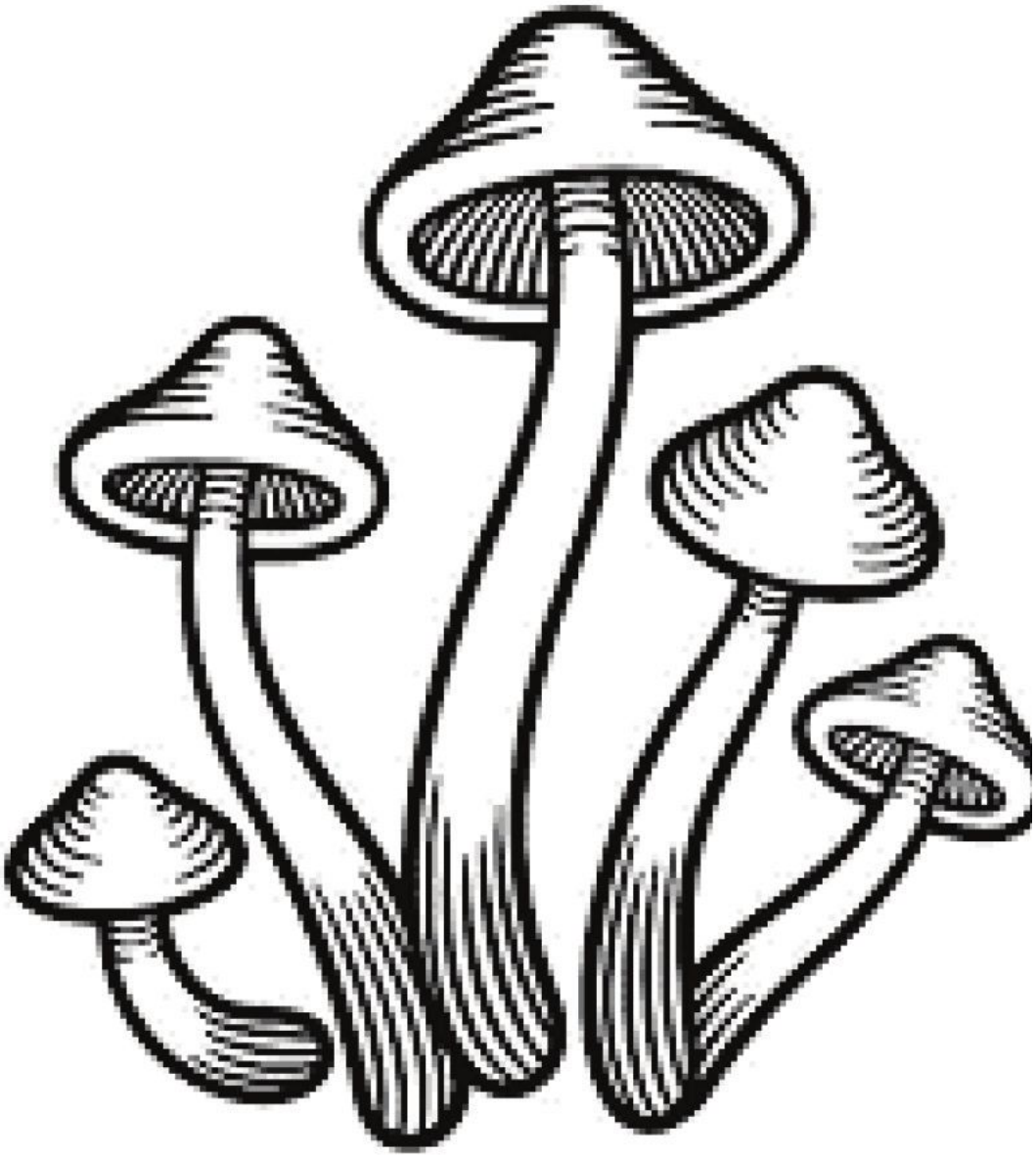
• **Spores**

Of course, none of these products is of many benefits to you if you don't have the spores of your mushroom to grow on them. Then why, you wonder, didn't we tell you where to get your hands on those

spores of Psilocybe first? It's a great question and one that regrettably calls for a complicated answer. You are more likely than not to live in a country that has found such modest and gentle mushrooms illegal. Although the government can do nothing to completely control these species (no more than if they were to prohibit the mold forming on your shower curtain), they might very well incarcerate you for frolicking with them.

CHAPTER 7

Magic Mushroom Cultivation



The Easiest Method of Scratch

The most comfortable growing procedure for growing magic spores' mushrooms requires very little in the form of resources. What we need is some compost, vermiculite, water, canning bottles, a pressure cooker, and spores. This method works well for San Isidro (Psilocybe cubensis) and other dung-growing mushrooms, particularly the Panaeolus species. It is essential to pick manure. A lightly colored compost will be used. When the waste is so fresh, it's a hard thing to deal with. But if it is too old, it is less appropriate as a medium of production. Due to its soft nature, horse manure is preferred to cattle manure, but compost from other herbivorous animals, like goats and even elephants, may be used for mushroom cultivation. Composted manure is fantastic. Nevertheless, if the manure is obtained directly from a stall in a stable after it has been broken down for more than a year, it is often inappropriate. Should not use commonly packed manure. Typically, after industrial fermentation, it is more like mud than proper waste. Sometimes a farm sells cow manure, which has been primarily separated from filth by a machine and placed in a huge pile where it starts to compost.

After the manure is picked, the next move is to add some vermiculite (about 1/4 to 1/3 cup) into a large canning jar. Add some compost, then. You're not meant to overcomplicate it. Use enough to coat the vermiculite with a layer of between 1 to 1 ½ inch of compost. It's not a vital volume. For example, it is not appropriate to cover all vermiculite. The object of vermiculite is to retain the humidity to prevent the manure from burning the container when the steam is sterilized in a pressure cooker. The manure layer does not need to have a standardized thickness. Besides, it is possible to use comparatively small broken pieces of fertilizer with irregular shapes to provide sufficient surface space for growing mycelia. Relatively large undamaged parts of manure generally more resistant to complete sterilization in a pressure boiler. After the compost layer is in place, squirt well with the water from the spray bottle. It is beneficial to continue with plenty of water to provide an atmosphere of sufficient moisture for spores to germinate. Pressure-cooking helps to dry the manure when there is adequate water.

When, after spraying, water can not readily be seen collecting at the bottom of the container in the vermiculate sheet, apply around 1/8 cup of water. Much water, however, can allow the manure to melt into the gritty composition during sterilization. It's not beneficial. The benefit of uncomposted horse manure is that it is more resistant to degradation during sterilization. It's not meant to take a lot of time to feel how much water to use. Prepare as many bottles as you like, the better. Other glass jars, including Erlenmeyer flasks, can be used to start spores instead of canning jars, but canning containers are compact and functional. Place the dome of each canning jar lid upside down over the mouth of each jar after enough water has been added, so that the rubber seal faces up and screws the band of each lid. End up leaving it loose because the object is to allow the inside pressure of the jar to be balanced with that of the pressure cooker during sterilization. The bottles can use the pressure cooker. When flasks or other glass containers are used, cotton plugs can be used— aluminum foil as an exterior covering.

The 22-quart pressure cooker contains 7-quart canning pots. A more splendid pressure cooker with the house for two layers of quart jars allows for maximum manufacturing. Place the jars in the pressure cooker on the bottom rack and add water. Usually, about threequarters of water is adequate for a 22-quarter oven. One way to ensure that water has been applied is to fill the pressure cooker before the jars start floating and then scrape out some water with a small cup to avoid this. Pressure cookers that do not need a rubber gasket are a better buy, but any type should work correctly. Be sure to use a little vaseline to achieve a firm seal for any form of a seal. Pressure cook the containers at 15 lbs—pressure for a couple of hours from the time the force exceeded 15 lbs. Enable the pressure cooker and the contents to cool after the steam sterilization is done. To release any excess residual pressure, open the pressure lock, and remove the jars. To prepare for spore inoculation, flame the edge of a wire loop or poke, a blunt knife, or some other fitting surface in the flame of an alcohol lamp or-gas burner on a stove until it starts to glow.

Then carefully set it regularly to prevent the end from touching anything. It is safest to position the wire loop or similar item at the edge of the counter such that the heat sterilized end is not touching the surface. Thoroughly fold a spore print while it's folded. Then remove the lid of the jar to inoculate, cover both the band and the inverted dome simultaneously. So long as the two-piece cover is off, flip it over so that the crown doesn't break off and set it down. Pick up the unfolded spore print and keep it with one

hand at an extreme angle over the container. The spore print will be in front of the pot. Take the loop and scrape off any spores with the other hand, and let them fall into the pool.

Gentle pressing of the loop printing of the spore means that several spores can fall into the container. Do not overdo the taping, because it is not safe to create air currents. Then put the lid on the jar with the rubber seal of the dome still facing upwards. Do not clamp the band too firmly, because it is essential to release oxygen into the container and carbon dioxide. Several jars can be started from a large spore print. It is necessary to function in a free-range project during the whole inoculating process. Therefore, keep doors and windows closed and do not heat or air-conditioning for at least a few hours before the inoculation of the spore. It is also essential to manage to breathe when inoculating the containers, as they may be contaminated by breezing over the open jars. It's unnecessary to wear a mask in most situations, but it does make a difference for some adventurers. About three days to a few weeks, depending on the age of the spore print, white mycelia will be evident in each jar at several locations on the compost.

Ingredients

• Spore syringe, 10-12 cc
• Natural brown rice flour
• Vermiculite, medium to fine
• Hot water

Types of equipment

• 12 Shoulderless semi-pint jars with lids (e.g., ball or Kerr jelly or canning bottles)
• The hammer and the little nail
• Measurement cup
• Mixing pot
• Strainer
• High duty tin foil
• A big jar with a close lid for steaming
• Small towel (or nearly ten paper towels)
• Tape of micropore
• Clear plastic storage tub, 50-115L
• Drill with ¼ inch drill bit
• Perlite
• The mist spray bottle

Hygiene Materials

• Prevention of alcohol
• Butane/propane lighter torch
• The air disinfectant
• Air sanitizer
• Sterilized rubber gloves (optional)
• Surgical mask (optional)
• Still air or glove box (optional)

The simple P.F. Tek approach is very straightforward: Prepare your brown rice flour, vermiculite, and water substrate and split it into sterile glass jars. Introduce spores and wait before mycelium grows. It is a network of filaments that will support the growth of your mushroom. Move your colonized substrates or "cakes" to a fruiting chamber after 4-5 weeks and wait for your mushrooms to develop.

Step 1: preparation

• Take four holes down from each of the lids, uniformly spaced across their curvature.
• Combine ⅔ cup vermiculite and ¼ cup water in a mixing bowl thoroughly for each glass. Drain the remaining water with the disinfected strainer.
• Add ¼ cup of brown rice flour per half-pint container to the bowl and mix with wet vermiculite.
• Be careful not to stack too closely; fill the jars in half an inch of the rims.
• Sterilize this upper half-inch with alcohol rubbing
• Clean off the bottles with a coat of dried vermiculite to insulate the ground from the pollutants.
• Screw securely on the lids and protect the bottles with tin foil. Protect the edges of the foil along the sides of the bottles to prevent water and condensation from escaping into the openings.
• Place a small towel (or paper towels) in a large boiling pot and put the jars on top to ensure that they do not touch the surface.
• Bring the tap water to a point halfway up the sides of the jars and bring to a steady boil, ensuring that the jars stay upright.
• Put the tight-fitting cap on the pot and steam for 75-90 minutes. When the pool is running dry, refill with hot tap water.
• Keep the foil-covered jars in the bowl for a few hours or overnight after steaming. Before the next step, they must be at room temperature.

Step 2: inoculation

• Use a flame to heat the length of the needle in the syringe until it is bright warm. Enable it to cool down and clean with alcohol, not touch it with your hands.
• Take the plunger back a little and rotate the syringe to disperse the fungus' magic spores equally.
• Cut the foil from the first of the jars and insert the syringe into one of the openings.
• Inject roughly ¼ cc of the spore solution with the needle reaching the surface of the bottle (or marginally less if a tencc syringe is used in 12 jars).
• Repeat with the remaining three holes, rubbing the needle with alcohol between the holes.
• Cover the gaps with the micropore tape and set aside the container, leaving the foil off.
• Perform the inoculation cycle with the remaining bottles, sterilize the needle with the flame, and then the bottle's alcohol.

Step 3: colonization

• Place your infected jars clean and out of the way. Generally, avoid sunshine and temperatures outside of 70-80 ° F (room temperature).
• White, fluffy-looking mycelium will begin to emerge between seven and 14 days and spread out from the inoculation areas.
• After three or four weeks, if all goes well, you will have at least six well-colonized bottles. Enable the mycelium to reinforce its grip on the substrate for another seven days.

Step 4: preparation of growing chamber

• Take your sealed plastic jar and drill ¼-inch holes around the walls, base, and top of two inches apart. To stop splitting, hammer the holes in a piece of wood from the inside out.
• Set the box over four stable items, positioned at the corners to allow the air to flow below. You will also want to cover the surface underneath the package to shield it from a humidity leak.
• Keep the perlite in a ramekin and run it under a cold tap to drain.
• Let it drain until no drips remain, then scatter it over the base of your growing chamber.
• Repeat for a perlite layer approximately 4-5 inches thick.

Step 5: fruiting

• Unlock your jars, extract the dry vermiculite coating from each one of them, and take good care not to ruin your substrates or "cakes" in the method.
• Open each container and tap onto the disinfected surface to free the cakes unchanged.
• Clean the cakes one at a time behind a cold tap to remove any weak vermiculite, taking care not to damage them again.

• Fill your cooking pot or another large jar with lukewarm water and put your cakes inside. Drench them with another bank or similar heavy object just below the top.
• Leave the bowl at room temperature for up to 24 hours to moisten the cake.
• Extract the pie from the water and place it on a disinfected sheet.
• Cover the mixing bowl with solid vermiculite.
• Bake the cakes one by one to fully cover them with vermiculite. This is going to help hold in the moisture.
• Cut the tin foil square for each of the cookies, which is big enough for them to rest on without scratching the perlite.
• Space these equally within the rising room.
• Place the cakes on top and softly foam the spray bottle in the container.
• Fan with a filter before shutting the door.
• Bring the chamber four times a day to keep the temperature up, take care not to soak the cakes with water.

Step 6: harvesting

• Your fungi, or fruits, will seem like tiny white bumps before Your fungi, or fruits, will seem like tiny white bumps before 12 days.
• Cut the mushrooms close to the cake to extract when finished. Don't wait for them to come to the end of their growth as they begin to lose power as they reach maturity.

Storage

Psilocybin mushrooms tend to go down in the refrigerator after a few weeks. And if you're going to use them for microdosing, or simply want to store them later, you'll need to worry about storage. Drying is the most efficient approach for long-term storage. This will keep them healthy for two to three years as long as they are kept in a cold, quiet, dry spot. When they're put in the fridge, they 're going to last forever. The lo-fi way to dry the mushrooms is to leave them on a sheet of paper for a few days, maybe in front of a fan. The drawback of this approach is that they're not going to be "cracker tight." That's, they 're not going to break when you want to stretch them, which means they 're always going to hold any moisture. They can also decline dramatically in effectiveness, depending on how long you hold them out. Using a dehydrator is by far the most effective process, but it can be costly. A good option is to use the following desiccant:

• Air-dry the mushroom for 48 hours, preferably with a fan.
• Place the desiccant coating at the base of the airtight bottle. Ready-to-use treats include silica gel kitty litter and anhydrous calcium chloride, which can be bought from hardware stores.
• Put a wire rack or similar set-up over a desiccant to prevent the mushrooms from touching it.
• Place the mushrooms on the rack and make sure they are not too crowded together and lock the jar.
• Wait for a few days, and check to see if the cracker is intact.
• Switch to plastic bags (e.g., Ziploc, vacuum-sealed) and put in the freezer.

Reusing the substrate

Following the first stream, the same cakes will be reused up to three times. Just dry them out for a few days and repeat Step 5.2 (dunking). Yet don't roll them in the vermiculite; just bring them back in the rising chamber and the fog and the fan as before. If you begin to see the chemicals (usually after the third reuse), dip the mister spray cakes and dispose of them outdoors in a secure container.

Create spore Syringes

Designed to fill your psilocybin spore needles is as self-sufficient as it is. Second, you'll need to take a spore print from a mature mushroom, that is, allowed to expand until the cap is removed and the sides are twisted up. You will also note an aggregation of dark purple particles around the foundation. They are the precious seeds of the fungus. To extract them, cut the cap with a flame-sterilized scalpel and

place it on a clean sheet of paper. Fill with disinfected glass or bottle to shield from the air and leave for 24 hours. Hold the resultant spore printed out of the sun in an airtight plastic container.

To fill a spore syringe, remove some of the spores in a clean container of purified water. You can find this in the car parts shops. Then fill the needle (which will also be sterile) and pour it back into the bottle several times to disperse the spores equally. Fill it for the last time and place it inside the airtight plastic container. Leave at room temperature for a couple of days to allow the spores to hydrate. You can keep the syringe in the refrigerator until you're ready to use it. It's expected to last at least two months.

Alternatives and modifications

Numerous improvements have been made to the P.F. Tek process to maximize yield and make it simpler. Various animals also tend to perform best under different substrates and environments. The essential alternative to the simple P.F. Tek is the monotube process, which involves bulking on coir (coconut fiber extract), manure, straw, or some other fresh and nutritious substrate. Eventually, you may want to play with any of these different approaches, but for now, P.F. Tek is a decent start.

Harvesting, dosage and Preserving

When the mushroom grows to full size, the cap should be broader and more spherical. At first, the gills will be protected by a wing of tissue, called a veil. These gills connects the edge of the cap with the stalk. As the cap expands, this veil is separated from the cap rim to create an annulus, or a ring of split veil tissue, on the base. The mushroom can be cultivated as soon as the veil has broken. However, if a spore print is to be collected, the mushroom should be allowed to form an umbrella before cultivation. Freshly harvested mushrooms may be eaten fresh or dried and enclosed in plastic bags for preservation. It's an easy matter to make a small drying cabinet made of hardboard or plywood. Essentially, this consists of a wooden box with a hinged door on the front and two or three displays or wire shelves that can slip in and out. An electric light bulb of 150 to 200 watts can be placed in the bottom as a heat source. This form of drying cabinet is appropriate and trouble-free. This generates only heat at 120 degrees F., And it will dry even giant, dense-stemmed mushrooms entirely within 48 hours; the smallest mushrooms will dry in 24 hours using this closet.

They can be dried in a convection oven at low heat (140 F. or less) for 6-10 hours. They may even be dried under a heat lamp, underneath a heating vent screen, or in a small electrical food dehydrator. Mushrooms are fully dry until they are hard to handle, like crackers, with no spongy texture. Mushrooms that were dried at too high temperature will turn brown and taste very bitter. Such mushrooms are considerably less psychoactive. Dried mushrooms should be sealed in five-gram increments in plastic bags. The air has been removed and placed in a tightly sealed glass container or other moisture-proof container and refrigerated to maintain maximum potency. Rolls of luggage material and electrical seals used for packing are sold commercially in retail outlets under the name "Seal-A-Meal" and "Seal & Save." Dry mushrooms left in the open air quickly lose their strength. Fresh mushrooms need not be frozen first, even though frozen in this situation is going to make them into a dark, gooey mess. However, new mushrooms will be kept in a plastic bag in the vegetable pan in the refrigerator for around a week to ten days. Fresh mushrooms older than this should be consumed or dried to avoid spoilage. Dry mushrooms contain 0.2 to 0.4 percent psilocybin by weight.

Some species of Stropharia cubensis have been documented to possess as much as 0.5% psilocybin. Psilocin is only present in small quantities. Such symptoms include sensory and auditory disturbances, intense hilarity, perceptions in time and perception in space, and a feeling of mental separation from the world. Less pronounced effects can be observed at concentrations as low as 2 mg, i.e., roughly 1-2 dried mushrooms. New mushrooms tend to be a bit better than dried mushrooms. Psilocybin is one of the least poisonous to all hallucinogens. The psychological state caused by a full dose of mushrooms is that of euphoria and relaxed lucidity, with no lack of concentration or clarity of thought. The hallucinations seen with eyes closed are vivid, hard-lined, and finely detailed, ranging from abstract geometric forms to images of beautiful landscapes and architectural views. These symptoms are most

severe when the mushroom is used in the situation favored by the Mazatecans: inside at night in complete darkness.

CHAPTER 8

A Guide to Grow Magic Mushrooms Outdoor

If you grow magic mushrooms, likely, you do so indoors. But have you ever considered increasing mycelium outdoors as well? When you grow mushrooms in your backyard or a similar location out, this can have several advantages. You could produce a whole year's supply of shrooms, and it will be less costly! Growing magic mushrooms isn't incredibly tricky; significantly, if you increase your shrooms with a fully equipped grow kit. But if you want to grow shrooms from spores, there can be a learning curve, and it can take a little more work. One of the most significant considerations, when you grow mushrooms, is to avoid contamination with mold. This is why you want to choose the right spot where you can increase your shrooms without risk. With a suitable outdoor patch in your garden or backyard for growing, you don't need to worry about this and can look forward to good yields. If you want to grow magic mushrooms outdoors, you don't even need to have your garden. You could find a nice secluded spot in the forest as well. This comes with the benefit that your mushroom spores will be freely spreading in the area, creating a "magic spot" where your shrooms will grow naturally over time!

Some basics about growing mushrooms

As mentioned, growing mushrooms, fortunately, isn't rocket science. But if you want to do it right so, you can avoid any potential problems that would spoil your harvest, and it can be helpful to know some basics about mushroom cultivation. So, let's look at some shroom facts first before we get more into detail for our outdoor mushroom growth.

Mycelium

Firstly, it is essential to know that the part is growing out from the substrate—the region with the stem and the cap—is not the actual "mushroom," but the fruiting body of the organism. The real thing is what grows underneath, called the mycelium. This is the white web, which extends through the substrate. So, if you want to grow mushrooms successfully, what you are doing is creating an optimal environment for your mycelium to grow.

Mushroom spawn

Whether you're growing your shrooms indoors or out, you need a mushroom spawn. The spawn is any type of substrates, such as rye, sawdust, or wood chips, colonized with the mycelium.

Where do you get a mushroom spawn?

The easiest way to source a mushroom spawn is with a mushroom grow kit. These grow kits usually come with a substrate that's already fully colonized. You can use the spawn from the kit to populate any other suitable substrate, such as if you have a bag of wood chips or sawdust that you want to colonize. Another method is to inoculate a bag of pure grain or another substrate with a spore syringe. No matter

what, when you have a spawn, either from a grow kit or a colonized a bag of the substrate, you can always spread the mycelium. And this is what we will be doing for our outdoor mushroom growing. We'll be getting to this in a moment. Most grow kits use grain as a mushroom substrate. The reason here is that grain also contains nutrition for the fungus, which makes it an ideal medium. Great for an indoor grow, but not so much for an outdoor mushroom growing. This is because the grain is more susceptible to contamination from bacteria and other unwanted pathogens. But you can transfer a grain spawn to sawdust. Sawdust has a lower risk of infection, which makes it better suited for the outdoors. Moreover, if you want to prepare a nice growing patch out, you will need more colonized substrate anyway. So by transferring the grain spawn to sawdust, you are also “multiplying” it for your purposes.

How to transfer grain mushroom spawn into sawdust?

This process is relatively easy. In addition to your grain spawn from your grow kit, you will need a bag of sawdust. You can get sawdust in most pet shops. The sawdust will likely not be sterile, so you have to sterilize it first. For this, immerse the sawdust in a bucket of boiling water for about 10 minutes. After you have sterilized your sawdust, drain the water. Use another bucket and start layering the sawdust with your inoculated grain: Do multiple layers and cover each layer of grain with sawdust, until you have used up the sawdust or have made the desired amount. Now, use a plastic bag or a lid to cover the bucket that contains your layered mix of sawdust and grain. Make sure to open the lid once per day so that oxygen can enter. This way, you can prevent the growth of mold. After several weeks, the sawdust in the bucket will be colonized entirely and ready for the outdoors. As a rule, you will need about 1.2kg of colonized sawdust spawn per square meter for your outdoor mushroom patch.

Find a good outdoor spot for your mushrooms

• **Indirect daylight**

Magic mushrooms love spots with indirect sunlight. They do love the sun, but they also don't want to be exposed to direct sunlight for an extended period. A somewhat shaded area where your mushrooms can still get enough sunlight throughout the day is ideal. Out in the wild, you can find mushrooms growing at the border of wooded areas where grass and shrubs meet. You can look for these types of places to find a spot.

• **slopesok and swales**

Natural slopes and swales are also where mushrooms often grow in the wild. These spots usually have a subsurface flow of water, which greatly benefits the growth of the mycelium.

• **Accessibility**

Yet another essential factor for your outdoor magic mushroom should be accessibility. So a spot that requires a long journey each time you want to visit won’t be of much use. The reason for this is that mushrooms can fruit very fast, sometimes literally overnight. When harvest time comes around, you may want to check on your shrooms daily. If the spot is too far out of your way, you may risk missing a harvest.

• **How to create your mushroom patch?**

When you have finally found the right spot, you want to make it into an optimal growing patch for your magic mushrooms. For this, you will need the following things:

• Your fully colonized sawdust spawn
• Sterile wood chips
• Cardboard
• Small shovel (optional)

• Watering can or a garden sprayer (optional)
• Straw or hay (optional)

How to prepare patch?

1. Clear the entire spot of debris. With a shovel or your hands, you should also dig as far down until there is nothing but plain earth. By removing all excess dirt and debris from the area, you reduce the risk for contamination and can make sure that mycelium grows optimally without competition.

2. Line the cleared spot with cardboard and place a 5cm thick layer of sterile wood chips on the cardboard and spread it out evenly.

3. Moisten this first layer of wood chips. Use a watering can or a sprayer for this. If you're preparing your grow spot in your own backyard, you can just use a garden hose.

4. Spread the first layer of sawdust spawn evenly on the moist chips. For each layer, use about 400g of spawn per square meter.

5. Cover this layer of sawdust spawn with with another layer of wood chips. The layer should be about 7cm thick.
6. Use the hose or watering cane again to moisten this layer. Place another layer of spawn on the moistened wood chips.
7. Once again, moist the wood chips and cover with another layer of spawn just like before.
8. At this point, you should have done three layers of wood chips and three layers of spawn.
9. Moist the entire spot with water again.
10. Put a cardboard layer on top to keep the moisture in.
11. If you want an extra layer of protection for your mushroom grow spot, you can cover the bed with straw or hay. However, if you want to do this, you need to use sterilized straw— sterilized with boiling water in a bucket, just as you did before when you sterilized the sawdust. If you use unsterilized straw, there is a good chance that the straw contains all kinds of fungus that may overgrow your mushroom mycelium.

Now, when you're done with your outdoor mushroom patch, all you need is some patience. Leave the growing patch undisturbed for at least six months. In this time, the mycelium will colonize all the wood chips in your increasing location. Sit back, relax, and look forward to an incredible outdoor harvest!

What is the best time to prepare your outdoor mushroom growing patch?

Most types of cubensis will fruit in late fall or early winter. Since it will take about six months for your growing location to be fully colonized, an excellent time to make your outdoor patch is likely in early spring, around March in the Northern Hemisphere. But you need to also take into account the time it will take to colonize your sawdust spawn. You want to do this ahead of time before you head out into the wild in spring. A good time to inoculate your sawdust can be in January. If you do it this way, you can plan your outdoor mushroom grow for a fall harvest.

Some extra tips

Most of the time, if you have found the right spot and have brought out your spawn as we explained in our guide, you shouldn't be required to do anything further. Mother Nature will do the rest and will reward you with plenty of shrooms come harvest time. But there can be times when you want to take some extra care so that your shrooms are guaranteed to grow well. For example, if the season is unusually dry in summer, you may want to water your bed once in the morning and once in the evening. When harvest time comes around, make sure that you check on your mushrooms frequently, preferably every day. This way, you won't miss out on some sprouted magic! Likewise, if you are harvesting your magic mushrooms, look out for anything that might be growing alongside them. No matter how careful

you planned everything, there is always a risk that invasive species may increase. You don't want to consume those!

CHAPTER 9

What are the Safest Ways to Prepare AND Consume Magic Mushrooms?

The simplest and easiest method to digest shrooms is by swallowing them up straight. However, there is a significant danger to this process as shrooms are sometimes obtained from cattle garbage. That's not necessarily the case, so when you know that your stockpile came from a sterilized home, move on the side of safety and conclude that it grew under a cow patty. Washing the shrooms is relatively easy. Run it under cold water, brush off some mud or droppings, and put it on a paper towel to rinse. Effectiveness will not be compromised by a water rinse, but bear in mind that shrooms can quickly absorb water.

If you want to clean your mushrooms without rinsing or boiling, look for a mushroom comb. These culinary instruments were specially crafted with bristles stiff enough to clear soil but also flexible enough to protect the flesh of the shroom. Or you might just clean your shrooms down with a wet paper towel. After washing the shrooms, you can crush them in powders and put them in gel caps. When you know more or less how many you put in each gel cap, you can accurately measure the dosage. Gelcaps are a perfect way to store shrooms or to carry them discreetly. Just make aware that they are specifically distinguished from all other herbs, minerals, or dietary supplements.

Smoking shrooms

There is a serious debate as to how anyone should get away from smoking shrooms. There are a lot of anecdotal stories, but even though it does, it usually doesn't last as long or as profoundly as swallowing them orally.

• **Mix mushrooms with other food**

Move up from eating undercooked shrooms: brush them on or blend them in another bowl. Pizzas and pasta are standard methods, but feel free to be innovative. For example, crushing shrooms and eating them with a handful of Japanese rice crackers will mask the shroom flavor with almost zero preparation. As if you were eating raw shrooms, you would clean the fungus before rubbing or sprinkling it on your milk. Only a small amount of heat will allow virulent bacteria to replicate at infectious rates.

• **Shrooms infused with chocolate and other sweets**

Placing pieces of psychedelics in chocolates, caramels, or other confectioneries is another fantastic way to eat them. In the presence of chocolate bars, caramels, cookies, or some other sweet that needs baking, note that psilocybin breaks down to around 190 ° F. That cooking for a more extended period (30 + minutes) above that temperature may have an impact on efficacy. You can also try no-bake variations of your favorite snacks to conserve fuel, too.

• **Shroom tea**

Besides eating them relatively tender, making shroom tea is the most famous way of consuming psilocybin. You've got to have a quick-andfacil shroom tea recipe that you can try at home, but again, feel free to be adventurous. You can add almost every kitchen ingredient to your shroom tea without losing its efficacy.

• **Sauteed stews, quiches, risottos, and other culinary delights**

Were you a culinary artist who won't be content with only teas or psilocybin crumbles? Perhaps you've been cooking with hemp, and now you'd like to try some shroom dishes with your hand? Just know that psilocybin is heat sensitive and begins to break down at around 190°F. Psilocybe cubensis mushrooms have a propensity to infuse everything with their classy flavors. So, imagine cooking shrooms in foods with rich, intense flavors to keep the gnarly flavor away from your taste buds.

Swallow and straight-up chew

The traditional way to eat magic mushrooms is literally by swallowing them. In this case, it is essential to chew the juices rigorously, to allow all the juices to come out. The psychoactive compound that your saliva releases from the mushroom will start to mix with your blood and reach every cell in your body. It should take more or less 45 minutes for them to start functioning, based on their stomach content – the less you consume then, the healthier. It is advisable to skip eating for a few hours. You could opt for a truffle grinder to skip the not-so-pleasant chewing part.

Mushroom in the form of tea

Not exactly a massive fan of the sour taste of mushrooms? Dream about having a magic cocktail. Taking your mushrooms in the form of a tea will cause a particular flavor to disappear. Only boil a little water, crush the required level of shrooms into small pieces, and dump them in. Heat the pan gradually, keep it close to simmering, but do not bring it to a boil – otherwise, you might kill the active compound and end you with an unpleasant drink of no psychoactive benefit. Let it rest for about 10 to 15 minutes and "enjoy."

Magic mushroom capsules

Capsules give consumers the option of microdosing their hallucinogenic drugs or truffles. If cruising higher planes of presence for hours on end doesn't apply, but you would like a chance to experience comprehensive insight without losing a whole day, capsules maybe your best friend. You can make your magic mushroom capsules using a little more than empty capsules, a capsule machine, and a grinder! Tablets can be used discreetly during the day, topping up if necessary. Shrooms are not known to be tasty. Luckily, this process reduces the moldy taste and makes dosing more comfortable than ever before. Only ever take the capsules you made yourself — that way, you can guarantee their integrity. Stealthy in nature, it is much safer and less conspicuous to cart around any of the capsules than the bags of entire or ground mushrooms. Pills can even be vegetarian-friendly, catering to the needs of many users.

As far as microdosing is concerned, the practice can be more or less customized by regular doses. Many people mention using mushrooms in this way to aid them in artistic activities or those that require problem-solving. Through promoting positivity, increasing energy levels, and helping to concentrate, the trick to microdosing is to maintain the volume of mushroom per capsule below 0.5 g. This way, the impact will not overpower the consumer. You 're going to know your tolerance level better than anyone else, so it's worth experimenting to find out what works for you. Keep in mind, start low, and go slow.

Psilocybin edibles

Add magic mushrooms to your diet, and you can unleash a whole new world of experiences-not only on a magical trip, but just by learning your culinary skills. Fundamentally, the introduction of mushrooms to food can improve the flavor and the sense of nausea that most people suffer. Since magic mushrooms can be added to virtually any food, user preferences will be given priority. However, if you're left with plans, the following tips may be a perfect way to appreciate the meal. The trick with your chosen recipe is to avoid adding the mushrooms at any cooking stage. Psilocybin, the essential part of the mushrooms that lets you fly, tends to disintegrate under extreme heat. Baking mushrooms on top of pizza, for example, will result in a horrible trip experience. Instead, after frying, consider applying them to sauces or toppings. A prime example would be the addition of shrooms to freshly made pesto or honey, both of which can be enjoyed cold. Magic chocolate truffles are the favorites. The more mushrooms you use, the stronger and longer the trip; so again, try your dosage until you find what's right for you.

Lemon tek

Lemon Tek is a kind of magic mushroom drug. Not only is it quick and straightforward to take, but consumers also assert that the lemon's alkaline nature breaks down the psilocybin, intensifying the subsequent trip. Although the question of an accelerated journey is a ferociously contested one, many believe that using this approach would make the trip quicker. With that, in my opinion, we would always recommend starting with half the number of shrooms you would typically have. Consumption is relatively easy. Ground magic mushrooms enter lemon juice in a bottle of your choosing. Leave it to sit down, add some water, and go down. As we have said, the party child's use of the shroom.

Cooking of mushrooms with acidic ingredients

Psilocybin is not a component of the shrooms that let us go on a journey. In reality, the substance that enables us to fly is psilocin, which our bodies make from psilocybin after the body absorbs it. Research demonstrates that psilocybin can be converted to acid psilocin. This involves not just the naturally created acids in our bodies, but also the acids in our skin. Long-term shroomers will inform you that removing psilocybin with lemon juice, and the acid will make your journey quicker and easier. So, cooking or preparing your lemon juice — or tomato sauces, or milk, or coffee, or any other acidic additive — may affect your dish's potency. Know as you brace yourself or your mates for a psilocybin encounter. Basically, gradually lower and go slow, party responsibly, and play safely. Then, as always, if psilocybin mushrooms are illegal in your area, follow those ideas at your own expense. Alternatively, view this knowledge as something to look forward to when your region, state, or country legalizes or decriminalizes magic mushrooms.

Risks of magic mushrooms

There are many risks in taking magic mushrooms. Here are some of the potential risks to be considered.

• **Addiction**

Psilocybin is not toxic and does not result in obsessive use. This is partly because the medication will induce an extreme "trip." Plus, people can develop an immunity to psilocybin relatively quickly, making it impossible to see any effect after multiple days of regular use.

• **Adulteration**

It is also usual for magic mushroom items to be polluted. A survey of 886 specimens of psilocybin mushrooms tested that only 252 (28 percent) were potentially psychedelic. At the same time, 275 (31 percent) were standard LSD or phencyclidine (PCP) mushrooms, and 328 (37 percent) contained no drugs at all.

• **Poisoning**

Since hallucinogenic drugs appear similar to toxic mushrooms, poisoning is another possible danger of taking such medications. Mushroom poisoning can cause serious illness, organ damage, and even death.

• **Acceptance**

Like other drugs, the more magic mushrooms you consume, the more resistance you grow. Tolerance is also rapidly developing with regular use. This means that you need more drugs to achieve the same effect. Developing immunity may be particularly dangerous for shrooms, as eating a significant quantity of shrooms may lead to withdrawal effects that could include anxiety, vomiting, nausea, muscle fatigue, hysteria or paranoia, hallucinations, and seizures.

• **Extraction**

While users typically document physical withdrawal symptoms when they stop using the narcotic, some encounter psychological effects that may include depressive symptoms.

CHAPTER 10

Doses and Effects of Magic Mushrooms

Psilocybin is the active psychedelic component in psychedelic mushrooms. The optimal dosage for experiencing the effects of dried mushrooms is usually 0.2-0.5 g, but it differs for each person. A moderate dose in the 1-2.5 g range, taken orally, typically produces effects lasting from three to six hours. Psilocybin is about 100 times less potent than LSD and ten times less potent than mescaline. If you take psilocybin, the drug is metabolized to psilocin by the liver, all of which cause psychedelic effects. Psilocybin and psilocin specifically interact with brain serotonin receptors and have an exceptionally high affinity for 5-HT (serotonin) 2A subtype receptors. Among rats, psilocybin has demonstrated a strong association with receptors among brain core regions that enhance sensory perception. It could clarify symptoms such as synesthesia — an experience of combining sensory types, such as hearing colours or sensing sounds — and distorted sensory perceptions on mushroom trips.

Micro dosing

Micro dosing is the process of ingesting sub-perceptual (unnoticeable) amounts of a psychedelic substance. Many people report higher levels of creativity who have incorporated microdose psilocybin mushrooms into their weekly routine.

Dose effects

These ranges of doses are for Psilocybin cubensis mushrooms. They may implement to other psilocybin-containing species, but on average some (e.g. P. semilanceata) is more effective.

Micro-dose (0.05-0.25 g)

A micro-dose is a sub-perceptual (unnoticeable) dosage that certain people carry during their weekly routines. The concept behind this is to increase the degree of imagination, attention, and concentration, and the tension, anxiety, and emotional distress. Common effects shall include:

• Lower stress
• Emotional stability
• Awareness, focus, and peace
• Openness and acceptance to selves
• Fluidity of speech
• Alleviation of chronic disorders such as stress, anxiety, ADD /

ADHD, and PTSD
• Improved inspiration (e.g. constructive lifestyle changes)
• Improved levels of discharge
• Clearer, more connected thinking
• Enhanced memory
• Rise in innovation
• Easier meditation

• Improved physical strength
• Improved total strength (without stress or eventual crash)
• Minor distortion of emotion, positive or negative
• Potential states of mania
• Possibly increased neuroticism
• Change in attitude

Mini-dose (0.25-0.75 g)

While an appropriate micro-dose should not be felt, a mini-dose of psilocybin is taking you just above the sensory threshold — but this is not a full-blown trip.

• Change in mood, moderate euphoria or anticipation
• Awareness, focus, and peace
• Openness and acceptance to selves
• introverted insight
• Alleviation of chronic disorders such as stress, anxiety, ADD /

ADHD, and PTSD
• Improved inspiration (e.g. constructive lifestyle changes)
• Improved levels of discharge
• Simpler, more connected thinking
• Improved senses
• Easier meditation
• Increased enjoyment of the physical activity and daily tasks
• Introspection choice over socialization
• Increased light sensitivity
• Very slight audio, if any
• Possible states of mania
• Focusing difficulty or thinking loops
• Difficulty with some mental performance
• Anxiety, restlessness, or lethargy
• Difficulty or frustration in socializing

Museum dose (0.5-1.5g)

The symptoms of psilocybin are more apparent with a museum dose than with a mini-dose, but a museum dose is also not going to give you a total psychedelic experience. The term "museum dosage," introduced by the biochemist and pharmacologist, refers to the fact that at this dosage you will still engage in public events (such as seeing the artwork in a gallery) without attracting attention. Popular results shall include the following:

• Improvement of mood, euphoria or excitement
• Increased sympathy
• Fluidity of conversation
• Deep thinking
• Increased states of flow
• Improved senses
• Enhanced appreciation of music, art, etc.
• Increase in creativity
• Reinforcement of emotion, positive or negative
• Adjusted perception of sound
• Time dilation or contraction (time passing slower or faster)
• Increased light sensitivity
• Dilation of the pupil

• Focusing difficulty or thinking loops
• Difficulty or frustration in socializing
• Irritation during treatment
• Mild to moderate visuals (e.g. "breathing" environments)

Moderate dose (2-3.5 g)

This is where the psychedelic experience starts. You will have optical hallucinations, like shapes and fractals, and stuff like time and depth perception will be blurred. Even with this dosage, you're already in a position to understand your surroundings — they're only going to be extremely altered. Popular results shall include:

• Life-changing introspective or spiritual insights
• An increase in the flow of ideas
• Enhanced appreciation of music, art, etc.
• Consider otherwise funny or fascinating worldly stuff
• Clear coming-up, peak, and coming-down
• Emotional amplification, whether good or bad
• Visuals of open and closed eyes (e.g. patterns, auras)
• Synesthesia
• Compulsory yawning
• Disorientation of the system
• Fear and anxiety ('bad trip' experiences)
• Difficulty in cognitive tasks
• blurred vision
• Nausea
• Insensitive to light

Megadose (5+ g)

Mega-dose results in a total loss of basis in reality. This is where you will experience extreme hallucinations, as well as ego death, mystical experiences, and deep introspection. Popular results shall include:

• Spiritual experience and intense feeling of curiosity
• Life-changing introverted or philosophic insights
• Death of the self
• Powerful open-and closed-eye visions (e.g. memories that

come to life)
• Dissociative symptoms
• Time to become meaningless
• Disorientation of the device
• Recommended engine functions
• Strong fear and anxiety (extreme "bad trip" experience)
• Severe trouble with executive tasks;
• Dizziness
• Nausea

Confrontations with other medicines

So far, there are not many data on psilocybin interactions with other drugs, whether positive or negative, but it is best to be meaningful and come down on the side of caution when mixing any two substances. Here's what we know about this.

Positive interactions

• Cannabis: Cannabis has the bits of help to improve the psychedelic essence of mushrooms, but it's better to wait until the latter half of the experience so that you don't interfere with the insight of psilocybin.
• Ketamine: Psilocybin + ketamine are a traditional Burning Man mixture.
• MDMA: Colloquially known as "hippy tossing," adding MDMA and psilocybin is a common occurrence. Although no current research promotes the protection or threat of this combination, anecdotal reports show that MDMA can enhance your psilocybin excursion and even help you avoid being overcome by negative thoughts.

Neutral interaction

Coffee: There are no common side effects of mixing coffee and psilocybin, but some believe that boosting caffeine energy can improve psilocybin experience.

Negative interaction

• Alcohol: anecdotal findings from emergency rooms recommend that the healthiest and smartest bet is to abstain from alcohol while on mushrooms. When using any psychedelic, it is best to abstain from alcohol.
• Adderall, Xanax, SSRI antipsychotics: these are powerful psychoactive drugs with largely subjective side effects, and psychedelic use should be approached with extreme caution when taking any of these substances regularly. On top of that, psilocybin is a potent serotonin agonist, which means that it could interfere with any drugs that alter the serotonin system.

Risks & benefits

Potential benefits

Among several historical cultures that have used them, psychedelic mushrooms have a long-standing, meaningful and well-known reputation as agents of healing and change. Beyond that, the advantages of these powerful little fungi are being recognized in a great way today. Studies on the widespread and multifaceted use of psychoactive mushrooms are being performed across the United States and abroad, and there is strong evidence that they are indeed drivers of personal development. One recent research found that a single dose of psilocybin generated substantial and long-lasting decreases in depressed mood and anxiety, along with a boost in the standard of living. The mysterious and transformative encounters that emerged before psilocybin reached the American psychedelic lexicon in the 1960s are still being discussed and explored in traditional medical research. The findings are positive and convincing, indicating that psilocybin may be an effective healer. More specifically, clinical trials involving patients with life-threatening cancer have been and are currently underway in the United States and internationally. These studies are primarily intended to understand the efficacy of high-dose psilocybin experience in therapeutic environments as a tool to reduce psychological stress and anxiety often associated with a lifethreatening diagnosis. The results have been promising so far. Under double-blind, placebo-controlled settings, a single high dose of psilocybin has been found to alleviate the symptoms of psychiatric discomfort in terminally ill patients, and the benefits of this treatment have been significant and lasting.

Hazards

Psilocybin is widely considered to be one of the safest psychoactive substances you can take. That is five times smaller than that for MDMA, LSD and cocaine. Psilocybin is also non-addictive, and there is no known fatal dosage, which means that even though you have a bad ride, you are unlikely to overdose. Psilocybin can induce certain physical side effects, such as nausea, perspiration, numbing,

and tremor, at the beginning and during a ride. It can also contribute to fear, heart attacks, depression, and mood swings. A survey found that up to 33% of the people surveyed who had taken mushrooms had felt paranoia and anxiety at some stage during their journey. Long-lasting physical and psychological effects are uncommon. When they do occur, research suggests that the cause was latent psychological disorders, not the fungi themselves.

There is. However, something called Hallucinogen manifesting Perception Disorder (HPPD), frequently referred to as "flashbacks." Unlike PTSD-related flashbacks, even so, HPPD is unique to psychedelics and includes sensory alterations in weeks or months regarding the use of psilocybin (or other psychedelics). The prevalence of HPPD is unknown, but is considered to be a rare disorder and is not associated with any physical changes or neurological damage.

Therapeutic use

As far back as the 1960s and 1970s, psilocybin studies have suggested that the substance can perform a strong potential in the treatment of a wide variety of disorders, including chronic migraines, anxiety disorders, and addiction. However, after the federal government reclassified psilocybin as a Schedule drug in the 1970s, research into its therapeutic effects became virtually non-existent. Today, with anecdotal accounts of the medicinal benefits of psilocybin gradually catching the interest of medical practitioners and regulators and trickling into the media, research is being funded and performed by a variety of organizations.

Psilocybin in Mood and Anxiety Disorders

For years, observational studies have indicated that psilocybin (and other psychedelics) is a successful cure for mood problems, such as depression and anxiousness. For example, in 2011, the research study tested the effects of psilocybin on depression and end-of-life anxiousness in terminal cancer patients. Patients in this study had advanced cancer and a clinical diagnosis of stress or anxiety associated with their disease. After psilocybin therapy, researchers have seen substantial improvements in anxiety and depression measures up to 6 months after the trial. Another research indicates that psilocybin can be used to manage severe depression. In the study, twelve patients received two doses of psilocybin (one low and one high) coupled with psychological support. One week after the second dose, depression levels were positively reduced in almost all patients, with 8 out of 12 showing no depression symptoms. Three months later, five patients were free from depression, and four of the remaining seven had a decrease in their depression rating from "intense" to "Mild or moderate." Psilocybin treatment has also been shown to efficiently reduce the symptoms of obsessive-compulsive disorder (OCD) in a small study of people who did not respond to conventional serotonin reuptake inhibitor (SRI) drug therapy. In this study, all patients showed a decrease in OCD symptoms ranging from 23 per cent to 100 per cent.

Psilocybin in Alcohol Therapy

In the 1950s and 1960s, "classic psychedelics" were used in preclinical trials to treat with impressive outcomes effectively. But again, once many of these psychedelics have been made illegal in the U.S. and most of Europe, research into their use for therapeutic applications has come to an end. However, recent years have seen the reemergence of research into psilocybin and other psychedelics as promising treatments for addiction. In a study, for example, psilocybin was shown to be useful in treating alcoholism as part of an assisted treatment plan. Large decreases in alcohol and abstinence were recorded following administration of psilocybin as part of the treatment plan. Psilocybin also looks to be prospective tools that can help people stop smoking tobacco. In a recent trial, 15 smokers had two to three psilocybin sessions as part of a larger cognitive-behavioural smoking cessation therapy program. Twelve of the participants (80 per cent) were willing to quit effectively. By contrast, traditional smoking quitting success rates — including tobacco, patches, and cold turkey — have only a 35 per cent success rate.

Psilocybin in Cluster Migraine Therapy

More severe but shorter in period than migraine headaches, cluster headaches are often characterized as the most painful and problematic type of headache and seriously impact a person's life. To date, no comprehensive studies have been published describing the possibility of psilocybin to treat cluster headaches, but observations that this use has caught the attention of the medical community. Healthcare experts began taking notice of psilocybin and LSD as treatment options for cluster headaches. After some of their patients reported reductions of their condition following recreational psychedelic use as well as successive self-medication. One recent study reported that psilocybin could be a more effective treatment of cluster headaches than currently available medications. with nearly 50 per cent of sufferers reporting psilocybin as a completely effective treatment. Many clinical trials on this usage are ongoing, and further work will be possible early. Some experts are starting to suggest that much of the positive effects of psilocybin on mental health problems could be related to its capacity to "fix" the Default Mode Network (DMN), the brain's control mechanism. Overactive DMN has been linked with depression and other mood disturbances. Psilocybin has been shown to reduce behaviour in the region significantly. It has been linked with therapeutic effects.

Personal growth

One of the most promising aspects of the intentional and responsible use of psilocybin is its potential to stimulate personal growth. In early trials in which psychedelics were administered to healthy adults under supportive conditions, many participants reported long-term beneficial changes in their personality, behaviours, values, and attitudes. Such early observations have also been replicated in more recent research. Approximately 40 % of participants in laboratory studies involving psilocybin reported positive, long-term changes in their aesthetic experience and relationship to nature. Empirical accounts have since followed such early observations. Upon a psilocybin encounter, people frequently show greater love of culture, art and nature, greater empathy towards others, and enhanced inspiration and imagination. A 2011 study has shown that more than a year after participants had a single psilocybin encounter, their self-reported accessibility levels remained substantially improved, which studies in this study and elsewhere relate to a very obscure yet strong dimension of a mushroom trip: magical encounter. In this situation, spiritual experience is characterized as "feelings of harmony and interconnectivity with all people and objects. A sense of righteousness, a sense of peace and happiness, a sense beyond transcendence beyond normal time and space, ineffability, and an unconscious conviction that perception is a source of empirical truth regarding the nature of life."

These subjective results, such as perceptions of interconnectedness, are presumably attributable to the capacity of psilocybin to which the interconnectivity of the brain communication hubs. In plain language, that means that psilocybin allows for more "cross-talk" between regions of the brain that are normally segregated. Scientists are speculating that this allows a state of "unrestricted cognition," implying that the forms in which we usually organize, categorize, and distinguish facets of cognitive perception are torn down, and thought is more fluid. it helps to know that similar patterns of brain activity are also observed in different states of meditation. Work has demonstrated that psilocybin can be used to improve one’s spiritual activity. In a recent study, 75 participants participated in a six-month spiritual course involving meditation, awareness and self-reflection. During the course, participants received either a low or a high dose of psilocybin. At the end of the six months, patients with a large dose of psilocybin reported substantially bigger changes in indicators of spirituality such as emotional closeness, sense of life, the transcendence of death, and redemption. Having all of this in mind, many people agree that psilocybin (and other psychedelics) may be a central component in self-improvement and self-optimization. Through giving birth to the sensation of becoming linked to the world (in whatever human shape it takes) and facing the darkest aspect of yourself, many agree that psilocybin will enable you to take the requisite measures to become the strongest version of yourself you can be.

Legality

Psilocybin has been banned in most countries for decades, although in some cases the drug remains into the legal grey region. In the Netherlands, for example, it is possible to buy "magic truffles" containing psilocybin without breaking the law due to a legal clause. Psilocybin is also legal in some form in Brazil, the British Virgin Islands and Jamaica. While psilocybin remains prohibited at the federal level in the U.S. Psilocybin mushrooms were deemed safe for growing and consuming (as long as they are not dried) in New Mexico in 2005. In 1978, the Supreme Court of Florida ruled that the cultivation of wild psilocybin mushrooms was essentially lawful. Nevertheless, given the fact that spores are safe, rising spore mushrooms are often known to be an illegal practice.

CHAPTER 11

Healing Power of Psychedelic Mushrooms

Scientists now recognize the therapeutic powers of magic mushrooms as an effective method for self-actualization and treating psychiatric disorders. Hallucinogenic mushrooms appear to have been part of human culture since their very beginnings. Art dated back to 5000 B.C. And through several continents, it reveals how diverse civilizations across the world worshiped the magical healing powers of the magic mushroom. Beginning in the 1960s and continuing today, clinical experiments are ongoing to explore the short-term and longterm effects of the active ingredient of psychoactive mushrooms, psilocybin, and the findings are mostly favorable. Here's what current literature suggests about the use of psilocybin with specific possible indications.

Anxiety

Depression is one of the most studied reasons for psilocybin therapy. As Healthline stated earlier this year, Psilocybin therapy was marked "breakthrough medication" by the FDA for the treatment of stress.

Dissolution of smoking and other addictions

Dissolution of smoking and other addictions

month follow-up cycle. According to researchers, psilocybin also can cure many drugs uses conditions, including alcohol and cocaine dependency. "The general theory is that the essence of these diseases is a restricted emotional and behavioral range. “So, in well-organized treatments, psilocybin can shake someone out of their habit and provide a snapshot of a bigger image and build emotional plasticity in which people can step beyond these issues.

Psychological suffering associated with cancer

There have been some positive research findings in fields such as the management of extreme suicidal fear in individuals approaching the end of their lives who are diagnosed with advanced cancer. A randomized, double-blind study showed that a single dose of psilocybin substantially increased quality of life and reduced anxiety and depression in people living with life-threatening cancer. "The thing we have the most data for is cancer-related depression and anxiety. It seems reasonable, and I'd be shocked if the findings didn't hold up.

Psilocybin appears to be briefly reorganizing the brain

Psilocybin binds to a serotonin receptor in the brain, which is believed to induce much of the sensory hallucinations. But, along with hallucinations and mood swings, people who take psilocybin also perceive an elusive, dreamlike experience of "broadened consciousness." Research like functional magnetic resonance imaging (fMRI) has shone a light on what it feels within the brain in recent years. In one test, for example, researchers tested the minds of 15 people to send them psilocybin. MRI

increased in the brain network related to emotional learning, with similar activation in various regions such as the hippocampus and the anterior cingulate cortex. Around the same time, the behavior was less structured in the brain network, connected to high-level thought and self-awareness.
Another fMRI research found a "dramatic shift" in brain structure, connecting psilocybin to a sudden burst of neuronal interactions that usually did not occur. We consider that the psychedelic state is correlated with a less restricted and more intercommunicating mode of brain activity, consistent with explanations of the essence of consciousness in the psychedelic state. Besides, a team of researchers found that psilocybin can also bind to receptors that stimulate healing. It is assumed, however, that psilocybin restores and develops brain cells, which may prove useful to those suffering from depression or other mental health issues.

Psilocybin may cause a persistent change of attitude

Although brain function usually returns to normal after psilocybin wears off, evidence indicates that specific symptoms can last longer. One research assessed how psilocybin affects five facets of personality. These are neuroticism, extroversion, Transparency, empathy, and conscientiousness. Fundamental changes in Transparency were found after a high-dose psilocybin session. Openness is a psychological term describing someone's disposition to new experiences and is synonymous with characteristics such as imagination, ingenuity and esthetic appreciation. Naturally, if anything, Transparency tends to decline as people grow older. Until the tests started, participants were all considered mentally stable, researchers said, and their psilocybin treatments were closely supervised. Some of the participants expressed intense apprehension or distress during the sessions. Although this response was transient, the researchers said it demonstrated the possible dangers of attempting hallucinogens without professional oversight.

Psilocybin can momentarily 'disintegrate' your ego

Some people worry about losing their sense of self in magic mushrooms. This "dissolving" of the ego is typically short-lived but may be associated with some longer-lasting effects of psychedelics. The ego dissolution results in a moment of heightened consciousness, a state in which the mind is more clearly and more deeply connected with the universe. Via this practice, it could be possible to re-engineer the processes of selves, which may, in effect, alter people's perspective or worldview. The deep sense of relation brought on by this experience has the potential to be useful to individuals suffering from anxiety, depression, and other types of addiction. People who go through psychotic encounters no longer take it for granted that the way they've done it is the only way to do so. Psychedelics can serve to enlighten people about the mechanisms underlying their subjectivity. Ego destruction provides dramatic scientific evidence that things can be changed, but that there is an incentive to achieve improvement. Even the ingestion of "microdoses" of magic mushrooms will stimulate a person's imagination. Participants who ate tiny amounts ended up with more suggestions about how to solve a problem and became more articulate, agile, and creative with the options they had come up with.

While magic mushrooms are largely banned and often used as dangerous party drugs, a growing body of research places them in a much less sinister light. Not only are they healthier than other people think, but they have a compelling ability to deal with a range of mental health issues. For one thing, psychedelics generally have a negligible habit-forming potential. Any psychedelics can also help to overcome addiction to substances such as narcotics and nicotine. Magic mushrooms are now widely used as a possible healing miracle drug. Research clearly shows beneficial outcomes on anxiety, for example, which can effectively restore the activity of essential brain circuits known to play a role in mental illness. The compound tends to increase emotional sensitivity in the brain; another recent study showed that it could alleviate stress without cognitive blunting often associated with conventional antidepressants known as selective serotonin reuptake inhibitors (SSRIs).

Psilocybin has also provided profound recovery from fear, particularly in patients with life-threatening cancer. For one study, mild doses of psilocybin paired with psychotherapy helped cancer patients resolve anxiety and stress due to their diagnosis, leading to a long-term improvement in the quality of

life and confidence. Six months after a single dosage (which lasted just four to six hours), approximately 80 percent of patients had observed a substantial decrease in anxiety and depression, and 83 percent reported higher life satisfaction. Twothirds have also listed their psilocybin session as one of the five most essential encounters of their lives. The classic caricatures of magic mushrooms appear to be evolving rapidly. Psilocybin has recently been described as a "breakthrough treatment" for depression in the U.S. Food and Drug Administration. At the end of 2019, a new study showed that 89 healthy participants had "no significant side effects" and no detrimental impacts on neurological or emotional control.

Life-changing experiences

The cost of taking psychedelic mushrooms with correct dose, purpose, and environment is profound and sometimes life-changing. Like other psychedelics, extreme and often terrifying hallucinations can be part of a creative process. Still, they can be reduced with careful preparation and treatment and are often an essential part of a transformational experience. Psilocybin may give rise to spiritual-type hallucinations with profound and lasting personal significance and spiritual needs. The importance of significant and enduring mystical experience cannot be overstated, both for healthy adults and those suffering from mental health disorders. A vast array of physical and mental illnesses can be traced back to trauma, unhealthful patterns of behavior, stress, and identity struggle. The ability of magic mushrooms to promote peace, knowledge, and contact with the world is a beneficial medicinal device that can cure many illnesses right at their roots. Research is now demonstrating that they can be used in a wide variety of clinical applications.

Psychotherapeutic Applications

Scientific studies conducted over the past 50 years have shown the significance of psilocybin in the treatment of the obsessivecompulsive disorder (OCD) and tobacco addiction control. Efforts to understand how to use magic mushrooms for these and other conditions can significantly minimize the need for invasive surgery and dangerous prescription medicines. Psilocybin therapy provides the benefit of psychological and moral enlightenment instead of causing unpleasant or harmful side effects. In addition to LSD, psilocybin was also used in the treatment of terminal cancer patients with stress and anxiety associated with their diagnosis. There are very few people on the earth who need greater love and support than those who are dying. The happiness and moral fearlessness that comes with the sight of the mushroom is the ideal remedy for those on their deathbed, helping them to enjoy their remaining days to the fullest of grace and peace.

Conclusion

In this book, we've covered everything that is important for avoiding and uptaking of magic mushrooms. Magic mushrooms have severe hellicination effects on the brain of consumers. The biggest mistake you make after learning these consuming methods is to use them favourably and keep them away from others, rather than spreading the information to others. Magic mushrooms consumption is not easy for everyone. The mushrooms containing psilocybin are known as magic mushrooms. Psilocybin is a schedule-I controlled substance, meaning that it has a high potential for abuse and serves no legitimate medical purpose. Individuals use psilocybin as a recreational drug. It provides feelings of euphoria and sensory distortion that are common to hallucinogenic drugs, such as LSD.Although medical bodies do not consider psilocybin to be an addictive substance, users can experience disturbing hallucinations, anxiety, and panic from using the drug.

Psilocybin is a hallucinogen that works by activating serotonin receptors, most often in the prefrontal cortex. This part of the brain affects mood, cognition, and perception. Hallucinogens work in other regions of the brain that regulate arousal and panic responses. Psilocybin does not always cause active visual or auditory hallucinations. Instead, it distorts how some people that use the drug perceive objects and people already in their environment. The quantity of the drug, past experiences, and expectations of how the experience will take shape can all impact the effects of psilocybin. After the gut ingests and absorbs psilocybin, the body converts it to psilocyn. The hallucinogenic effects of psilocybin usually occur within 30 minutes of ingestion and last between 4 and 6 hours. Mushrooms containing psilocybin are small and usually brown or tan. In the wild, people often mistake mushrooms containing psilocybin for any number of other mushrooms that are poisonous. People usually consume psilocybin as a brewed tea or prepare it with a food item to mask its bitter taste. Manufacturers also crush dried mushrooms into a powder and prepare them in capsule form. Some people who consume these mushrooms cover them with chocolate.

The effects of psilocybin are generally similar to those of LSD. They include an altered perception of time and space and intense changes in mood and feeling. The effects of psilocybin vary between people, based on differences in the mental state and personality of the user and the immediate environment. If the recreational user experiences issues with mental health or feels anxious about using the hallucinogen, they face a higher risk of having a bad experience. Psychological distress is the adverse event most often reported after recreational use of psilocybin. This distress can take the form of extreme anxiety or short-term psychosis.

Symptoms of mushroom poisoning may include muscle spasms, confusion, and delirium. Visit an emergency room immediately if these symptoms occur. Because hallucinogenic and other poisonous mushrooms are common to most living environments, a person should regularly remove all mushrooms from areas where children are routinely present to prevent accidental consumption. Most accidental mushroom ingestion results in minor gastrointestinal illness, with only the most severe instances requiring medical attention.