

Microdosing 101

By Kali Archipley

Microdosing is the practice of taking sub-perceptive amounts of a substance to gain benefits without experiencing the effects larger doses provide. Virtually any substance can be microdosed, but this term is most commonly used to describe a protocol with psilocybin, ketamine, MDMA, or LSD. In this guide, we will be speaking mostly about the effects, benefits, and risks of psilocybin mushrooms.

Background of Psychedelic Mushrooms

There are over 100 different species of mushrooms which contain psilocybin, and they are found all over the world. Humans have shared a rich history with fungi, with theories about how humans have interacted with psilocybin dating back to over 100,000 years ago. Dr. McKenna theorized that early humans' utilization of these mushrooms helped to propel them into advanced cognitive abilities, bringing us to where we are today. Historically, mushrooms and other psychedelics like ergot (LSD) can be found to have been documented in numerous ancient civilizations, in current indigenous religious practices and in new age spiritual connections.

Dr. McKenna's theory of how early humans utilized these mushrooms implies that microdosing has been around for quite a long time. In the 1950's, a reemergence of psychedelic use and research inevitably helped triggered the "War on Drugs", and these substances ultimately being made illegal and schedule 1 on the federal substance list. Today, we are learning that the risks believed to be involved in consuming these substances were false, and the expansive benefits of them have only barely been tested. Today, we are experiencing another psychedelic renaissance, and as our governments reconsider the legal barriers of psychedelics, researchers, religious leaders and individuals are starting to test the limits themselves.

What We Know So Far

Anyone with a background in natural medicines and herbalism knows the concept "if it can help, it can hurt". While psilocybin mushrooms are incredibly safe, with no known "lethal" dosage, individuals must consider their overall health when choosing to utilize any medicine or natural substance, and identify risks accordingly.

Psilocybin enacts upon serotonin receptors in the brain. What is beautiful about this medicine is that it doesn't harm any receptors or tissues in the body (unlike alcohol, many Rx or street drugs). Already research has shown that psilocybin can help to build new neural pathways in the brain, making it neurogenerative, and can help individuals heal both physical and emotional trauma. These are the keys we aim to unlock with microdosing.

Psilocybin helps to heal trauma in the brain and body by offering new pathways for our nervous system to react to repeat experiences and input. It's helpful to utilize an analogy when teaching this concept: Imagine your brain is a forest, and your experiences become paths that are carved into the forest floor over time. Our deepest, most internalized traits, behaviors, and reactions become deeply entrenched roads in our brain, and we are generally destined to fall into those same paths over and over again until we become conscious of them and are able to make a new choice. In dysfunction, these paths are the form of emotional and physiological triggers brought upon by the reemergence of traumatic experiences and memories, substance use and addiction, negative thought patterns about ourselves or the world around us, or dysfunctional behaviors, thoughts and relationships. When psilocybin enters our system, it's like covering this forest in a thick blanket of snow. In addition to the psychedelic visual, spiritual and mystical experiences people have on larger doses of these medicines, they also help to provide individuals with new insights to their lived experiences and offer them new directions they may take outside of these well worn tracks.

When psilocybin is used in microdosing, it offers these same healing insights in a much more subtle form over time. Microdosing is often sub-perceptible, but individual experience and dosage differs widely and one's needs may change over time. But often, there are multiple themes and side effects noted in most individuals that are positive, negative, or telling.

Positive Effects:

- Euthymia (overall sense of wellbeing, "happy")
- Calm, reduction in anxiety
- Increased Focus
- Decreased symptoms of depression
- Higher tolerance to emotional/physical triggers
- Reduction in physical/nerve pain
- Reduction in body tension
- Improved energy levels
- Improved sleep
- Reduction of addictive triggers (lesser desire to smoke, etc)

Negative Effects:

- Headache
- Agitation
- Increased blood pressure
- Increased anxiety (typically due to bias/stigma)
- Serotonin syndrome (rare)
- Racing thoughts

Depending on dosage and individual chemistry, microdosing psilocybin may either cause sleepiness, or have a stimulant effect. These effects tend to feel neutral, but may be a signal to change the time of day or the dosage to maximize these effects.

So far, many of these effects are able to be easily managed with a dosage or timing change, or may be the result of interactions with diet or other medications. Working alongside a medical provider and mentor who is familiar with psilocybin and pharmaceuticals will help to ensure a positive outcome and mitigation of effects.

Often, individuals may notice a positive effect, and believe that more mushrooms will equal a positive amplification of these effects.

Or, an individual may experience one or more negative side effects, and believe that a lower dosage is necessary.

Psilocybin typically tends to work within a threshold, which can be different for each individual, and can also change over time. Sometimes, a negative effect (ie. headache, irritability) is actually a sign that the microdose is not dosed high enough for the individual to break the threshold to positive benefits. An individual experiencing positive effects from a microdose may actually experience negative effects if they increase their dosage, as they are moving past the threshold of microdosing.

Individuals who also take stimulants (adderall, caffeine in high doses) or already struggle with high blood pressure may see a noticeable spike in blood pressure in the hours after microdosing. If your blood pressure is being monitored by a physician, or if you are being treated for a heart condition, it may be necessary to consult with your provider on how to safely integrate microdosing into your current treatment plan. For some, this may be as simple as stopping or reducing any medication which increases blood pressure so the substances are not interacting significantly.

If your blood pressure and cardiovascular system is typically healthy and not controlled, but microdosing is causing BP spikes or headaches, supplementing with a cardiovascular supplement such as hawthorne may be helpful. Ensuring adequate hydration, electrolyte balance and a healthy diet will also ensure your microdose experience is to its greatest positive effect.

Individuals who take SSRI's, SNRI's, or other medications which affect the serotonin system in the body (epilepsy medications and mood augmentors are another example) must also be aware of serotonin syndrome and how to diagnose it. It is **highly unlikely** that a microdose will affect the system to such a degree as to cause serotonin syndrome, but it is still something to become familiar with when entering the world of natural plant and fungi medicines because it can be fatal. If you have an interest in microdosing or taking part in a macro dose experience, dosage and timing of medication may be important to ensure that negative effects don't occur, and also that

you will receive the greatest benefit of your experience. SSRI's have been known to dim the effects of psilocybin because they block serotonin receptors in the brain, and, in higher doses, can cause a rapid build up of serotonin in the body, which can cause seizures, loss of consciousness and death. It is becoming common practice for psychiatrists to help patients titrate off of their psychotropic medications in preparation for microdosing to help eliminate these risks and improve potential outcomes. If you are taking the lowest dose of a serotonergic medication, it is highly unlikely that you will experience any negative effects with adding a psilocybin protocol. But it is important to not get complacent in the event dosage of any medication or substance is changed over time.

Microdosing Protocols

There are a number of published methods for microdosing in regards to dosage, timing, and frequency. I will list them briefly, but want to repeat that microdosing is a soft science, and individual empowerment and choice will make for the best outcome, with a few boundaries in mind.

It is important to acknowledge that more of a microdose will not necessarily trigger amplification of positive benefits. This includes increasing a singular dose, or attempting to dose hourly or more than once or possibly twice during a day. Our receptors in our brain are sensitive and once fully saturated within the substance's half-life, we will start to see either an elimination of effects or possibly negative effects in the hours after dosing continues. This is also why taking high doses of melatonin doesn't automatically trigger deeper sleep - our ability to handle a substance is dependent on the number and health of receptors in our bodies.

North Sound Naturals Microdosing "Protocol"

Typically when an individual is consuming psilocybin for the first time ever, I do recommend taking the opportunity to try a microdose on a "non- stakes day". Because a microdose is a sub-perceptive amount, this recommendation is not because of the risk of having a psychedelic experience (most people will need to take at least ten times a microdose to start experiencing visuals or disorientation), but just because it can help to ease anxiety and improve a first time experience if a first timer is also a parent or works in a high stress environment - it will be easier to lean into the medicine and experience it's full effects, and identify and manage any possible negative side effects, if you are not in a position of high responsibility. I also recommend taking a first time microdose in the late morning after a light breakfast, and while well hydrated.

I am a big advocate for intuitive dosing and don't like to create unnecessary restrictions on how one microdoses. Instead, I want to encourage you to find ritual and routine around your experience. This aligns with the integration protocols, discussed later.

Some individuals microdose almost daily. Others only dose on weekends or off day. Some individuals dose as needed or when entering into stressful experiences or environments. Some individuals microdose when being creative or engaging in entertainment. There are so few risks to microdosing and, as long as doses are not taken too frequently, there aren't any known risks associated with dosing regularly. Typically a 24 hour period is a reasonable *minimum* time frame between microdoses.

Fadiman's Protocol: Dr. Fadiman created a protocol which involves taking a microdose every three days, with intentional reflection, journaling and integration on the two off-days. This is designed to capitalize on the "golden window" where residual effects of a microdose may be felt for up to two days after a dose, and also encourages integration practices to help bring any insights and awareness from the experience into one's life.

Stamet's Stack: Paul Stamets created a microdosing protocol which includes additional supplementation of Lion's Mane mushroom and niacin. His protocol involves dosing for five days, and taking two days off. There is some evidence that stacking psilocybin with these two other substances helps to amplify the benefits of all three - with Lion's Mane having significant metabolic, immune and neurogenerative properties, and niacin improving stimulation and travel of medicine to the peripheral nerves in the body.

One day on, One day off: This protocol is similar to Fadiman's in that it seeks to exploit microdose long term benefits into the next day. This additionally ensures that enough time is given between doses to ensure *minimum effective dose*.

Dosage: Typically a microdose falls anywhere between 0.08mg - 0.25mg (80mg - 225 mg). For a better visual example - a macrodose where one may become incapacitated or disoriented with visuals or body load is over ten times that of a microdose, starting at 1000mg on the low end, but typically runs at 2000 mg (2g) and up.

Integration “I think, I believe, I speak, I act, I am...”

Integration is the intentional act of aligning one's daily life, relationships, behaviors, diet and beliefs to our determined values. The utilization of Earth's medicines is typically with the expectation of gaining insights, awareness and healing to elicit significant change in one's life. When entering into this healing process, it is important to be aware that in order for the medicine to be most effective and for healing to occur, there are likely things in our lives we must add or eliminate to achieve this. There is no order or time frame for these things to occur, and microdosing is a great way to begin this change, as it can help bring us up out of some of our most significant symptoms so we may have the energy and insight to pursue integration.

Healing is a multi-faceted act, which can be viewed like spokes on a wheel. No singular spoke is more important than any other - but maintaining balance in each spoke can help improve and maintain overall wellbeing.

Some of the spokes on our integration wheel can include...

Physical wellness (exercise, walking, yoga, sports)

Emotional Wellness (Therapy, journaling, communication)

Creative Wellness (art, entertainment, music, reading)

Nutritional Wellness (Diet, supplementation, hydration)

Relational Wellness (intimate relationships, family, friendships, community)

Environmental Wellness (Home, nature, bedroom, geography)

Spiritual Wellness (religion, ritual, routine, connection to higher power, spirit)

Not all of these things need to be focused on simultaneously. Not all of these areas are going to be able to be changed always when you want or need, or, you may not know how an area needs to be shifted. In times we may feel stuck in one healing area of our lives, we can lean on other areas which are more accessible to us to help to build space to find balance.

For example, you may not have the financial ability to leave a living environment or location you have identified to be agonistic to your healing. This is not a failure. Instead, we can lean on areas we can access to help cope and find balance in our living environment until we can shift our perception of our environment, or change it if necessary.

When beginning a microdosing protocol, be prepared to incorporate integration practices into it. This can be simple, like ensuring you drink a full glass of water with your dose, beginning a journal to document your experience, or incorporating a nature walk, exercise or other movement practice alongside your dosing or throughout your day.

Integration may also involve finding a therapist or group therapy opportunity, leaving or confronting a dysfunctional relationship, purging excess belongings, or changing your diet or supplementation. Try not to feel threatened by the potential for these big changes, but instead, allow them to flow if and when they do. Your path should come to you with clarity, not confusion.

The use of Earth medicines alone can sometimes be enough to usher in change in one's life, but integration will almost always be where the big healing shifts occur. Accountability, objectivity, and practice will do more to overcome hardships in our lives than taking a capsule or drinking a tea. We will always intend to pursue healing practices with the lowest effective dose, and often this dosage will be zero, because, as much as Earth medicine can be a catalyst for healing, it can also become a way to bypass the work we need to do to overcome what inhibits us from healing. Microdosing is not a cure all - instead, we want it to act as a tool to help regulate an dysfunctional nervous system, and lift an individual up above their symptoms so as to take a new path when faced with adversity, triggers or symptoms which would otherwise leave them disabled. Microdosing and integration is, above all, the path for the individual to learn to heal themselves and develop the ability for self-actualization, and never a marketing ploy for profits or control.