

## **Psilocybin**

Clinical name: psilocybin

Brand name: none

Street name(s): shrooms, magic mushrooms

### **Miscellaneous:**

- The mycological members used for their hallucinogenic effects most commonly fall into the *Psilocybe* family.
- Ironically, it is usually not illegal to grow or carry fresh mushrooms. Kits for *Psilocybe* mushrooms are legally sold in numerous stores and even over the internet. Most laws stipulate that these mushrooms are legal until they are picked/pulled and dried into an administration-ready/distribution form.
- It should be noted that this is a substance that is prone to adulteration. LSD is the substance most often used in cases of adulterated mushrooms.
- Caution should be expressed to suspected users with regard to type of mushroom used. Extremely toxic mushrooms exist that closely resemble the *Psilocybe* species being sought. The toxic mycological relatives can produce a plethora of effects including apnea, extreme gastrointestinal cramping/contractions and ultimately death.

### **Pharmaceutical Properties:**

Psilocybin is the psychoactive constituent of mushrooms found within the *Psilocybe* family. The mushrooms are small, have a thin stalk, are topped with a “cap,” and are usually brownish in color.<sup>1-4</sup>

### **Uses:**

Hallucinogen/psychostimulant.

### **Administration:**

Oral ingestion.

### **Mechanism/Pharmacology:**

Upon ingestion and consequent digestion of psilocybin, this compound is converted to psilocin. Psilocin is the active hallucinogen that causes visual, auditory and temporal distortions in individuals.<sup>1-6</sup> From this perspective, psilocybin could be viewed as the prodrug and psilocin, thus, the active metabolite.

Psilocybin’s exact mechanism of action is unknown. It is certain, however, that the drug adversely affects normal cognitive transmission. Effects typically occur within 20-40 minutes, peak at two hours and persist for up to eight hours.<sup>1-3</sup>

**Side effects:**

Psychological: Extremely distorted temporal/visual perceptions, “bad trips”, prolonged anxiety, schizophreniform and panic attacks.<sup>1-6</sup>

Physical: Anorexia, tachycardia, hypertension, palpitations, anxiety, blurred vision, insomnia, pyresis, mydriasis, nausea/vomiting and paresthesia.<sup>1-6</sup>

\* Overdose-induced death is not likely with pure psilocybin due to a required intake hundreds to thousands times greater than the 2-4 gm dose which produces a psychedelic effect.<sup>1</sup>

**Testing:**

Current testing is performed through hair, urine, or blood analysis.

**Treatment:**

Symptomatic. There is no specified treatment guideline for psilocybin users. Considering the drug’s administration, induction of emesis may be effective in avoiding effects depending on relation to when the mushrooms were ingested.

**Synthesis:**

Psilocybin is a compound that is naturally found within select members of the *Psilocybe* family of mushrooms. These mushrooms can be located in specific environments in the wild or purchased (spores) and grown domestically.

**User Identification:**

Physical: Tachycardia, palpitations, mydriasis. Numerous traits depend on whether or not the individual’s experience is pleasurable or terrifying, and the physical characteristics will vary accordingly.<sup>1-6</sup>

**Citation References:**

1. Seymour RB. ‘Shrooms,’ a.k.a. psilocybin. Psychopharmacology Update 1997;5:8.
2. James J. Psilocybin: Demystifying the “Magic Mushroom”. 2002;132.
3. Schwartz RH, Smith DE. Hallucinogenic mushrooms. Clin Pediatr (Phila) 1988;27(2):70-3.
4. Peden NR, Pringle SD, Crooks J. The problem of psilocybin mushroom abuse. Hum Toxicol 1982;1(4):417-24.
5. Vollenweider FX, Vollenweider-Scherpenhuyzen MF, Babler A, Vogel H, Hell D. Psilocybin induces schizophrenia-like psychosis in humans via a serotonin-2 agonist action. Neuroreport 1998;9(17):3897-902.
6. Leikin JB, Krantz AJ, Zell-Kanter M, Barkin RL, Hryhorczuk DO. Clinical features and management of intoxication due to hallucinogenic drugs. Adverse Drug Exp 1989;4(5):324-50.

**General References:**

1. Seymour RB. ‘Shrooms,’ a.k.a. psilocybin. Psychopharmacology Update 1997;5:8.
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