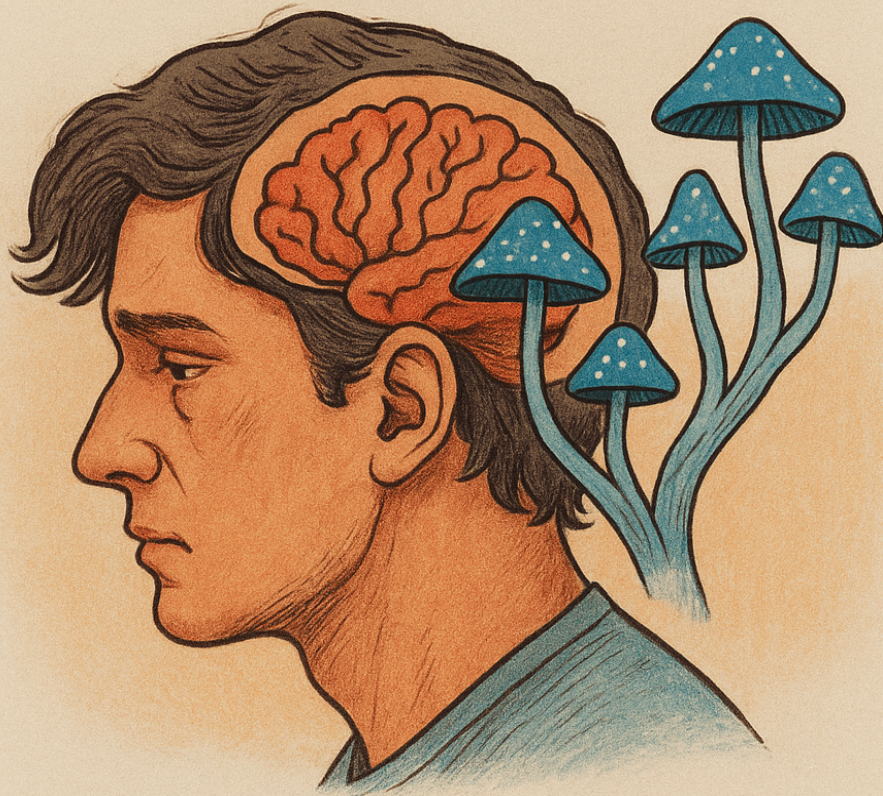


POST-TRAUMATIC STRESS DISORDER (PTSD)

and PSILOCYBIN THERAPY



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What is PTSD?

Post-Traumatic Stress Disorder (PTSD) is a psychiatric condition triggered by exposure to traumatic events such as combat, assault, disasters, or severe accidents. It manifests through intrusive memories, hyperarousal, emotional numbing, and persistent avoidance of trauma-related stimuli.

Diagnostic Criteria (DSM-5)

To be diagnosed with PTSD, symptoms must persist for more than one month and cause significant distress or impairment. Key criteria include:

- Intrusive symptoms (e.g., flashbacks, nightmares)
- Avoidance of trauma-related thoughts and cues
- Negative alterations in mood and cognition
- Increased arousal and reactivity

Brain and Neurobiology of PTSD

- Amygdala: Hyperactive, increasing fear response
- Hippocampus: Reduced volume, impairing contextual memory
- Prefrontal Cortex: Hypoactive, weakening emotional regulation
- Neurotransmitters: Elevated norepinephrine, reduced serotonin and GABA
- HPA Axis: Blunted cortisol response, elevated CRH
- Inflammation: High IL-6, TNF- α ; disrupted immune response

Risk Factors and Comorbidities

- Risk factors: childhood trauma, low social support, dissociation during trauma
- Comorbidities: depression, anxiety, substance use disorder, chronic pain, TBI

Standard Treatments for PTSD

- Psychotherapy: Cognitive Processing Therapy, EMDR, Exposure Therapy, Trauma-focused CBT
- Medications: SSRIs (sertraline, paroxetine), SNRIs, prazosin (for nightmares), off-label use of antipsychotics
- Emerging: MDMA-assisted therapy, psilocybin, ketamine

Long-Term Outlook

Early intervention improves outcomes. Chronic PTSD may persist without integrated care. Psychedelic therapy offers novel pathways for emotional healing, memory reconsolidation,

and psychological flexibility.

What is Psilocybin?

Psilocybin is a serotonergic psychedelic compound found in Psilocybe mushrooms. It is rapidly metabolized into psilocin, which primarily acts as a partial agonist at the 5-HT_{2A} receptor, producing perceptual, emotional, and cognitive shifts crucial for trauma processing.

Neurobiological Effects

- Disrupts the Default Mode Network (DMN), reducing ruminative loops
- Desensitizes the amygdala to fear stimuli
- Boosts Brain-Derived Neurotrophic Factor (BDNF) to promote synaptogenesis
- Lowers systemic inflammation (IL-6, TNF- α)
- Opens a window for trauma memory reconsolidation

Clinical Research Evidence

- Carhart-Harris et al. (2016): Effective in treatment-resistant depression
- Davis et al. (2021): Sustained remission in 70% of MDD patients
- MAPS MDMA trials support use of similar psychedelic protocols in PTSD
- Current trials underway for trauma-related disorders with psilocybin

Therapy Protocol

1. Preparation (1–3 sessions): rapport building, trauma mapping
 2. Dosing Session: 25–30 mg psilocybin in supportive environment
 3. Integration (2–5 sessions): narrative reprocessing, somatic work, goal setting
- Facilitated by 2 trained therapists, sessions are typically 6 hours long.

Comparison to SSRIs

Feature SSRIs Psilocybin
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Onset Weeks Immediate
Insight Low High
Duration Daily Episodic
Side Effects Chronic Transient
Cognitive Blunting Common Rare
Spiritual Connection None Common

Safety Profile

- Contraindicated in psychosis, bipolar I, uncontrolled heart conditions
- Low physiological toxicity
- Requires safe set & setting to reduce anxiety and ensure integration

Unique Benefits for PTSD

- Facilitates reconnection with suppressed emotions
- Reframes guilt, shame, and fear loops
- Reduces avoidance and emotional numbing
- Promotes post-traumatic growth and cognitive flexibility

Legal & Ethical Notes

- Federally Schedule I in the U.S.
- Legal in Oregon for therapy
- Decriminalized in Denver and multiple cities/states
- Ongoing FDA fast-track designation for depression/trauma trials

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