

Psilocybin may reverse anorexia's cognitive rigidity

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Dr Claire Foldi, left, and Dr Kyra Conn. Credit: Monash University

Characterized by pathological weight loss driven by restrictive feeding and excessive exercise behaviors, anorexia nervosa (AN) has one of the highest mortality rates of any psychiatric disease.

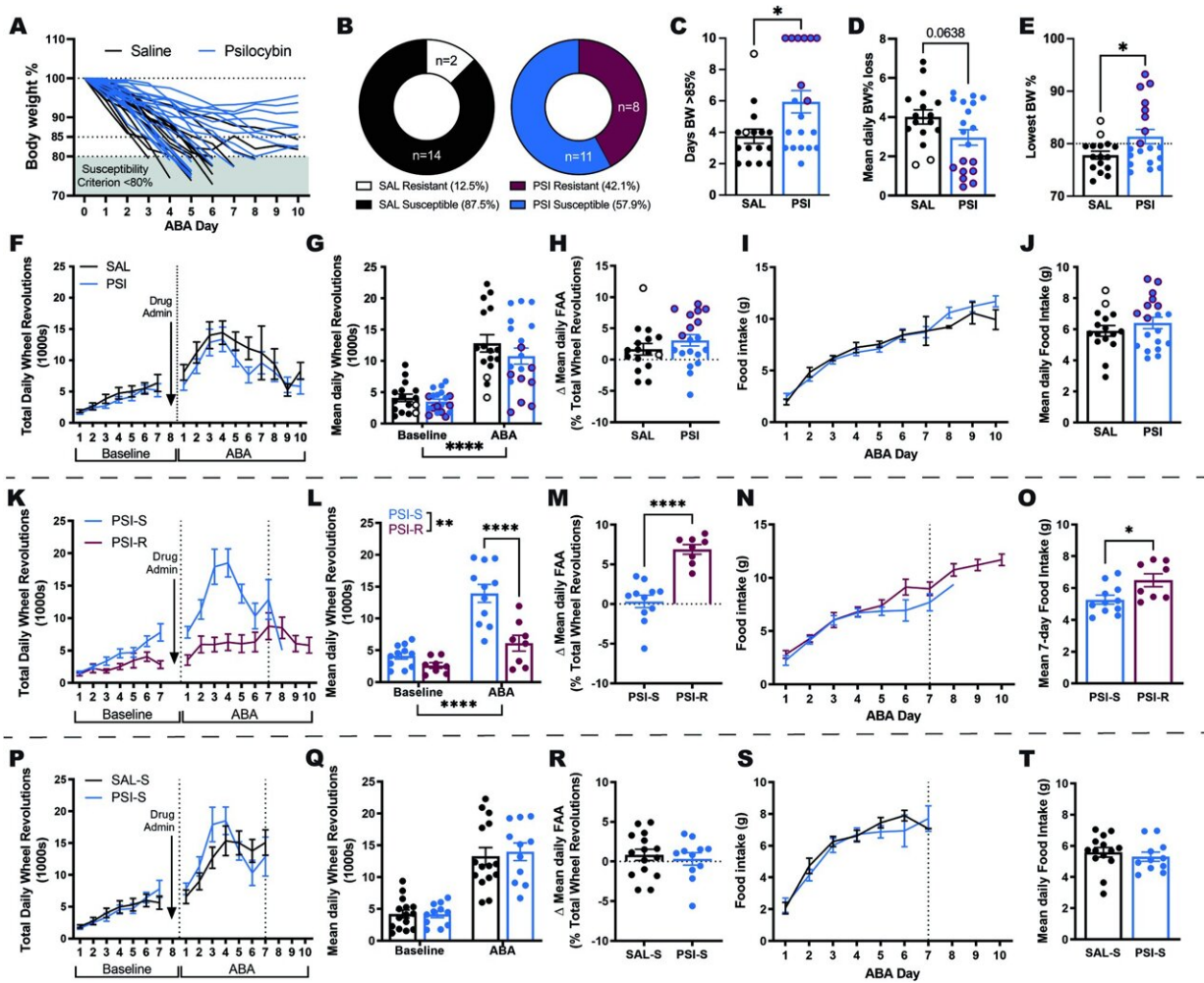
Some small clinical trials have shown that psilocybin, the active ingredient in magic mushrooms, may be a potential treatment for anorexia nervosa. The condition is characterized by cognitive inflexibility, or rigid thinking and there is evidence that psilocybin acts to increase this flexibility.

However—crucial to the use of the drug as a recognized treatment for anorexia—is the need to understand how psilocybin actually works in the brain. Now, a study led by Dr. Claire Foldi from the Monash University Biomedicine Discovery Institute and [published](#) in the journal *Molecular Psychiatry*, has studied psilocybin in an animal model of anorexia nervosa—revealing that it improves body weight maintenance in female rats and facilitates [cognitive flexibility](#).

Importantly, the Monash researchers found a specific mechanism within the brain by which [psilocybin](#) works to make "anorexic thinking" more pliable, opening the way for targeted therapies.

According to Dr. Foldi, while [selective serotonin reuptake inhibitors](#) (antidepressants) are the leading pharmacological treatment, they are used off-label and "they do not improve clinical symptoms in underweight individuals with anorexia," she said.

"Cognitive inflexibility is a hallmark of the condition often arising before symptoms of [anorexia nervosa](#) are obvious, and persisting after weight recovery—making this symptom a primary target for therapeutic intervention."



Effects of psilocybin on body weight maintenance in ABA. Weight loss trajectories of individual rats (n = 16 saline; n = 19 psilocybin) over the 10-day ABA period. Credit: *Molecular Psychiatry* (2024). DOI: 10.1038/s41380-024-02575-9

More information: K. Conn et al, Psilocybin restrains activity-based anorexia in female rats by enhancing cognitive flexibility: contributions

from 5-HT1A and 5-HT2A receptor mechanisms, *Molecular Psychiatry* (2024). [DOI: 10.1038/s41380-024-02575-9](https://doi.org/10.1038/s41380-024-02575-9)

Provided by Monash University

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