

ADHD medication for amphetamine addiction linked to reduced risk of hospitalization and death

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Vyvanse (Lisdexamfetamine) 70mg capsules. Credit: [Champlax](#)/Wikimedia Commons, [CC BY-SA](#)

The ADHD medication lisdexamfetamine was associated with the lowest

risk of hospitalization and death in people with amphetamine addiction, when medications generally used among persons with substance use disorders were compared. This is shown in a large registry-based study by researchers at Karolinska Institutet in Sweden in collaboration with the University of Eastern Finland and Niuvanniemi Hospital, published in *JAMA Psychiatry*.

"Our results suggest that lisdexamfetamine is associated with the best outcomes, and encourage the conduction of randomized controlled trials to explore this further," says Jari Tiihonen, professor at the Department of Clinical Neuroscience, Karolinska Institutet, and the study's last author.

Amphetamines are the second most used [illicit drugs](#) in the world and amphetamine-related hospitalizations are increasing substantially.

However, there are currently no approved pharmacological interventions available for treating addiction to amphetamine or the variant methamphetamine. Certain medications have shown promising results, but to date, the studies have often been small and convincing evidence is lacking.

In the present study, the researchers investigated the association between generally used medications among persons with substance use disorder and the risk of two primary outcomes in people with amphetamine or methamphetamine use disorder: 1) hospitalization due to substance use disorder or 2) hospitalization due to any cause, or [death](#).

The study included nearly 14,000 individuals; all residents aged 16 to 64 years living in Sweden with a registered first-time diagnosis of amphetamine or methamphetamine use disorder from July 2006 to December 2018. Individuals with schizophrenia or bipolar disorder were excluded.

The [patients](#) were followed from the time of diagnosis until the patient died, moved from Sweden, was diagnosed with schizophrenia or [bipolar disorder](#) or the study ended. The median follow-up time was 3.9 years.

The researchers looked at how the risk of hospitalization or death for each individual differed depending on whether they were on or off the medication at that time.

"Our results show that lisdexamfetamine, a medication approved for treating ADHD and in some countries also for binge eating, was the only specific medication associated with reduced risk of hospitalization and death," says the study's first author Milja Heikkinen, researcher at the University of Eastern Finland and Niuvanniemi Hospital.

The risk of hospitalization due to substance use disorder was 18% lower and the risk of hospitalization due to any cause or death was 14% lower during periods of lisdexamfetamine use, compared to periods without the ADHD [medication](#).

The combination of two or more different medications for substance use disorder was also associated with a lower risk of hospitalization or death.

Use of benzodiazepines was associated with poorer outcomes; 17% higher risk of hospitalization due to [substance use disorder](#) and 20% higher risk of hospitalization due to any cause or death, during periods of use compared to periods of non-use. The use of antidepressants was also associated with slightly worse outcomes than non-use.

The researchers note that pharmacological treatments are often discontinued when the clinical state has improved, and are started when the clinical state deteriorates. Therefore, the results may underestimate the putative beneficial effect of treatments. To control for this

phenomenon, the researchers conducted analyses by omitting the first 30 days of use. The results were then in line with the main analyses.

More information: Association of Pharmacological Treatments and Hospitalization and Death in Individuals With Amphetamine Use Disorders in a Swedish Nationwide Cohort of 13 965 Patients, *JAMA Psychiatry* (2022). [DOI: 10.1001/jamapsychiatry.2022.3788](https://doi.org/10.1001/jamapsychiatry.2022.3788)

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