

An Alzheimer's drug might ease hair-pulling disorder

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A long-established Alzheimer's drug can help people with a disorder that

causes them to compulsively pull at their hair or pick at their skin, a new clinical trial has concluded.

Memantine considerably improved symptoms in 3 out of 5 patients with either [trichotillomania](#) (hair-pulling disorder) or excoriation (skin-picking) disorder, researchers reported in the *American Journal of Psychiatry*.

"I think it was encouraging that it helped reduce the behavior of picking and pulling, compared to a placebo," said lead researcher Dr. Jon Grant, a professor of psychiatry and behavioral neuroscience at the University of Chicago. "It gives me the idea that perhaps we're onto the right underlying mechanism that might be happening here."

Hair-pulling and skin-picking disorders affect an estimated 3% to 4% of Americans, Grant said. Patients obsessively pull out strands of hair or pick at their skin, often doing themselves real physical harm.

Memantine inhibits the activity of glutamate, one of the most abundant neurotransmitters in the brain.

Overly high levels of glutamate in the brain can cause nerve cells to become overexcited, and this has been associated with conditions like Alzheimer's disease, Parkinson's disease, Lou Gehrig's disease and multiple sclerosis, according to the Cleveland Clinic.

Glutamate also has been linked to mental health problems like [mood disorders](#) and obsessive-compulsive disorder, the Cleveland Clinic says.

The U.S. Food and Drug Administration approved [memantine](#) to treat moderate-to-severe Alzheimer's in 2003, and it is now available as a [generic medication](#).

But some psychiatrists have been prescribing memantine off-label to help treat obsessive-compulsive disorder, "which is sort of a cousin of hair pulling and skin picking," Grant said.

That gave Grant an idea.

"Could a medication that affects glutamate—such as this fairly innocuous Alzheimer's medication, which is generic, cheap and has a fairly innocuous side effect profile—could this be beneficial in treating trichotillomania and excoriation disorder?" he said.

To test this notion, Grant and his colleagues recruited 100 adults with skin-picking or hair-pulling disorder, and randomly assigned them to take either memantine or a placebo for eight weeks.

Memantine treatment wound up "much or very much" improving symptoms in 60% of patients taking the drug, while only 8% of patients on placebo reported similar improvement.

However, only about six patients in the memantine group (11%) completely stopped picking or pulling by the end of the trial, compared with one in the placebo group (2%).

"Although it reduced the behavior, we did not see a lot of people stop the behavior," Grant said. "So it's able to do something, but maybe not perfectly."

These positive results give a good sign that glutamate is involved in these disorders, but more work needs to be done to find the [best treatment](#), he said.

"Maybe we need to use a higher dose of it. Maybe we need to find people who will preferentially respond to it. Maybe we need to combine

it with other medications or behavior therapy," Grant said. "I think it's a good starting point."

Dr. Katharine Phillips, a professor of psychiatry at New York Presbyterian and Weill Cornell Medicine in New York City, agrees that controlling glutamate could be key to treating hair-pulling and skin-picking disorders.

In fact, Phillips said she already prescribes it to help treat those disorders.

"It's one of my two first-line medications for both trichotillomania and skin-picking disorder," she said. "These glutamate modulators may be particularly helpful for disorders characterized by obsessional thoughts and repetitive compulsive behaviors.

"In my experience, memantine—especially if added to something like a serotonin reuptake inhibitor—can be additionally helpful for depressive symptoms, [obsessive-compulsive disorder](#) and anxiety," Phillips added.

Memantine also can be used in combination with habit-reversal training, which is the best-proven treatment for hair pulling and skin picking, she said.

Habit-reversal training is a form of cognitive behavioral therapy that helps people break body-focused repetitive behaviors.

Memantine caused mild side effects in Grant's clinical trial, most notably fatigue, nausea, constipation and dizziness. Two people in the memantine group stopped taking the medication due to dizziness.

But that might be because the research team increased the participant's dosage of memantine too quickly, Phillips said.

"I usually titrate the dose up a little bit more slowly than he did in the study," she said. "It's very rare to get side effects on this medication. That's one of the great things about it."

While memantine is generic, some pharmacies charge quite a bit for it, Phillips said.

"I have had patients say, 'I can't take this because it's so expensive,'" she said.

Patients confronted with a high price at their usual pharmacy should shop around, at either other pharmacies in town or with online pharmacies, Phillips advised.

"We have always found an alternative," she said. "In the end, everyone's been able to afford memantine treatment."

More information: Jon E. Grant et al, Double-Blind Placebo-Controlled Study of Memantine in Trichotillomania and Skin-Picking Disorder, *American Journal of Psychiatry* (2023). DOI: [10.1176/appi.ajp.20220737](https://doi.org/10.1176/appi.ajp.20220737)

The Cleveland Clinic has more about [hair-pulling disorder](#) and [glutamate](#)

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