

# Study: Ritalin treats apathy in patients with Alzheimer's disease

February 5 2013, by Cynthia Billhartz Gregorian

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Leslye Nathe did not realize the profound effect that Ritalin was having on her mother's Alzheimer's disease until a doctor stopped the prescription.

Her mother, Susan Brown, 74, a resident at Provision Living in Webster Groves, Mo., began sleeping nearly all the time. And during rare moments, when she was awake, she was tearing the sheets off of her bed and scratching wounds into her arms.

"She was like a child having a tantrum and she kept telling people to leave. She was very paranoid," Nathe said. "She would beg me, 'Please, please get me some medication. There's something wrong. I can't deal with it anymore.'"

Brown had been taking Ritalin for many years even before she was diagnosed with Alzheimer's, to treat [attention deficit disorder](#) and depression.

When her physician, Dr. George Grossberg, director of [geriatric psychiatry](#) at St. Louis University, heard about her alternating bouts of [lethargy](#) and meltdowns, he put Brown back on the Ritalin.

Her reaction to being taken off the drug was more extreme than usual, but it supported the long-held notion that Ritalin is key to controlling some Alzheimer's symptoms.

Grossberg and a team of researchers at the university, recently received a \$183,540 grant from Noven Pharmaceuticals Inc. to study Ritalin as a therapy for [apathy](#) and fall risk in Alzheimer's patients. Both are common symptoms of Alzheimer's disease, affecting about 70 percent patients who have it.

Noven is a joint-venture partner of [Novartis](#) Pharmaceuticals, which manufactures Ritalin. Novartis paid Grossberg \$28,000 in 2010 to speak about its products to other physicians.

Grossberg said family members frequently notice that loved ones are indifferent, socially disengaged and have lost all enthusiasm.

"It's serious couch-potatoism, and it drive relatives crazy," Grossberg said. "There's a lot of evidence that Ritalin has mood-elevating effects and also makes them more aware of their environment and obstacles. They also make better decisions."

Scientists are not sure what causes apathy in patients with Alzheimer's disease but early data indicate that it might be related to a decrease in the transmission of dopamine, a feel-good chemical in the brain. Ritalin, which is commonly used to treat attention deficit disorder, increases the transmission of dopamine in the brain.

A previous international clinical trial, funded by the National Institute on Aging, showed marked improvements on clinical testing for apathy among Alzheimer's patients who were given Ritalin compared to those who were not.

"Once you have depression, or apathy in this case, it makes it harder to focus on the environment," Grossberg said. "So by improving patients' energy levels, we think it will contribute to them being less likely to fall."

Falling and balance do not involve the hippocampus, which is most responsible for memory and most profoundly affected by the disease.

"But in the balance section of brain, there may be cells dying or chemical alterations that increase the risk for falls. It could be a combination of different things," Grossberg said.

"We do know that there are extremely high rates of apathy and that the risk of falls is much higher in Alzheimer's patients than in age-matched non-Alzheimer's patients," he said.

"It's very safe," Grossberg said. "We're using ultra-low doses in patch form. A lot of older people with Alzheimer's have trouble swallowing. Plus, with the patch you can have a gradual introduction to the blood stream and keep it level without peaks and valleys. So it's better tolerated."

When Nathe told Grossberg about her mother's behavior after being taken off the [Ritalin](#), "he said, 'you know your mom's history. Let's go with what you're saying,'" Nathe said. "Within two days she was back to her normal self. And Grossberg adjusted other medications for her mood disorders, which helped.

"My mom is on 5 mg in the morning and 5 mg after lunch. That's not very much," Nathe said. "But it worked and it works now. I want her up and participating in as many things as she can. And that's what she does now."

Grossberg and his team are in the process of recruiting 40 St. Louis-area Alzheimer's [patients](#) at three nursing homes to participate in the four-week study. They hope to have data within a year.

"This is a high-risk population for falls, so they have to be watched

round the clock to see if they tolerate the treatments and don't fall," Grossberg said. "Plus we need continuous observation to see what the results are."

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