

A single dose of Ritalin may help improve brain function in people addicted to cocaine, according to a small study published in *JAMA Psychiatry*.

Researchers at the Icahn School of Medicine at Mount Sinai in New York studied 18 people addicted to cocaine. Half received a single 20-milligram pill of Ritalin (methylphenidate), and half received a placebo. They all underwent MRI brain scanning to measure the strength of connectivity in certain brain circuits that play a role in addiction.

The study also included people not addicted to cocaine, for comparison.

Ritalin decreased the connectivity between areas of the brain thought to be involved in habit formation, including compulsive drug-seeking and craving. The drug also strengthened connectivity between several regions of the brain involved in regulation of emotions and exerting control over behaviors. Previous studies suggest these connections are disrupted in cocaine addiction.

"These findings may also be generalizable to other types of addiction," lead researcher Dr. Rita Goldstein told CBSNews.com. "The benefits of methylphenidate were present after only one dose, indicating that this drug has significant potential as a treatment add-on for addiction to cocaine and possibly other stimulants," she noted in a news release. "This is a preliminary study, but the findings are exciting and warrant further exploration, particularly in conjunction with cognitive behavioral therapy or cognitive remediation."

Drugs, legal and illegal, are consumed across cultures, and are used for a wide variety of reasons, including, in the case of prescription drugs, to promote health. However, illegal drugs play a very different role in our society and the effect they have those who use them. Click here to learn more about Drugs and Drug Dependence.