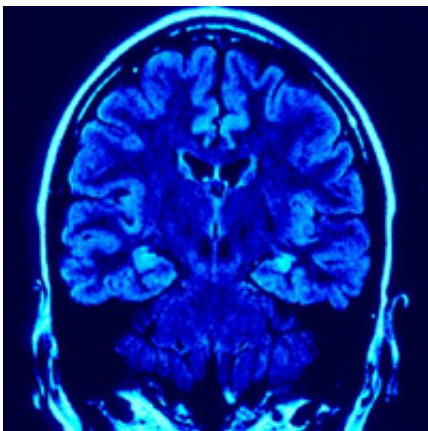


# Parkinson's drug offers insight into helping cocaine users kick habit

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(PhysOrg.com) -- Medication that increases levels of the brain chemical dopamine could open up new ways for helping some heavy users of cocaine and amphetamines kick the habit, researchers from Cambridge have found.

They also found for the first time that how compulsively a person uses stimulants provides an important clue about whether a particular drug user would benefit from this kind of medication.

Dr Karen Ersche and colleagues from the University of Cambridge asked chronic stimulant users and volunteers who do not use drugs to perform a simple colour-naming test while their brains were scanned.

They found that the drug users performed the test just as well as the non-drug-taking volunteers as long as they were presented with neutral words. But when drug-associated words (drug cues) - such as sniff, coke or Charlie - appeared on the screen the drug users became distracted.

In the presence of drug cues drug users' performance deteriorated and their brain activation changed, particularly in brain areas involved in self-control and memory.

However, when the drug users were given Parkinson's Disease drug pramipexole their performance improved and their [brain activation](#) normalised. This beneficial effect was only seen in those drug users with a less compulsive pattern of using [cocaine](#) or amphetamines.

According to Dr Karen Ersche of the University of Cambridge: "Our findings show that some heavy cocaine and amphetamine users may benefit from a medication that corrects the amount of [dopamine](#) in their brains.

"The difficulty for doctors is to identify those drug users who are the most likely to benefit, because the same medication could make addiction worse in other [drug users](#). The pattern of drug-taking, in particular how likely cocaine users are to give in to an urge to use the drug, might provide clinicians with a vital clue."

"Our findings suggest that this compulsive urge to use cocaine and the loss of control that goes with it reflect biological differences in users' brains and may help predict how heavy users respond to a medication."

Cocaine and [amphetamine](#) abuse is increasing in the UK. The standard treatment for people who want to quit or cut down their cocaine use mainly involves behavioural approaches such as counselling and cognitive-behavioural therapy.

Despite the effectiveness of these treatments, there is a high relapse rate so finding effective pharmacological treatments for these people would be very useful.

The results are published today in the *Archives of General Psychiatry*.

Provided by University of Cambridge

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