

6 February 2009

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Ritalin and cocaine have the same effects on the brain, and can cause serious damage  
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## [Ritalin and Cocaine Have Identical Effects on the Brain](#)

*This is devastating news for millions of children*

New scientific studies bring about a new wave of concern about the safety of commonly-used drugs, as it seems that, oftentimes, their effect on the brain is not fully understood. For example, a recent investigation shows that Ritalin, a drug prescribed millions of times per year in the United States alone for the treatment of diseases such as the Attention Deficit Hyperactivity Disorder (ADHD), has the same effects on the brain as regular cocaine use, especially on the reward regions of the cortex.

The new study, conducted on unsuspecting lab mice, further shows that, at times, the effects of Ritalin are roughly the same as those of cocaine, which should be a major concern for parents treating their children with the drug. The investigation team, based at the Rockefeller University, has revealed that methylphenidate, the active ingredient in the ADHD drug, has long-term effects that often overlap with those of the terrible narcotic.

"Methylphenidate, which is thought to be a fairly innocuous compound, can have structural and biochemical effects in some regions of the brain that can be even greater than those of cocaine. Further studies are needed to determine the behavioral implications of these changes and to understand the mechanisms by which these drugs affect synapse formation," RU senior research associate Yong Kim, co-author of the new study published in the February 3rd edition of the journal *Proceedings of the National Academy of Sciences*, says.

RU Vincent Astor Professor Paul Greengard, the head of the Laboratory of Molecular and Cellular Neuroscience, has also co-authored the new paper. The team has studied the behavior of lab mice, which have been injected with either cocaine or methylphenidate for two consecutive weeks. Once the trial period concluded, the investigators have focused their questions on the effects of the two substances on neurons.

For most of the conclusions, Ritalin has behaved in very much the same way cocaine does in the brain, on account of the fact that they are both psychoactive substances, and, as such, have similar effects. In some cases however, the methylphenidate has revealed a stronger impact than that of the narcotic, triggering, for example, a higher level of protein expression in certain parts of the brain.

This research is very important for the health of American children, and parents need to check their babies' prescriptions for this drug. Furthermore, while the researchers say that further studies are required, they do not mean that they might come up with a different result. They simply suggest that they will repeat the experiment and notice the exact effects of Ritalin on the brain.