

Adult ADHD linked with dopamine levels

Adults with attention-deficit/hyperactivity disorder have a reduced response to the drug Ritalin, U.S. government scientists have found.

Ritalin -- methylphenidate -- increases brain dopamine levels, helping ADHD patients, the scientists noted, which suggests people with ADHD suffer from a dysfunction in the dopamine system.

Dr. Nora Volkow of the National Institute on Drug Abuse and colleagues studied 19 adults with ADHD who had never received medication, and 24 healthy controls.

Positron emission tomography brain scans were performed after blind injections of a drug that inactivates dopamine receptors. Scans were performed after injections of placebo and of Ritalin.

People with ADHD released less dopamine than controls did in response to the drug. The blunted response was associated with symptoms of inattention.

"The findings of reduced dopamine release in subjects with ADHD are consistent with the notion that the ability of stimulant medications to enhance extracellular dopamine underlies their therapeutic effects in ADHD," the researchers said.

The findings appear in the August issue of Archives of General Psychiatry.

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