
ADHD Linked to Genes

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About the Author:

C. Stephen Edwards, Director, Adolescent Psychiatry, [Lindner Center of Hope](#) is the author of this article on mental health clinics, teen depression and mood disorders. Dr. Edwards is board certified in general psychiatry, child and adolescent psychiatry and board eligible in pediatrics. As Director, Adolescent Psychiatry at Lindner Center of HOPE he oversees the adolescent inpatient and outpatient programs. He specializes in Attention Deficit Hyperactivity Disorder (ADHD), Post Traumatic Stress Disorder (PTSD) and abuse prevention. The Lindner Center of Hope offers a level of service to patients, families and referring physicians not typically found in health care today. The unique infrastructure provides access to cutting edge treatments years before they become widely available.

Summary:

A new study provides evidence that ADHD is linked to DNA. The new findings are hoped to aide in the development of better ADHD treatment and help reduce negative stigma surrounding parents of ADHD children. The article also focuses on a study suggesting children with higher level exposures to malathion are at a greater risk of developing ADHD.

ADHD Linked to Genes

A new study has found direct evidence linking Attention Deficit Hyperactivity Disorder (ADHD) to genetic makeup.

The study was conducted by a team of British scientists who scanned gene maps of over 1,400 children. The researchers discovered the children with ADHD were more likely to have small pieces of their DNA missing or duplicated, according to a Sept. 30 Reuters article. The scientists came to this conclusion after comparing the abnormal samples to the DNA of 1,047 children in the study without ADHD.

The DNA irregularities among ADHD children were most prevalent in the same region where schizophrenia and autism is believed to develop, solidifying the belief ADHD is a neurodevelopmental condition.

"Too often, people dismiss ADHD as being (due) to bad parenting or poor diet," said Anita Thapar, the study's lead researcher and a professor of psychiatry at Cardiff University. "Now we can say with confidence that ADHD is a genetic disease and that the brains of children with this condition develop differently to those of other children."

ADHD is commonly diagnosed in childhood and causes impulsiveness, restlessness and difficulty focusing on tasks. It affects roughly two million U.S. children and three to five percent of the global child population worldwide. Medication and behavioral therapy are the most common forms of ADHD treatment.

The new findings are expected to help researchers develop better methods for ADHD treatment. However, it is doubtful the findings will lead to the development of an ADHD genetic test, as many experts in the field consider environment as factoring into the cause as well.

Pesticide also an ADHD factor?

Speaking of environmental factors, another recent study suggests children with high levels of the pesticide malathion in their urine are at a greater risk of developing ADHD.

Previous studies have also noted a correlation between child exposure to pesticide and the development of behavior disorders. But the new study is the first to base its findings on a general U.S. population sample rather than on children from farmworking families or those living in locations where higher chemical exposure is more prevalent, according to a May 16 Los Angeles Times article.

The study compared data on 1,139 children from National Health and Nutrition Examination Surveys conducted from 2000 to 2004. The findings concluded children with malathion metabolite levels 10 times the normal rate are 55 percent more likely to have ADHD. Researchers were able to determine from personal interviews with parents which children had been formally diagnosed with ADHD prior to taking the survey.

Malathion is a commonly used pesticide and insecticide used in both residential and agricultural settings. Researchers estimate the majority of participants in the study were exposed to the malathion through food consumption.

Malathion tends to stay in the body less than five days and is known to fluctuate in its content levels. However, researchers believe if the study participants maintain the diet in which the data is based on, the report can be viewed as a reasonable estimate of their average malathion levels.