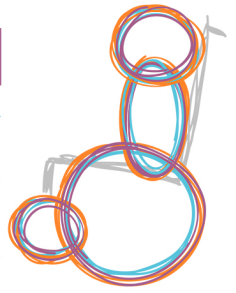


Does genetics play an important role in ADHD?

childhood
disability
LINK



Glossary of terms

- **A.D.H.D. (attention deficit hyperactivity disorder):**

A disorder characterized by poor concentration, distractibility, hyperactivity, and impulsiveness that are not typical for a child's age. Children and adults with ADHD are easily distracted by sights and sounds in their environment, cannot concentrate for long periods of time, are restless and impulsive and/or have a tendency to daydream and be slow to complete tasks.

- **Response inhibition:**

The ability to control one's response to stimuli.

Summary

Studies on groups of children with ADHD have shown a relationship between ADHD and a gene abnormality (on the gene known as DAT1). The present study looks further into this relationship using a group of children from the general population (this means that it was not known ahead of time if the child being tested had a diagnosis of ADHD or not), and also examines the connection between the gene and performance on tests of attention, response inhibition, and working memory. As suspected, the study found a significant association between the gene DAT1 and boys who scored high on a test for ADHD (which means they showed a lot of symptoms of ADHD). Also, a significant association was found between the DAT1 gene and measures of attention and response inhibition but not memory, indicating the DAT1 gene is associated mainly with ADHD-type symptoms (attention and the inability to control responses) and not general mental impairment.

What families should know

This study shows that there may be a genetic component in a subset of children diagnosed with ADHD. This implies that children may not just be “acting out” and that they require special attention and help in overcoming the barriers of ADHD.

What practitioners should know

Practitioners should recognize that there is an association between ADHD symptoms and the DAT1 genotype. Practitioners should recognize that the ADHD-DAT1 association produces a distinct weakness in executive control but does not appear to significantly impact on working memory abilities.

Reference

[Cornish, K. M., Manly, T., Savage, R., Swanson, J., Grant, C., Morisano, D., et al. \(2005\). Association of the dopamine transporter \(DAT1\) 10/10-repeat genotype with ADHD- symptoms and response inhibition in a general population sample. Molecular Psychiat](#)