

Transcript Details

This is a transcript of an educational program. Details about the program and additional media formats for the program are accessible by visiting: <https://reachmd.com/programs/medical-industry-feature/exploring-the-genetic-link-between-parents-children-with-adhd/11963/>

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Exploring the Genetic Link Between Parents & Children with ADHD

Announcer Opening:

Welcome to ReachMD. *This Spotlight on ADHD*, exploring genetic links between parents and children with ADHD,” is sponsored by Tris Pharma Inc. Presenting is Dr. Alice Mao-Brams, Professor of Psychiatry and Behavioral Sciences at Baylor College of Medicine.

Dr. Mao-Brams:

Despite the common misconception that only children can have ADHD, the reality is that this disorder can affect children, adolescents, *and* adults. In fact, ADHD impacts about 5 percent of children worldwide¹, and in my experience two-thirds will continue to have ADHD as adults. So this is a lifelong condition that has a huge impact on their ability to learn in school, interact with their peers, get along with their family members, and form relationships. There have been many studies indicating negative outcomes for children with ADHD, including peer rejection, school failures, injuries due to accidents, occupational failures, long-term relationship difficulties, and premature death³.

That's why being aware of the genetic link between parents and children with ADHD is so important, because ADHD has a high heritability of 74 percent¹. Studies have shown that about a third of ADHD heritability is due to polygenetic components comprised of many common variants, each having small effects¹. And we've learned from studies of copy number variance that rare insertions or deletions also account for part of ADHD heritability¹. These findings have implicated new biological pathways that may eventually have implications for treatment development¹. In addition, by looking at heritability from family adoption and twin studies, we know that if you have one child with ADHD, then there's a nine-fold risk of their siblings actually being impacted by ADHD as well, suggesting very high heritability¹. And among biological parents, there was a three-time higher risk of developing ADHD compared to adoptive parents who had no genetic relationship with the child². So it becomes really important for purposes of early identification to not only ask how ADHD is impacting the child, but also to see if there are other family members that have inherited this condition and the symptoms they may be experiencing as well.

How that often plays out in my practice is that when a child is referred for evaluation because of school failure or behavioral problems. When we're doing the family history, the parents may say that they've *also* had problems with inattention and distractibility when they were younger. So as we treat the child and note that they have a very good response, such as being able to do better in school and show behavioral improvements at home, often what happens is that the parents will say, "You know, I'm wondering if I should be treated because I also had similar problems as a child, but I never actually got treatment." And at this point, the parents themselves may volunteer to be screened and evaluated for ADHD, and we can do that using the Adult ADHD Rating Scale. If we find that they're showing significant impairment across work, home, and social situations, then we may consider treatment, and in my case since I'm boarded in adult, adolescent, and child psychiatry, I feel very comfortable treating them. The results are definitely rewarding in these cases, where our understanding of the heritable nature of ADHD raises our awareness toward potentially affected family members of our patients, such that parents or other close relatives can also find improvements in their lives such as work performance and relationships with their significant others. Which in the end, is really what treating our patients with ADHD is all about.

Announcer Closing:

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References:

1. Faraone SV, Larsson H. Genetics of attention deficit hyperactivity disorder. *Mol Psychiatry*. 2019 Apr; 24(4):562-575.
2. Sprich S, Biederman J, Crawford, et al. Adoptive and biological families of children and adolescents with ADHD. *J An Acad Child Adolesc Psychiatry*. 2000 Nov;39(11):1432-7.
3. Barkley RA, Fischer M. Hyperactive child syndrome and estimated life expectancy at young adult follow-up: the role of ADHD persistence and other potential predictors. *J Atten Disord*. 2019;23(9)907-923.

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