

NEWS

# Attention deficit may mask autism, delay diagnosis

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Attention deficit hyperactivity disorder (ADHD) may mask autism in children who have both conditions. Many of these children receive their autism diagnosis an average of four years later than those who have autism alone, suggests a new study<sup>1</sup>.

The findings are based on parent reports rather than vetted diagnoses and so do not prove that an earlier ADHD diagnosis is to blame for stalling the detection of autism in some children. Still, the researchers say that the data fit the hypothesis that ADHD overshadows autism in certain cases.

“If a child is diagnosed with ADHD, the mindset becomes geared toward managing ADHD,” says lead researcher **Amir Miodovnik**, a pediatrician at the Infant and Children’s Hospital at Maimonides Medical Center in New York. By the time the child’s autism is recognized, he says, “You’ve missed out on this window of opportunity in which interventions appear to be much more effective.” The work was published 14 September in *Pediatrics*.

ADHD affects **5 to 11 percent of U.S. children**, compared with a **1 to 2 percent** prevalence for autism. The two disorders share some symptoms, such as impulsivity and social deficits, and studies suggest that up to **80 percent of children of children with autism meet the criteria** for both conditions. Mounting evidence indicates that autism and ADHD also involve similar biological mechanisms. They may share common genetic risk factors and **affect the same regions of the brain**.

In light of this overlap, Miodovnik and his colleagues wanted to dig into the timing of diagnosis for children who have both disorders. Combing the 2011-2012 **National Survey of Children’s Health**, a database of parent reports on nearly 100,000 U.S. children, they found 1,496 children whose parents say they have autism, 705 of whom reportedly also have ADHD. Roughly 45 percent of children who have both disorders were diagnosed with ADHD first.

“That led me to look into whether that resulted in a delay in the autism diagnosis,” says Miodovnik.

## Confounding conditions:

The researchers found that receiving an ADHD diagnosis first was associated with a delay in autism diagnosis by an average of about four years. These children received an autism diagnosis at an average age of 8.6 years compared with an average of about 4.7 years for children diagnosed with autism before or at the same time as ADHD.

“Early recognition of autism spectrum disorder is extremely important, and earlier interventions lead to better outcomes,” says **Gagan Joshi**, director of the Autism Spectrum Disorder Program at Massachusetts General Hospital in Boston, who was not involved in the work. “It’s good that we’re recognizing their ADHD, but we need to recognize their autism as well.”

The “Diagnostic and Statistical Manual of Mental Disorders” used to prohibit doctors from diagnosing a child with both autism and ADHD, out of a concern that the practice would lead to under-recognition of autism. In 2013, the **DSM-5**, the latest edition of the diagnostic manual, did away with that stipulation.

Many experts thought **the change was long overdue**, but the new findings suggest the earlier fears were warranted. Miodovnik says doctors without special training in autism may be more likely to issue an ADHD diagnosis, as even specialists can have trouble distinguishing between the two conditions. (The database he used in the study does not indicate who gave the children their ADHD diagnosis, however.)

## Debatable data:

The study also does not definitively show that the delay in autism diagnosis is a result of an earlier ADHD diagnosis. It's possible, for instance, that some children were diagnosed later because doctors missed their symptoms when they were younger, at a time when autism was not as widely recognized as it is now. This underdiagnosis would then have had nothing to do with the child's ADHD status.

Other experts note that the data used in the study do not indicate the type or severity of the children's symptoms. Whether a child has an official diagnosis for either condition is also uncertain, as the data came from parents.

"This study was conducted as rigorously as one can, given the data source," says **David Mandell**, associate professor of psychiatry and pediatrics at the University of Pennsylvania, who was not involved in the work. "But the data source is problematic."

Miodovnik acknowledges that the findings are preliminary. Confirming causation would require recruiting thousands of children prior to receiving either diagnosis and following them for years to see which factors affect the timing of an autism diagnosis.

If the results hold up, they suggest a need for a change in the way clinicians treat children who have ADHD. Instead of assuming that ADHD is a child's only diagnosis, doctors should remain on the lookout for signs of autism. Joshi says an easy solution would be to screen children for autism when they receive an ADHD diagnosis.

## REFERENCES:

1. Miodovnik A. *et al. Pediatrics* **136**, e830-837 (2015) [PubMed](#)