



# Autism, Asperger's Syndrome, and ADHD

by Edward B. Aull, MD

Our thinking about Asperger's syndrome and ADHD has changed significantly since I last wrote on this topic for *Attention* magazine (April 2003). Today, people are much more likely to have heard of Asperger's syndrome and know that it is a mild form of autism. Not only is the public more aware but so are the schools, and therefore autism spectrum disorders are much more likely to be suspected and diagnosed today, compared to ten years ago.

The incidence of ADHD in the general population is about eight to ten percent. The incidence of any autism spectrum disorder is currently thought to be about one in eighty-eight children, or a bit more than one percent. In 1990, the incidence of an autism spectrum disorder was thought to be four per ten thousand. A careful study by the National Institute of Health revealed an incidence of 12.3 per ten thousand. In that study, seventy percent of patients who met criteria for an autism spectrum disorder also met criteria for intellectual disability. We now know that there are individuals with an autism spectrum disorder who are not only of normal intelligence, but are actually gifted. Most of the large increase in incidence of the diagnosis of autism spectrum disorders is related to better recognition and diagnosis of the more common milder types, which in the DSM-IV included Asperger's syndrome.

In the DSM-V, Asperger's syndrome has been subsumed into a broad category of autism spectrum disorder. However, I believe the term will continue to be utilized, at least with the public, if not in research studies. The incidence of the more severe forms of autism has not significantly increased. Individuals with milder forms of autism spectrum disorders, such as Asperger's syndrome or PDD-NOS (pervasive

developmental disorder—not otherwise specified), are much more likely to be diagnosed with only ADHD or anxiety plus ADHD, than those with more severe forms of autism where the social issues, anxiety issues, and repetitive or ritualistic movements, such as hand flapping, are more obvious.

When the DSM-IV was published in 1994, it brought Asperger's syndrome to the forefront through its inclusion as a separate clinical diagnosis under Pervasive Developmental Disorders. According to the DSM-IV, a diagnosis of ADHD or Asperger's syndrome excluded one another. Therefore, if you made a diagnosis of ADHD in a patient, the individual could not have a diagnosis of Asperger's syndrome and vice versa. Since then, studies in the USA and abroad have shown that ADHD may be a significant issue in autism spectrum disorders (most studies cite an incidence of thirty-five to eighty percent) and is going to require treatment for good patient outcome. It has also been shown that individuals with autism spectrum disorders are much more likely to have side effects from stimulant therapy for their ADHD.

#### **When diagnosis is incomplete**

I have long defined autism spectrum disorders as a mix of ADHD, anxiety, and a language-based learning disability, where language is taken too literally and body language is poorly understood. I see that many individuals with mild Asperger's syndrome are often diagnosed by their family and by their doctors as having only ADHD, because the anxiety and the language difficulties may be overlooked or poorly understood. In someone with a mild condition, it often requires prolonged symptom review by the evaluator to "discover" the correct diagnosis. It is not that the diagnosis of ADHD is incorrect, it's incomplete.

I recently saw a patient, a college junior who was referred by his school for an evaluation for ADHD. His history was significant for symptoms of ADHD, but it was also significant that he has a brother with high-functioning autism. One has to be at least suspicious that this student may have ADHD, but he may also have a milder form of Asperger's syndrome. I could not make a conclusive diagnosis of Asperger's syndrome and I could for ADHD. When I selected a medication, however, I picked one that was less likely to aggravate anxiety and social quietness in case he has more than "simple ADHD." One significant fact in his history (that might suggest Asperger's syndrome) was that while he had dated girls, it seemed to always be "one date and gone," and he did not know why.

Typically, if someone begins taking stimulant medication for ADHD and he or she actually has Asperger's syndrome, there will be less than ideal results. A common result is that the medication may work for three or four months and then cease to be effective. Perhaps the dose is raised or the medication is changed to another stimulant, and it works for a while and then again ceases to be effective. Another common effect is to increase attention, but the person focuses mostly on anxiety and becomes worse.

Individuals with Asperger's syndrome have more trouble with ADHD treatment, mostly because of their innate comorbid anxiety issues. Many of the medications used in ADHD can "pressure" anxiety and cause patients with Asperger's syndrome to be less comfortable or even fearful. Thirty-one percent of people with ADHD have a comorbid anxiety disorder, and may have similar outcomes, but people with Asperger's syndrome are almost uniformly affected. It often requires a doctor with experience in treating autism spectrum disorders to achieve the best outcome in someone with ADHD and autism, although it is not required.

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*Although the diagnoses are not always easily differentiated, Asperger's syndrome is important to consider when someone thought to have ADHD is not doing well.*

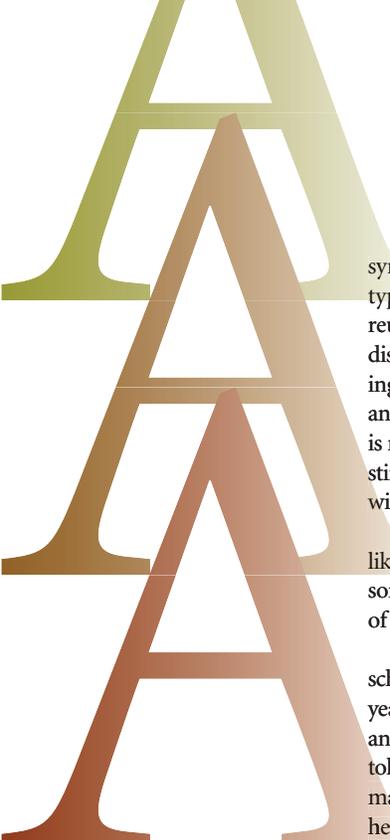
#### **Changes in the DSM-V**

According to the DSM-V, ADHD may be included as a part of the diagnosis of individuals with autism spectrum disorders that may require treatment. Many of the medications for ADHD work, at least in part, by improving the effects of dopamine in the brain. This is very effective for ADHD but it can worsen anxiety in someone with ADHD and anxiety disorders. Individuals with Asperger's syndrome are individuals with ADHD and anxiety.

It is important to discern whether Asperger's syndrome might be a diagnosis for multiple reasons. People with Asperger's syndrome have more social difficulties than people with ADHD alone. In fact, although frequently mentioned, social difficulties are not part of the DSM-IV or DSM-V diagnostic criteria for ADHD but are a major component for an autism spectrum disorder diagnosis. Individuals with Asperger's syndrome have difficulty joining into groups and are often bullied by others. Certainly individuals with ADHD may have trouble with bullies, but those with Asperger's syndrome are quite gullible and can be easily set up to get in trouble.

Studies show that in ADHD, thirty-one percent of children and about fifty percent of adults suffer with anxiety, but anxiety should always be present to some degree in individuals with an autism spectrum disorder. Many of the medications used to treat ADHD affect dopamine. Dopamine is good for ADHD symptoms but it aggravates anxiety. If the doctor understands that the patient has Asperger's





syndrome, therapy can be adjusted to protect the anxiety, typically with the addition of an SSRI (selective serotonin reuptake inhibitor). In a patient with an autism spectrum disorder, anti-anxiety therapy with an SSRI is frequently going to be required so that the patient can tolerate the use of an ADHD medication, especially a stimulant medication. It is not rare to see a patient who has tolerated a low dose of a stimulant medication, but who requires treatment of anxiety with an SSRI in order to tolerate an adequate dose.

Individuals with Asperger's syndrome are much more likely to say the wrong thing, at the wrong time. This trait is sometimes attributed to ADHD, but it is much more typical of someone with Asperger's syndrome.

I recently saw a senior in college who'd had to drop out of school due to extreme anxiety. Diagnosed with ADHD many years before, he was thought to have been adequately treated and made very good grades. It is quite possible that he never told the doctor about his anxiety or his mild social issues—or maybe the doctor never asked. His situation came to a major head in the fall of his senior year, when he had to drop out of school due to high anxiety and inability to sleep. This poor result might have been avoided with the correct diagnosis and appropriate treatment of anxiety and autism at an earlier time. He should respond to appropriate treatment for

anxiety and return to school when the new semester starts.

This student has a particular academic interest and wants to become a professor. This could work well for him as a profession. But if he had been in business management, hotel management, or personnel management, his education would not have fit well with his Asperger's syndrome diagnosis in the "real world." Knowing a patient has Asperger's syndrome may be helpful, even while in school, in selecting certain occupations or at least avoiding some.

Scientific study suggests that ADHD is a part of autism spectrum disorders and the treatment of ADHD and anxiety is helpful in achieving good outcome in school and employment. Recognition that a person doesn't simply have ADHD, but also has Asperger's syndrome or another autism spectrum disorder, may lead to better school and occupational results. Although the diagnoses are not always easily differentiated, Asperger's syndrome is important to consider when someone thought to have ADHD is not doing well. 

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*With a specialization in developmental behavioral pediatrics and psychiatry, Edward Aull, MD, practices in Indiana. He is the author of The Parent's Guide to the Medical World of Autism: A Physician Explains Diagnosis, Medications and Treatments (Future Horizons, 2014).*



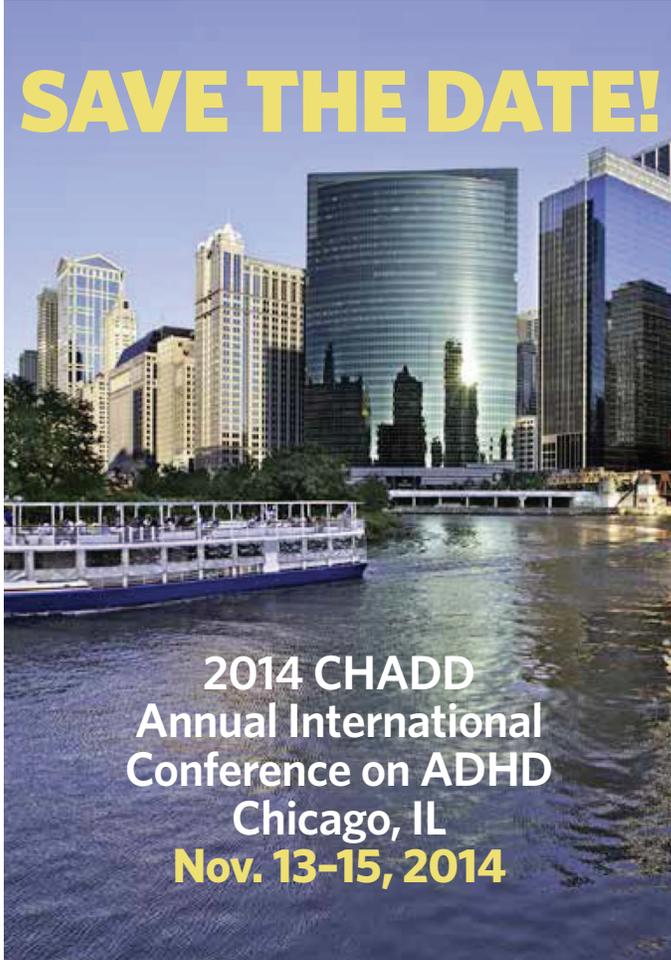
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