



Attention-deficit/hyperactivity disorder (ADHD) is a neurodevelopmental difference with three core characteristics: inattention, hyperactivity, and impulsivity. It's a common condition: The most recent data from the Centers for Disease Control and Prevention indicate that close to 6.1 million children in the U.S. have an ADHD diagnosis. Roughly half of those diagnosed with the condition as children will still have some symptoms into their teen years and adulthood.

ADHD affects the functioning of the executive system, a group of processes that help people regulate their thoughts, emotions, and goal-directed behaviors. The condition can also have physical effects, such as interfering with sleep patterns, and psychological effects, such as anxiety or lower self-esteem.

ADHD typically has one of three different presentations:

Inattentive, which causes people to have trouble with:

- remembering
- organizing tasks and supplies
- staying "on task"
- concentrating or focusing
- shifting efficiently between tasks

Hyperactive-impulsive, which causes signs and symptoms like these:

- difficulty sitting or staying still
- fidgeting and restlessness
- excessive talking and interrupting
- problems controlling impulses
- acting without thinking of risks or consequences

Combined presentation, which features both inattentive and hyperactive-impulsive symptoms.

ADHD makes it harder to function in many settings. Even so, people with ADHD are often accomplished and successful. Researchers have attributed these personal qualities to ADHD study participants:

- creativity
- expressiveness
- inventiveness
- resilience
- energy
- adventurousness
- intense focus
- spontaneity

In studies, college students with ADHD report having personal qualities and skills like these:

- competitiveness
- cooperativeness
- academic ability
- artistic ability
- math ability
- computer skills
- public speaking ability
- writing ability
- spirituality
- compassion

ADHD characteristics can change as a person matures. In the meanwhile, medication and evidence-based behavioral and psychosocial treatment can help people manage symptoms so they can function more efficiently in school, at work, and in their personal relationships. The key– as is true with so many health conditions—is diagnosing ADHD and intervening early to minimize harmful effects and to build on each person's strengths and skills.

WPS is proud to provide trusted assessment tools to help clinicians and educators evaluate children and adults with ADHD symptoms.

Research and Resources:

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Sedgwick, J. A., Merwood, A., & Asherson, P. (2019). The positive aspects of attention deficit hyperactivity disorder: A qualitative investigation of successful adults with ADHD. *ADHD Attention De cit and Hyperactivity Disorders*, *11*, 241–253. <u>https://doi.org/10.1007/s12402-018-0277-6</u>

Diagnosing ADHD

The Diagnostic and Statistical Manual of Mental Health Disorders, Fifth Edition Text Revision (DSM-5-TR) describes ADHD as "a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with a person's functioning or their development."

The DSM-5-TR states that at least six symptoms of inattention and/or at least six symptoms of hyperactivity-impulsivity must have been present for 6 months or more, beginning before age 12 years. The symptoms should be active in two or more settings, such that they interfere with a person's social, educational, or work functioning. For teens and adults 17 years or older, only five or more symptoms need be present.

The International Classi cation of Diseases 11th Revision (ICD-11) describes ADHD as "a persistent pattern of inattention symptoms and/or a combination of hyperactivity and impulsivity symptoms that is outside the limits of normal variation expected for the age and level of intellectual development." To meet the ICD-11 diagnostic criteria, symptoms must have been present for at least 6 months and must be severe enough to impact academic, occupational, or social functioning.

Research and Resources:

Centers for Disease Control and Prevention. (2021, August). *Symptoms and diagnosis of ADHD*. <u>https://www.cdc.gov/ncbddd/adhd/diagnosis.html</u>

World Health Organization. (2022, February). 6A05 Attention de cit hyperactivity disorder. <u>https://icd.who.int/browse11/l-m/en#/http%3a%2f%2fid.who.int%2ficd%2fentity%2f821852937</u>

Who Can Diagnose ADHD?

ADHD evaluations often involve a multidisciplinary team of clinicians and educators, especially:

- educational or school psychologists
- clinical psychologists
- special education teachers
- reading specialists
- speech and language pathologists
- occupational and physical therapists

The Centers for Disease Control and Prevention lists several clinical professionals who can diagnose ADHD, including:

- mental health professionals such as psychologists and psychiatrists
- health care providers such as family physicians, pediatricians, neurologists, and developmental pediatricians

What Does a Comprehensive ADHD Evaluation Include?

No single assessment can provide a clear yes-or-no answer to the question "Is ADHD at the root of these symptoms?" A reliable ADHD diagnosis comes from analyzing and integrating information from:

- multiple diagnostic measures, including those that measure ADHD symptoms or rule out other diagnoses
- multiple sources, including the individual at the heart of the evaluation, caregivers, families, educators, health care providers, and mental health specialists
- multiple settings, including home, work, school, and health care facilities

A thorough ADHD evaluation often includes:

- interviews and rating scales involving multiple sources who can help evaluators understand which ADHD symptoms are impacting home, school, work, and personal life; how severe the impairments may be; how an individual copes or compensates in problem areas; and whether life events may be contributing to symptom severity
- detailed developmental and medical histories, including past diagnoses and treatments, to help evaluators assess an individual's risk and protective factors and to identify any other health conditions that might cause similar or overlapping symptoms
- educational and occupational histories to help evaluators determine the degree to which symptoms are interfering with the individual's ability to function; when symptoms began; which past interventions may have been successful; and what strengths have helped the individual succeed
- assessments with validated diagnostic tools so evaluators can analyze objective data in relevant areas

Why Do We Recommend Screening for Reading Difficulties with ADHD?

<u>Reading difficulties</u> and ADHD often go hand in hand. The aim of universal screening is to identify students who may need extra help so they can begin interventions at a young age, when the brain's plasticity better enables growth. When people learn to read, areas of the brain involved in vision, hearing, and spoken language build new neural connections devoted to reading processes. Over time, these pathways become more efficient in most people. When they don't, early intervention can help. Targeted interventions can actually *prevent* some reading disabilities.

Screening measures can also be used as progress-monitoring tools—quick tests to see whether students are developing specific reading skills and whether interventions are working. Regular progress monitoring can also provide a glimpse of the *rate* of improvement. The International Dyslexia Association (IDA) recommends that screenings take place every 3 months, beginning as early as preschool and continuing through 2nd grade.

Students who are learning English as a second language should be screened, too—though some advocates have expressed concern that results for English-language learners may not be interpreted as accurately and could lead to students being mislabeled.

Learn more about why it's also important to assesss executive function with ADHD.

Research and Resources:

Centers for Disease Control and Prevention. (2022, August). ADHD treatment recommendations. <u>https://www.cdc.gov/ncbddd/adhd/guidelines.html</u>

ADHD Screening/Diagnostic Tools

WPS <u>Assessment Consultants</u> can help you and your evaluation team select the assessments you need to build a complete picture of a client's capabilities, deficits, symptoms, quality of life, and overall health.

Rating Scales

- Behavior Rating Inventory of Executive Function, Second Edition (BRIEF2)
- Behavior Rating Inventory of Executive Function-Preschool Version (BRIEF-P)
- Conners Third Edition[™] (Conners 3®)
- Conners' Adult ADHD Rating Scales (CAARS)
- ADHD Rating Scale IV (ADHD-RS-IV) With Adult Prompts
- Adult ADHD Clinical Diagnostic Scale (ACDS) v1.2
- Adult ADHD Investigator Rating Scale (AISRS)

- Adult ADHD Self-Report Scale (ASRS) v1.1
- Adult ADHD Self-Report Screening Scale for DSM-5 (ASRS DSM-5) Screener Adult
- ASRS Symptom Checklist v1.1
- Barratt Impulsiveness Scale (BIS-11)
- Brown Attention-Deficit Disorder Symptom Assessment Scale (BADDS) for Adults
- Clinical Global Impression (CGI)
- Wender Utah Rating Scale (WURS)



Interviews

• Diagnostic Interview for ADHD in Adults (DIVA) 2.0

Additional Measures:

- Revised Children's Manifest Anxiety Scale, Second Edition (RCMAS[™]-2)
- Trauma Symptom Checklist for Children (TSCC)
- Trauma Symptom Checklist for Young Children (TSCYC)
- Trauma Symptom Inventory-2 (TSI-2)
- Adult ADHD Quality of Life Measure (AAQoL) 2

- Driving Behavior Survey (DBS) 3
- Work Productivity and Activity Impairment Questionnaire General Health V2.0 (WPAI:GH) 4
- Adaptive Behavior Assessment System, Third Edition (ABAS®-3)
- <u>Comprehensive Executive Function Inventory Adult (CEFI Adult)</u>
- Executive Functions Test-Elementary: Normative Update (EFT-E: NU)

Challenges in Diagnosing ADHD

ADHD evaluations can be complicated, even for seasoned clinicians and educators. Here are some of the factors that can make it more challenging to arrive at the right diagnosis for each individual:

Overlapping and Similar Symptoms

ADHD symptoms can look and feel like the symptoms of different health conditions. ADHD can also co-occur with other disorders, so you may notice overlapping symptoms. In situations like these, it can be hard to tell which disorder is causing the symptoms. It may help to determine when symptoms began, since ADHD is a neurodevelopmental condition that emerges during childhood.

Compensatory Strategies

Some people develop an impressive array of work-arounds and strategies that help them succeed. In some cases, these strategies can mask ADHD symptoms. It's important to recognize these tools and strategies as you interpret data during the evaluation.

Some of the more common strategies include:

depending on checklists, devices, and reminder apps

- delegating organizational tasks
- switching tasks frequently to reduce distraction
- keeping detailed daily schedules and rigid routines
- engaging in physical activity
- limiting environmental stimuli

Sex and Gender

The Centers for Disease Control and Prevention reports that roughly twice as many boys as girls are diagnosed with ADHD (12.9% compared to 5.6%). The difference in this rate may be partly owing to genetic, hormonal, and psychosocial differences between the sexes. But some ADHD researchers think the disparity may also exist because it can be harder to recognize ADHD symptoms in girls and women. For that reason, a certain referral bias may exist.

To prevent misdiagnosis, it may help to consider these factors:

- Symptoms may appear less severe in girls and women.
- Inattention can also be described as being "disorganized," "distracted," or "overwhelmed."
- Symptoms often become more obvious during times of transition, such as between high school and college.
- Hormonal shifts (such as pregnancy or menopause) can make symptoms more noticeable.
- It's easier to overlook inattentive symptoms than it is to ignore disruptive, hyperactive, or impulsive behaviors.
- Emotional dysregulation, vulnerability to bullying, and social difficulties may be more pronounced in girls and women.

Race and Culture

ADHD occurs in every demographic group and geographical region. Yet, studies show significant disparities in how ADHD is diagnosed and treated in different populations. For example, in the U.S., White children are more likely to be diagnosed with ADHD than Black or Latinx children. White children with ADHD are also more likely to receive treatment than Asian children with ADHD. There's some evidence that a lack of access to health care and racial bias may worsen these disparities.

Culture can also affect how people interpret and express ADHD symptoms. Some individuals and families may feel reluctant to trust or request services. Others may avoid seeking help because of a stigma associated with mental health conditions and educational problems, or because they view ADHD characteristics differently.

Trauma

Some ADHD symptoms mirror the effects of trauma in both children and adults, which can complicate the diagnostic process. For example, ADHD is much more common among combat veterans with post-traumatic stress disorder (PTSD) than it is in the rest of the population. Researchers have also found a link between childhood trauma and ADHD symptoms. Trauma can cause ADHD-like symptoms such as:

- inability to pay attention
- memory problems
- restlessness
- irritability
- tendency to act on impulse
- quickly changing emotions

Differing Reports

Teachers, caregivers, health care providers, and others participating in an evaluation sometimes report different symptoms and severities. That discrepancy may be because a student or client functions better in some settings than in others. It's also possible that the individual completing a checklist or being interviewed may have an unconscious bias that shapes how they view a behavior or symptom. The best way to deal with data discrepancies is to look for trends and commonalities across all the data and all sources.

Medications, Substance Use, and Drug-Seeking Behavior

Some medications cause side effects that look like ADHD symptoms. For example, medications for anxiety disorders can affect the ability to pay attention. Other chemicals, such as nicotine and caffeine, can increase hyperactivity. For this reason, it's important for evaluators to take a thorough medical history to see what, if any, substances could be behind ADHD-like symptoms.

The problem of drug diversion is also on the rise. Diversion refers to selling or giving away prescribed ADHD medication to someone else. Between 2% and 14% of adolescents report misusing methylphenidate, a commonly prescribed ADHD medication. Also on the rise: misreporting symptoms to qualify for an ADHD diagnosis and obtain stimulant medications.

If you encounter challenges like these in an evaluation, it's okay—in fact, it's advisable—to ask for additional records, new assessments, and greater detail from those you interview. Your professional judgment is based on a longitudinal view—patterns of strengths and deficits that become clear over time and across settings.

Research and Resources:

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Vrijsen, J. N., Tendolkar, I., Onnink, M., Hoogman, M., Schene, A. H., Fernández, G., van Oostrom, I., & Franke, B. (2018). ADHD symptoms in healthy adults are associated with stressful life events and negative memory bias. *Attention De cit and Hyperactivity Disorders*, *10*, 151–160. <u>https://doi.org/10.1007/s12402-017-0241-x</u>

Young, S., Adamo, N., Ásgeirsdóttir, B. B., Branney, P., Beckett, M., Colley, W., Cubbin, S., Deeley, Q., Farrag, E., Gudjonsson, G., Hill, P., Hollingdale, J., Kilic, O., Lloyd, T., Mason, P., Paliokosta, E., Perecherla, S., Sedgwick, J., Skirrow, C., Tierney, K., van Rensburg, K., & Woodhouse, E. (2020). Females with ADHD: An expert consensus statement taking a lifespan approach providing guidance for the identification and treatment of attention-deficit/ hyperactivity disorder in girls and women. *BMC Psychiatry*, *20*, 404. <u>https://doi.org/10.1186/s12888-020-02707-9</u>

Diagnosing ADHD in Adults

The National Institute of Mental Health (NIMH) estimates that the median age for ADHD diagnosis is 6 years old. About a third of those diagnosed with ADHD as children will still be experiencing significant symptoms as adults. In adulthood, however, ADHD symptoms can

change. Much of the recent data suggests that just over 4% of the adult population in the U.S. has been diagnosed with ADHD.

Here are a few factors to consider when evaluating adults for ADHD:

The diagnostic threshold is different.

In adults, only five persistent symptoms of inattention or five persistent symptoms of hyperactivity-impulsivity must be noted in two or more settings. Persistence generally means that symptoms have lasted for 6 months or more. For both children and adults, some symptoms must have been present since 12 years of age.

It's important to look at multiple settings.

Since ADHD affects people both personally and professionally, evaluators should look for symptoms that limit someone's ability to function in social, educational, or work environments. To gather information about other settings, you may need to obtain permission to ask for records from these sources. It's also critical to assess functional deficits—impairments that keep people from being able to complete necessary tasks in a variety of settings.

Consider screening for substance use disorder.

People sometimes use substances such as alcohol or drugs to cope with ADHD symptoms and their practical effects. Studies show that people with ADHD have substance use disorder at higher rates than the general population—and substance use can intensify some ADHD symptoms, such as unstable moods. It's usually a good practice to include a substance use disorder screening in your ADHD evaluations for teens and adults.

Clarify when ADHD symptoms began.

Exploring developmental and educational histories can help you determine exactly when someone's symptoms began. Research into adult-onset ADHD is limited. Because the disorder is defined as "neurodevelopmental"—meaning that it emerges as children are developing—there is

some question about whether ADHD can begin in adulthood. Some researchers say it's possible that:

 people may not have noticed ADHD symptoms earlier because they were well-supported and helped by those around them

- look-alike symptoms were present but were thought to be associated with another condition
- symptoms began in childhood but were not diagnosed at the time

Take a look at past diagnoses.

In some cases, adults may have received an earlier diagnosis to explain their symptoms. As you formulate your current diagnosis and treatment plan, you'll need to understand which past treatments have worked and which haven't. It's a good idea to find out whether the individual complied with the treatment protocols. You'll also need to be aware of any side effects associated with previous treatments.

Consider a mental health referral if suicide, self-harm, or other psychological risks are present.

ADHD can have serious effects on mental health and well-being. Studies show that for some people with ADHD, depression can start at a younger age and can be more persistent than it is in other populations. And around 25% of those with ADHD experience significant anxiety. Use your professional judgment to determine whether someone has a higher risk of harming themselves or others.

Research and Resources:

National Institute of Mental Health. (2021). *Attention-deficit/hyperactivity disorder in adults: What you need to know*. <u>https://www.nimh.nih.gov/health/publications/adhd-what-you-need-to-know</u>

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Which Health Conditions Often Co-occur With ADHD?

The Centers for Disease Control and Prevention estimates that just under two-thirds of those with ADHD also have another behavioral, mental health, or emotional condition. ADHD is also known to occur alongside other health conditions such as sleep disorders and migraine headaches. Understanding their complex interactions is important for diagnostic evaluations and for creating effective treatment and intervention plans.

Here's a look at some of the conditions that frequently occur alongside ADHD.

Medical Comorbidities

Some health conditions are more common among people with ADHD than they are in the general population. In fact, research shows that around 77% of children with ADHD have another disorder. Close to 40% have at least two other health conditions. In some cases, these health conditions present symptoms similar to those caused by ADHD, which can make it harder to determine which condition is causing specific problems.

In other cases, ADHD and another health condition make the symptoms of each condition worse. And sometimes, the treatment for one condition changes the symptoms of the other.

Sleep disorders. ADHD and sleep disturbance are interrelated—and more girls with ADHD experience sleep problems than boys do. They're both associated with the same neurotransmitters, and they're both linked to structural differences in the same areas of the brain. ADHD symptoms can lead to certain sleep problems, such as taking longer to fall asleep and waking up more often during the night. Treating ADHD can sometimes decrease sleep disturbance, but it's important to know that some ADHD treatments can worsen sleep problems, too.

- Epilepsy. Children with epilepsy often have greater attention difficulties than children without the seizure disorder. Some researchers have found that the two conditions co-occur around 24% of the time. Around 14% of those with epilepsy have the inattentive type of ADHD. In studies, co-occurring ADHD and epilepsy are associated with being younger, starting seizures at a younger age, having more frequent seizures, and being assigned male at birth.
- Enuresis. About 40% of children who experience urinary incontinence during their sleep also have ADHD. Enuresis can increase the likelihood that a person with ADHD will also have self-esteem issues, anxiety, and distress. Researchers recommend that children with nighttime incontinence be screened for ADHD routinely.
- Asthma. Asthma and ADHD often overlap. Researchers think inflammation in the body may have something to do with both conditions. Research also shows that when children have both ADHD and asthma, they tend to experience more hyperactivity, greater impulsivity, and higher levels of anxiety than with ADHD alone.
- Tic disorders. The relationship between ADHD and tic disorders, including Tourette's syndrome, is complex. Up to 60% of those with Tourette's also have ADHD. The two conditions share genetic territory, and differences in the same neural pathways are associated with both conditions. Researchers recommend that when these conditions co-occur, prioritizing ADHD treatment may have a bigger impact on how a child functions, especially in school. It's important to know that some ADHD medications improve tics, and some worsen them.
- Migraine. Roughly 26% of children with ADHD have migraine headaches, studies show. The percentage of children with typical development and migraines is much lower: around 9.9%. Migraine headaches are also associated with ADHD in adulthood, particularly for people assigned female at birth.
- Gastrointestinal di culties. ADHD and digestive problems such as indigestion, constipation, and irritable bowel syndrome often co-occur. More research is needed to understand exactly how the two are related; one possibility is that the immune system and gut microbiome may play a role in both conditions.
- Risk of accidents and injuries. People with ADHD have a higher risk of being injured accidentally than people in the general population. Much of the time, injuries were related to traffic accidents. Research shows that many of the accidents occurred when people felt distracted, lost in thought, stressed, under pressure, or overconfident. In some cases, sleep problems and use of drugs or alcohol were factors. An important part of treatment plans, especially for adolescents and adults with ADHD, is to educate them about the risks and ways to cope.

Neurodevelopmental Conditions

ADHD can co-occur with other neurodevelopmental conditions—and other neurological conditions sometimes have symptoms that look similar to those caused by ADHD. Understanding which disorder is causing symptoms can be difficult. You may need to assess more than one condition to clarify which diagnosis best accounts for someone's symptoms.

- Autism spectrum disorder (ASD). Data from the Centers for Disease Control and Prevention show that around 1 in every 8 children with ADHD is also autistic. When these conditions cooccur, the characteristics of both conditions can be amplified, and the risk of mental health problems such as anxiety and depression can be higher.
- Developmental coordination disorder. This movement condition co-occurs with ADHD more
 often than any other neurodevelopmental condition. The two disorders overlap between
 50% and 75% of the time, studies show. For that reason, it's important to assess how
 children actually carry out their daily functions in different environments. Children with
 ADHD often have some difficulty with motor skills, but those difficulties might not meet the
 diagnostic criteria for developmental coordination disorder.
- Sensory processing conditions. Many people with ADHD process sensory stimuli in ways that aren't typical. While some people are less sensitive to stimuli, making them appear less motivated or interested, there's more evidence of the reverse condition—experiencing sensory information more intensely than is typical. It isn't fully clear whether sensory processing differences are caused by ADHD or whether they co-occur with ADHD.
- Learning disorders. Specific learning disorders in reading, spelling, or math sometimes cooccur with ADHD. In one German study, researchers found that just over 17% of children with a reading disorder also had ADHD, for example. When these conditions overlap, the psychological impacts can be greater. Building a child's sense of self-efficacy and selfconfidence can help to lessen the risk of anxiety and depression.
- Intellectual disability (ID). ADHD occurs at higher rates among people with ID. As much as 20% of those with ID also have ADHD, some studies show. Diagnosing ADHD in people with ID can be complicated, partly because ID can make it harder for people to communicate about their symptoms. One noteworthy difference is that with ID, inattention and not following instructions are sometimes related to a comprehension problem.

Learn more about assessing ASD + ADHD.

Psychological and Behavioral Conditions

ADHD often occurs alongside mental health conditions. Understanding the complex relationships between these conditions can help you plan effective interventions and make recommendations for additional supports.

- Anxiety disorders. ADHD co-occurs with anxiety disorders roughly 25% of the time. Some researchers suggest that generalized anxiety disorder could keep younger children from acting on impulse as often. In the teen years, anxiety can worsen working memory, and in adulthood, it can further disrupt sleep. Cognitive behavioral therapy and medication are two evidence-based treatments that can help people manage both conditions.
- Depression. Having ADHD as a child is linked to a higher risk of having <u>depression as a young adult</u>, even if ADHD symptoms don't continue into adulthood. It isn't completely clear whether ADHD and its effects cause depression, or whether the two conditions co-occur because of shared genetic factors. (Some studies support a different understanding of the relationship between the two conditions; these studies suggest that *depression* may cause or contribute to *ADHD*.) The good news is that effectively treating ADHD symptoms tends to lower the risk of having depression later.
- Bipolar disorder. There's quite a bit of overlap between these two conditions. For example, in a manic episode, someone might experience racing thoughts, which can seem similar to the distractibility of ADHD. In the same way, the euphoria that sometimes comes with bipolar disorder may look like the impulsivity associated with ADHD. The similarity of symptoms can make finding the right diagnosis more difficult. Around 1 in 13 people with ADHD also has bipolar disorder, and close to 1 of every 6 people with bipolar disorder also has ADHD.
- Conduct disorders. Conduct disorders are a range of behavior disorders that cause people to act aggressively, destroy things, be dishonest, and defy rules and norms over and over. These mental health conditions often co-occur with ADHD. It's important to gather information from caregivers, schools, and therapists to understand how ADHD and conduct disorders affect each individual. It's also important to determine when symptoms began because ADHD symptoms often start earlier.
- Childhood trauma. Between 12% and 37% of adults diagnosed with ADHD also have posttraumatic stress disorder (PTSD), and close to 44% of those with ADHD experienced childhood trauma, studies show. Like ADHD, traumatic experiences can affect thinking processes known as executive function, which includes the ability to focus, plan, remember, make decisions, and exercise self-control. Evidence suggests that having ADHD symptoms in childhood can increase the likelihood of experiencing trauma, especially aggression or abuse. For those with ADHD and childhood trauma, the chance of developing PTSD is higher.

Research and Resources:

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Best Practices for Assessing ADHD

Evidence-based best practices for ADHD evaluations are always being revised and updated. These recommendations are based on current research and professional guidance issued by the American Psychological Association, the American Academy of Family Physicians, and the National Association of School Psychologists.

Create a broad evaluation framework. In addition to the validated assessments you select, gather data from developmental, medical, education, psychiatric, and psychosocial histories. You will need to assess functioning in as many settings and domains as you can, documenting the impact that symptoms have on the individual's life and on the lives of others in their circle. The more comprehensive an evaluation is, the more reliable the diagnosis is likely to be.

Interview as many sources as possible. Gathering detailed information from teachers, counselors, coaches, family members, friends, and other clinicians can help you balance individual perceptions, biases, and levels of awareness.

Choose assessments with individual needs in mind. Assessments should be valid, reliable, and appropriate for the individual being tested. It's a good practice to ask questions like these when selecting an assessment:

- Does research support the use of this test for my purpose?
- Is this test available in the language needed?
- Does the standardization sample include people of a similar demographic?
- Is this assessment a good fit for our budget, time constraints, technology, and physical environment?
- Can I access training to be sure I'm ready to give, score, and interpret this test?
- What accommodations does this student need, given their disability?

Consider the characteristics of each setting where you test or observe the individual.

Environments can influence motivation and symptom expression. You can ask questions like these:

- Is this environment new?
- Is this a one-to-one interaction?
- Are rewards being offered for behavior? How often?
- How much stimulation is happening?
- Are the tasks engaging? Do they require sustained focus?

Keep in mind that ADHD symptoms can change as people mature. For that reason, it is important to understand what behaviors are developmentally appropriate. In the teen years, hyperactivity can look like mental or emotional restlessness. Impulsivity can be expressed in risk-taking and substance use. Inattention can result in procrastination and problems staying organized and meeting deadlines.

In interviews with teens and adults, look for signs of impairment in mental and emotional functioning. Teens may be more likely to open up if they're interviewed separately from parents, caregivers, or other authority figures. Listen for evidence of:

- bullying
- depressed thinking
- anxieties
- obsessive thinking
- self-harm or suicidal thinking
- delusions
- hallucinations
- substance use

If any of these signs are present, you may need to refer the individual to a mental health provider for additional services and support.

Develop a therapeutic alliance with the patient or student and the family. A strong therapeutic bond between you and those at the heart of the evaluation is crucial for the success of the intervention plan. Make sure every stakeholder knows that you value their perceptions and understand their concerns—even if they see things differently than you do or have different priorities. The better you understand their needs, the more effectively you'll be able to tailor the psychoeducation you provide around ADHD.

Read more about communicating with families to build trust, connection, and engagement.

Seek the professional development and training you need to stay current. Best practices, research findings, and assessments are constantly being revised. To make sure your evaluations and treatment plans are evidence based, regularly take advantage of continuing education opportunities. WPS is pleased to offer <u>training</u> to help you build your expertise with ADHD assessments.

Revise and reduce implicit bias. Each of us has beliefs that shape our approach to assessment, evaluation, and treatment of conditions like ADHD. Research shows that our culture influences our behavioral expectations and our tolerance levels. It's important that we learn how our personal beliefs and biases impact the way we interpret behaviors and make recommendations. Just as we analyze our own beliefs and assumptions, we need to examine our policies and systems to be sure every student receives a fair evaluation, accurate diagnosis, appropriate intervention plan, and sufficient resources.

Research and Resources:

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Addressing Bias and Reducing Disparities

ADHD affects people of all genders, races, ethnicities, educational levels, and socioeconomic groups. Yet a growing body of research shows that there are ethnic, gender, and racial disparities in the diagnosis of ADHD. For example, Black and Hispanic children are more likely than White

children to be diagnosed with a conduct or behavior disorder instead of ADHD. Likewise, people assigned male at birth are much more likely to be diagnosed with ADHD than people assigned female. The reasons for these disparities are complex, but it's clear that implicit or unconscious bias can sometimes be a factor.

Examples of Implicit Bias

Implicit bias refers to unfair beliefs that shape our actions and attitudes toward things or people, often without our full awareness. Though biases are influenced by our experiences, they are often based on inaccurate stereotypes. Clinicians and educators can develop biases that affect their ability to objectively assess the individuals entrusted to their care. Here are a few examples of bias drawn from recent research:

- Clinicians and educators may attribute more criminal behavior, aggression, and violence to Black and Hispanic children than to children of other races and ethnicities. One result of that bias is that Black children are 2.5 times more likely to be diagnosed with a conduct disorder than with ADHD.
- Black children are often viewed as older, more experienced, and less innocent than White children of the same age.
- Children who experience trauma are often diagnosed with conduct disorders because evaluators don't recognize the way that trauma responses can mimic or overlap with the symptoms of other disorders.
- Black and Latinx children are less likely to receive a referral from a school psychologist than children of other races and ethnicities.
- Children in families with higher incomes receive more ADHD diagnoses than children in lower-income homes. Children using Medicaid are 5 times more likely than kids with private insurance to be diagnosed with a behavioral or conduct disorder than with ADHD.

Reducing Implicit Bias

Counteracting implicit bias isn't easy or pleasant. It takes ongoing self-examination, honesty, and commitment to change—and studies show that forced implicit bias training may not work long term. One successful method for overcoming bias is known as the *prejudice habit-breaking intervention*. The intervention includes several core components:

- education about the origins and results of implicit bias
- training in anti-bias strategies such as perspective-taking and anti-stereotype imaging
- feedback about individual biases based on the <u>Implicit Association Test</u>

As important as anti-bias training is, it's also important to look at working environments that make it more likely people will resort to automatic, biased thinking. One factor to consider is burnout, which researchers think magnifies biased thinking.

Stress, fatigue, unmanageable caseloads, insufficient resources, and feelings of powerlessness can wreak havoc on your clinical decision-making. Under pressure, you're more likely to rely on automatic thought patterns—and that means bias can creep into your evaluations and treatment plans. As you're contemplating how to reduce implicit bias, you can begin by taking a deep breath and slowing the process to a humane and reasonable pace.

Learn how WPS is working to improve equity, diversity, and inclusion.

Research and Resources:

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Talking About ADHD Evaluation Results

Parents, caregivers, and people with ADHD respond differently to an ADHD diagnosis, depending on their personal attitudes and beliefs, cultural influences, and the amount they know about the condition. Working with clinicians and educators during the diagnostic process may be their first exposure to information about ADHD.

Taking the time to learn about the needs of different stakeholders early in the evaluation may make your job easier throughout the process. It may also help to ensure that the person with ADHD has the support needed to follow the intervention plan.

Here are a few tips to help you communicate with parents and caregivers about ADHD.

Be aware of the stress ADHD can cause at home.

Parents and caregivers of children with ADHD often feel extra stress, worry, and anxiety. Some, when speaking with researchers, have described the experience as "a wrecking ball" and a "war at home." Because you may be dealing with stressed parents and caregivers, it's a good idea to

adopt trauma-sensitive communication practices. Here are a few examples of what these practices can look like:

- protecting data privacy and strictly limiting what information you share outside meetings
- offering parents choices about how they want to communicate with you
- providing information in the home language
- allowing parents to access the information they need in different ways (for example, by email, phone, portals, websites, print, and apps)
- speaking in a calm, respectful manner
- providing ways for families to share honest feedback with you
- including students and families in shared decision-making
- enabling parents, students, and family members to make choices throughout the process

Practice cultural curiosity.

When you communicate with family members to prepare them for their role in the evaluation, you can ask questions to understand how they see the difficulties the child is experiencing. Each culture has a unique perspective on children's behavior, the parents' roles in shaping behavior, and the causes of conditions like ADHD. Showing respectful cultural curiosity will help you understand what each family needs.

Create opportunities for parents to ask questions.

Some parents are highly skilled at locating information and resources related to health conditions. Others may look to you as a primary source of information. In an international study that evaluated family needs, parents reported needing more information about:

- ADHD itself
- causes of ADHD
- both pharmaceutical and non-pharmaceutical treatment options
- effective reward and discipline methods
- ways to cope with mental and physical exhaustion
- problem-solving strategies
- anger-management methods
- resources for handling the costs of treatment

resources for dealing with stress, anxiety, and depression

Emphasize strengths and actionable steps.

Learning that someone in your care has ADHD can stir up lots of different emotions. For some people, it's a relief to have a medical diagnosis that explains hard-to-handle behaviors. For others, the primary feelings are shock, sadness, or guilt. You can help parents and caregivers to feel supported and empowered by emphasizing the positive personal traits and capabilities that evaluators noticed and that were identified in strengths-based assessments.

You can also provide parents with:

- training opportunities to learn about educational accommodations, behavior-management techniques, and stress-relief strategies
- resources for connecting with other people who are parenting children with ADHD, such as local or online support groups
- referrals to trained ADHD specialists in your community
- instructions for effective home-based interventions
- a schedule for follow-ups

It's also important that parents know how to contact you, since questions often come up after the conference is complete.

Research and Resources:

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Evidence-Based Interventions

ADHD symptoms can range from mild to severe, and they often change over the life span. They may worsen during stressful periods or with hormonal changes. They may shift their presentation as children move into adolescence and adulthood. For that reason, clinicians and educators need to create intervention plans that respond to an individual's current needs.

Research-based intervention plans typically include some or all of these elements:

Medication. Data from the National Survey of Children's Health shows that 62% of children with ADHD take medication to manage their symptoms. ADHD medications generally fall into two categories: stimulants, including amphetamines and methylphenidates; and non-stimulants, including antidepressants and alpha agonists (originally used to treat blood pressure disorders). At this time, the only non-stimulant medication approved by the U.S. Food & Drug Administration (FDA) for treating ADHD is atomoxetine (Strattera). The same medications used to treat children are also used for adults with ADHD.

Parent training in behavior management. In this type of intervention, a therapist works with parents and caregivers to help them:

- understand ADHD's effects
- build structure into a child's day
- positively encourage healthy behaviors
- discourage unhealthy behaviors

The Centers for Disease Control and Prevention recommends that parent training in behavior management be used as a first-line intervention before drug therapy in children younger than 6 years.

Behavioral teacher training. Considered by some researchers to be the most effective classroom intervention, behavioral teacher training helps teachers change a student's behavior by using stimulus control techniques. These techniques might focus on changing the conditions that lead to behavioral problems or on changing the response to unwanted behaviors. Techniques can include:

- creating reliable structure and routines
- providing clear instructions individually
- posting class rules and routines
- issuing daily report cards

- seating students with ADHD close to the teacher or in lower-stimuli areas
- clarifying expectations about behavior in different situations
- using praise to reward positive behaviors
- ignoring or using mild consequences for unwanted behaviors

Cognitive behavioral therapy. Cognitive behavioral therapy teaches people with ADHD to identify and "rewrite" unhealthy thinking patterns. This type of therapy can also incorporate relaxation strategies and ways to adapt an environment so that it's easier to concentrate.

Meta-cognitive therapy. This intervention helps people to analyze and understand their thinking style. It often focuses on helping people with ADHD change how they think about planning—building their organizational and time-management skills as well as disrupting thinking patterns that lead to unhealthy moods.

Trigeminal nerve stimulation (TNS). In 2019, the FDA approved the use of TNS to reduce ADHD symptoms. During treatment, a device emits low-level electrical stimulation through a patch on the forehead. The electrical waves stimulate the parts of the brain believed to be associated with ADHD symptoms. There is some evidence that TNS helps to improve executive functioning along with other symptoms of ADHD. For now, TNS is approved for children 7–12 years of age.

Research and Resources:

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