# Diagnosis and Treatment of ADHD in Adults in Primary Care

Brendan Montano, M.D.

The prevalence rate of adult attention-deficit/hyperactivity disorder (ADHD) indicates that 4.5% of adults continue to exhibit ADHD from childhood. Most adult sufferers of ADHD have not been properly diagnosed or treated. The majority of adults with ADHD exhibit at least 1 comorbid psychiatric disorder, such as major depressive disorder, anxiety disorder, personality disorder, substance abuse disorder, or bipolar disorder. In many instances, such a disorder may offer the first clue to diagnosing an adult with ADHD. Comorbidities may, however, confound a proper ADHD diagnosis, so it is important to look for and establish an early (childhood) and persistent (lifelong) history of inattention or hyperactivity. The use of available standardized ADHD rating scales and checklists will then help the physician to differentiate between ADHD and other comorbid psychiatric disorders commonly seen in primary care. At present, there is no universally accepted and efficient standardized assessment tool for identifying adult ADHD in primary care. However, the Adult Self-Report Scale Screener may represent such a tool and may be used with ease in a busy office setting. Using such strategies, primary care providers are still able and encouraged to identify and treat adults with ADHD. *(J Clin Psychiatry 2004;65[suppl 3]:18–21)*

Attention-deficit/hyperactivity disorder (ADHD)—marked by inattention, distractibility, and impulsivity—has long been known as a childhood disorder. Only recently has the persistence of untreated ADHD into adulthood been gaining recognition in primary care. It is estimated that as many as two thirds of children with ADHD will continue to have the disorder as adults.[1] Elsewhere it is estimated that the prevalence rate of adult ADHD is 4.5%.[2] Although the clinical features of adult ADHD are reminiscent of the highly recognizable symptoms of childhood ADHD, presentation of the disorder after childhood will evolve and change in an age-appropriate fashion as the individual matures.

Wender et al.[2] have estimated the prevalence of ADHD to be more common in the general population than epilepsy,[1] schizophrenia,[3] and stroke.[4] Thus, primary care physicians should expect to encounter adults who have the disorder but who have never been diagnosed or treated. In many (if not most) instances, primary care physicians can successfully identify and treat adults with ADHD with relative ease and comfort. Occasionally, they may need to refer the patient to a psychiatrist if the diagnosis is in doubt, if the patient has significant psychiatric comorbidity, or if the symptoms do not respond to medications proven effective in treating ADHD.

*From the Department of Family Practice, University of Connecticut Medical School, Farmington.*

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*Corresponding author and reprints: Brendan Montano, M.D., 160 W. Street, Building 1, Suite A, Cromwell, CT 06416 (e-mail: docmontano@aol.com).*

## PRESENTATION OF ADULT ADHD

Like those with other illnesses, individuals with ADHD may or may not have insight into the cause of their impairment. On occasion, a patient who has read about the disorder or has a family member who has been diagnosed with ADHD may present as "self-diagnosed." Most patients, however, present with no prior knowledge of ADHD but with complaints of difficulty functioning within normal capacity. (For examples/case reports, see references.)

When a patient's presentation suggests the possibility of ADHD, a thorough developmental history—corroborated where possible by sources like school records and family recollections—is needed to establish whether symptoms of ADHD have been present since the patient's childhood. A consistent history of impairment from childhood is a prerequisite for a proper diagnosis of adult ADHD. A diagnosis of ADHD also requires that the adult have current, considerable impairment in 2 or more settings: home, school, work, or social settings.

At present, the diagnostic criteria for ADHD match the symptoms of the disorder only as they appear in childhood.[5] For example, childhood hyperactivity is manifested

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in excessive running and climbing, but such behavior is not to be expected in adulthood; rather, these childhood symptoms may migrate to working a very active job or several jobs. The adult with ADHD is likely to exhibit less specific symptoms than those described in the *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition. Adult ADHD is expressed in chaotic lifestyles marked by such symptoms as inattention, restlessness, mood lability, disorganization, stress sensitivity, impulsivity, and hyperactivity.

As the individual with ADHD matures, physical hyperactivity diminishes in severity and tends to migrate from aimless to purposeful behavior.[6,7] For example, the adult with ADHD may choose a very active job, work 2 jobs, or work long hours in response to an overwhelming sense of inner restlessness. He or she may feel a disruptive need to talk excessively or to be constantly busy even during leisure times.

Inattentive symptoms become more prominent with time and may be perceived as incompetence by the patient or by those around the patient.[6,7] Inattentive symptoms may manifest as neglect, poor time management, motivational deficits (difficulty initiating, completing, or changing tasks), and poor concentration. The results may be forgetfulness, distractibility, misplaced items, and excessive mistakes in paperwork. Some adults with ADHD, however, may not complain of inattentive symptoms because they have learned to compensate to some extent for their impairment. The ability to "hyper-focus" on one task to the exclusion of all others, as well as purposefully surrounding oneself with numerous support staff in order to be constantly reminded, guided, and focused is a compensatory means by which some intelligent and successful patients with ADHD may creatively cope with their disease. It is far more common, however, for those with ADHD to live chaotic and disrupted lives.

Impulsive symptoms persist and may have more serious consequences in adulthood than in childhood.[6,7] For example, automobile accidents may be caused by impulsive behavior while driving. Individuals with ADHD have a low tolerance for frustration, which in an adult's life may lead to frequent job changes and unstable and interrupted interpersonal relationships. Some adults with ADHD self-medicate with cigarette smoking, excessive caffeine consumption, or abuse of or addiction to alcohol or illicit drugs such as cocaine.

In many instances, a presenting comorbidity may be the first clue to a diagnosis of adult ADHD. The majority of adults with ADHD have at least 1 additional psychiatric disorder, such as anxiety, substance abuse, bipolar disorder, or major depressive disorder; some may have 2 or more.[8,9] Such high rates of comorbidity have a tendency to disguise a diagnosis of ADHD. Careful attention to the patient's clinical features will help physicians to differentiate between ADHD and other psychiatric disorders commonly seen in primary care. For example, a patient who presents with "fidgetiness" and difficulty concentrating may be showing signs of ADHD or generalized anxiety disorder. However, if further examination reveals that this patient suffers from exaggerated and excessive apprehension or worry as well as somatic symptoms of anxiety (such as racing heartbeat or gastrointestinal problems), then the more likely diagnosis is generalized anxiety disorder. Mood lability and difficulties with attention, concentration, and memory may likewise be features of either ADHD or a substance abuse disorder; however, a pattern of detrimental substance use accompanied by tolerance and withdrawal clearly differentiates these symptoms from those of ADHD. Both bipolar mania and ADHD may be associated with increased activity, difficulty maintaining attention, and mood lability, but, unlike ADHD, mania is associated with substantial episodic cycles, decreased need for sleep, and possible delusions. An early childhood history of bipolar depression is not usually present, as most (but not all) bipolar patients manifest their illness in adolescence or early adult life. Major depressive disorder—especially in older adults—frequently causes inattention, poor concentration, memory impairment, and motivational deficits. However, major depressive disorder is differentiated from ADHD by substantial and lasting dysphoria, feelings of apathy, and disturbances in sleep and appetite, and, unlike ADHD, onset is usually in the late 20s of adulthood. A host of other conditions, including medication side effects and vision problems, can mimic the symptoms of ADHD. A substance abuse history and a medical and neurologic examination are helpful in ruling out non-ADHD causes of poor concentration, forgetfulness, and other cognitive or attention deficits.

Available standardized rating scales and checklists also aid in identifying the presence of confounding or comorbid disorders. These include the Structured Clinical Interview for DSM-IV (SCID)[10] and the Symptom Checklist-90 (SCL-90),[11] both of which are sensitive to a wide range of psychiatric disorders; the Hamilton Rating Scales for Depression[12] and for Anxiety[13]; and the Beck Depression Inventory.[14] At present, there is no efficient standardized assessment tool for specifically identifying adult ADHD in primary care. However, the Adult Self-Report Scale Screener,[15] the Wender Utah Rating Scale,[16] the Copeland Symptom Checklist for Adult Attention Deficit Disorders,[17] the Brown Adult Attention-Deficit Disorder Scales,[18] and the Conners Adult Attention Rating Scales[19] are all useful in determining the presence and severity of ADHD symptoms (Table 1).

## TREATMENT OF ADULT ADHD IN PRIMARY CARE

Adults with ADHD, on the whole, are usually not treated for ADHD. Failure to treat stems in part from

Table 1. Rating Scales for ADHD Symptoms in Adults

| Rating Scale | Description |
|---|---|
| Adult Self-Report Scale Screener | A self-administered, 6-question subset of the WHO's 18-question Adult ADHD Self-Report Scale |
| Wender Utah Rating Scale | A 5-point retrospective scale that evaluates the patient's childhood ADHD symptoms |
| Copeland Symptom Checklist for Adult Attention Deficit Disorders | A 3-point severity scale that evaluates a broad range of cognitive, emotional, and social symptoms |
| Brown Adult Attention-Deficit Disorder Scales | Series of 4-point frequency scales that evaluate cognitive symptoms associated with difficulty initiating and maintaining optimal arousal |
| Conners Adult Attention Rating Scale | Designed to elicit information relative to attention and affect in adults |

Abbreviations: ADHD = attention-deficit/hyperactivity disorder, WHO = World Health Organization.

underrecognition of the disorder. As discussed in the previous section, symptom overlap can cause diagnostic confusion. In addition, a lack of medical education regarding adult ADHD, as well as time constraints in a busy office setting, may contribute to failure to treat patients for this disorder in primary care. Compounding the problem, ADHD has been less studied in adults than in children, and specific diagnostic criteria have not been published for this disorder in adults.

Medication limitations also contribute to undertreatment of adults with ADHD. Psychostimulants such as methylphenidate have been the best known treatments for ADHD and were, until recently, the only medication treatment options approved by the U.S. Food and Drug Administration (FDA). Many primary care physicians have historically been reluctant to prescribe—and some patients may be reluctant to take—a controlled substance that has the potential for abuse, can cause positive drug screen results, and usually needs a new written prescription monthly for each treated patient.

The risk of psychostimulant abuse and side effects, such as tics, severe loss of appetite, and insomnia, the inconvenience of multiple daily dosing of psychostimulants, and the high rate of psychiatric comorbidity among patients with ADHD have fueled ongoing research aimed toward alternative pharmacotherapy. Among nonstimulant medications that have been utilized in the treatment of ADHD are the highly selective norepinephrine reuptake inhibitor atomoxetine and the antidepressants desipramine and bupropion. The nonstimulant atomoxetine is the only drug approved by the FDA for adult ADHD.

Atomoxetine is effective in reducing inattentive, hyperactive, and impulsive symptoms of adult ADHD, and its lack of abuse potential may be an advantage for some patients.[20] While some of the literature suggests that desipramine may be as effective as the psychostimulant methylphenidate in improving restlessness, inattention, and impulsivity,[21] other sources maintain that antidepressants in general are less effective than psychostimulants in treating symptoms of ADHD in the absence of dysthymia[1] and that desipramine in particular may not be the safest choice among tricyclic antidepressants.[22] On the basis of a double-blind, placebo-controlled, 6-week trial, Wilens et al.[23] concluded that the atypical antidepressant bupropion may be a suitable addition to the armamentarium of agents for treating adult ADHD.

## CONCLUSION

With the advent of new nonnarcotic and well-tolerated medications for treating ADHD, primary care physicians are challenged to understand the various presentations of adult ADHD and to have a high index of suspicion for the disorder. ADHD in adults can be readily diagnosed and treated, despite resembling or coexisting with medical or other psychiatric disorders. Although additional disorders are likely to coexist with ADHD, differential causes of symptoms of inattention, hyperactivity, impulsivity, mood lability, and stress sensitivity must be ruled out before ADHD can be diagnosed. Primary care physicians might need to consult with or refer the patient to a psychiatrist if the diagnosis is in doubt, if the patient has significant psychiatric comorbidity (especially substance abuse), or if the symptoms do not respond to any medications proven effective for ADHD. However, with the introduction of an approved, nonstimulant treatment option, most adults with ADHD can be successfully treated in primary care.

*Drug names:* atomoxetine (Strattera), bupropion (Wellbutrin and others), desipramine (Norpramin and others), methylphenidate (Ritalin, Concerta, and others).

*Disclosure of off-label usage:* The author of this article has determined that, to the best of his knowledge, bupropion is not approved by the U.S. Food and Drug Administration for the treatment of attention-deficit/hyperactivity disorder.

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