

WHAT WE KNOW

## AD/HD and Co-Existing Disorders

**A**s many as two thirds of children with AD/HD have at least one other coexisting condition.<sup>1</sup>

The constant motion and fidgetiness, interrupting and blurting out, difficulty waiting in lines or sitting in

restaurants, and need for constant reminders may overshadow these other disorders. But just as untreated AD/HD can leave lasting scars, so too can other untreated disorders cause unnecessary suffering in individuals with AD/HD and their families. Any disorder can coexist with AD/HD, but certain disorders seem to occur more commonly with AD/HD.

### HOW ARE THESE CO-EXISTING CONDITIONS IDENTIFIED?

As the diagnosis of AD/HD is considered, the clinician or mental health professional must also determine whether there are any other psychiatric disorders affecting the child that could be responsible for presenting symptoms. Often, the symptoms of AD/HD may overlap with other disorders. The challenge for the clinician is to discern whether a symptom belongs to AD/HD, to a different disorder, or to both disorders at the same time. For some children, the overlap of symptoms among the various disorders makes multiple diagnoses necessary.

By conducting a complete evaluation, a clinician or mental health professional familiar with AD/HD and other psychiatric disorders will be able to diagnose both the AD/HD and related conditions. Interviews and questionnaires are often used to obtain information about symptoms from the patient, the patient's family, and his or her teachers to screen for these other disorders.

## **WHICH CONDITIONS MOST COMMONLY CO-EXIST WITH AD/HD?**

AD/HD may co-exist with one or more disorders. The most common disorders to occur with AD/HD are (1) disruptive behavior disorders; (2) mood disorders; (3) anxiety disorders; (4) tics and Tourette Syndrome; and (5) learning disabilities.

## **DISRUPTIVE BEHAVIOR DISORDERS (OPPOSITIONAL-DEFIANT DISORDER AND CONDUCT DISORDER)**

About 40 percent of individuals with AD/HD have oppositional defiant disorder (ODD). Among individuals with AD/HD, conduct disorder (CD) is also common, occurring in 25 percent of children, 45-50 percent of adolescents and 20-25 percent of adults. ODD involves a pattern of arguing with multiple adults, losing one's temper, refusing to follow rules, blaming others, deliberately annoying others, and being angry, resentful, spiteful, and vindictive.

CD is associated with efforts to break rules without getting caught. Such children may be aggressive to people or animals, destroy property, lie or steal things from others, run away, skip school, or break curfews.

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CD is often described as delinquency and children who have AD/HD and conduct disorder may have lives that are more difficult than those of children with AD/HD alone. Academically, students with both AD/HD and CD are twice as likely to have difficulty reading as other AD/HD children. Children with both AD/HD and CD, *but not other children with AD/HD*, are at greater risk for social and emotional failure. Studies now suggest that AD/HD and CD may be a particular subtype of AD/HD, since multiple family members often have both of these disorders together.

Treatment of the person with AD/HD and ODD/CD requires efforts to discourage delinquent behaviors so that the person will increasingly choose pro-social behaviors. ODD and CD usually require strong, clear structure with reinforcement of appropriate behaviors as well as a positive behavior management plan to extinguish antisocial behaviors.

Medication remains important. Research has shown that AD/HD and CD students treated with stimulant medicines are not only more attentive, but also less antisocial and aggressive. In addition, medication combinations, such as a psychostimulant with an antidepressant, appear to be very effective for these patients.

## **MOOD DISORDERS**

Some children, in addition to being hyperactive, impulsive, and/or inattentive, may also seem to always be in a bad mood. They may cry daily, out of the blue, for no reason, and they may frequently be irritable with others for no apparent reason. Both sad, depressive moods and persisting elevated or irritable moods (mania) occur with AD/HD more than would be expected by chance.

## **DEPRESSION**

The most careful studies suggest that between 10-30 percent of children with AD/HD, and 47 percent of adults with AD/HD, also have depression. Typically, AD/HD occurs first and depression occurs later. Both environmental and genetic factors may contribute.

Environmentally, as children with AD/HD get older, they may feel left out. Too often they are forgotten on birthday party lists, playdates, and sleepovers. These children may not be invited to play at other children's homes because of past difficulties with accidents or may not be chosen to be on sports teams or to participate in games. This takes a heavy toll on the child's self-esteem. As these episodes pile up, the child with AD/HD can become discouraged and about one in four may become clinically depressed. While all children have bad days where they feel down, depressed children may be down or irritable most days. Children with AD/HD and depression may also withdraw from others, stop doing things they once enjoyed, have trouble sleeping or sleep the day away, lose their appetite, criticize themselves excessively (“I never do anything right!”), and talk about dying (“I wish I were

dead”). Fortunately, AD/HD by itself is not associated with increased risk of suicidal behavior. Current studies suggest that both AD/HD and depression may share a common underlying genetic link, since families with AD/HD also seem to have more members with depression than would be expected by chance.

Treatment of children with AD/HD and depression involves minimizing environmental traumas and different medication regimens. To minimize the child with AD/HD’s difficulty in playing with others, parents and teachers can arrange small group play experiences (sometimes just two people). In addition, it is vital that the parent monitor the school setting. Even children with carefully constructed educational plans may continue to struggle if the plan is inadequate. A number of studies have shown that certain antidepressant medications improve AD/HD alone, or with depression. The antidepressant desipramine (Norpramin) has improved both AD/HD and AD/HD and depression. Researchers have also found that stimulants (such as Ritalin) can be combined safely with antidepressants such as fluoxetine (Prozac) — these children not only feel better but also function better at school. Newer antidepressants such as bupropion (Wellbutrin) and venlafaxine (Effexor) have been found effective in some individuals with AD/HD alone and may additionally benefit those individuals with both AD/HD and depression.

## **MANIA/BIPOLAR DISORDER**

Up to 20 percent of individuals with AD/HD also may manifest bipolar disorder. This condition involves periods of abnormally elevated mood contrasted by episodes of clinical depression. Adults with mania may have long (days to weeks) episodes of being ridiculously happy, and even believe they have special powers or receive messages from God, the radio, or celebrities. With this expansive mood, they may also talk incessantly and rapidly, go days without sleeping, and engage in tasks that ultimately get them into trouble. While manic, they may go on spending sprees which get them into debt, become hypersexual, or contact people at all hours of the night.

In younger people, mania may show up differently. Children may have moods that change very rapidly, seemingly for no reason, be pervasively irritable, exhibit unpremeditated aggression, and sometimes hear voices or see things the rest of us don’t. AD/HD is much more common than mania, and while many children with mania may first exhibit AD/HD symptoms, very few

children with AD/HD will go on to develop mania. The combination of AD/HD and mania often leads to severe difficulty functioning. The overlap of mania and AD/HD is being actively studied. As patients with AD/HD-mania are followed over time, it will become clearer what their symptoms look like in adulthood.

From a treatment standpoint, mood must be stabilized on medications before treatment for AD/HD is likely to be successful. Patients with AD/HD-mania now are treated with mood stabilizers such as lithium, valproate (Depakote), or carbamazepine (Tegretol). Because these agents usually do not improve the AD/HD symptoms, stimulants or antidepressants are often added to improve the AD/HD symptoms.

## **ANXIETY**

Up to 30 percent of children and 25-40 percent of adults with AD/HD will also have an anxiety disorder. Anxiety disorders are often not apparent, and research has shown that half of the children who describe prominent anxiety symptoms are not described by their parents as anxious. As with depression, the child’s internal feelings may not stand out to parents or teachers. Patients with anxiety disorders often worry excessively about a number of things (school, work, etc.), and may feel edgy, stressed out or tired, tense, and have trouble getting restful sleep. A small number of patients may report brief episodes of severe anxiety (panic attacks), which intensify over about 10 minutes with complaints of pounding heart, sweating, shaking, choking, difficulty breathing, nausea or stomach pain, dizziness, and fears of going crazy or dying. These episodes may occur for no reason, and sometimes awaken patients. Students with AD/HD and anxiety report more school, family, and social/peer problems than student who only have AD/HD. Students with AD/HD accompanied by anxiety are less likely to appear hyperactive and disruptive, but instead appear more slowed down or inefficient. Genetic research thus far suggests that AD/HD and anxiety are separate disorders inherited independently of each other.

Treatment of AD/HD and anxiety requires attention to precipitating stressors, and training in methods of contending with fear-provoking circumstances. Relaxation techniques and alternative ways to think through stressful situations may be helpful. AD/HD and anxiety appear less responsive to conventional AD/HD medication treatments. Specifically, children with AD/HD and anxiety only showed a 30 percent response to methylphenidate (Ritalin), versus a 70-80

percent response observed in AD/HD-only children. Moreover, at least one study has shown that children with AD/HD and anxiety are more sensitive to negative side effects of stimulant medications. Accordingly, alternative medication regimens may be necessary. Tricyclic antidepressants (e.g., desipramine [Norpramin], nortriptyline [Pamelor], imipramine [Tofranil]), benzodiazepines (lorazepam [Ativan], clonazepam [Klonopin], alprazolam [Xanax], etc.) and more recently bupirone (BusPar) may benefit these patients.

## **TICS AND TOURETTE SYNDROME**

Only about seven percent of those with AD/HD have tics or Tourette Syndrome, but 60 percent of those with Tourette Syndrome have AD/HD. Tics (sudden, rapid, recurrent, involuntary movements or vocalizations) or Tourette Syndrome (both movements and vocalizations) can occur with AD/HD in two ways. First, mannerisms or movements such as excessive eye blinking or throat clearing often occur between the ages of 10-12 years. When children are nervous or tired, these tics may appear worse or more conspicuous. These temporary tics usually go away gradually over one-to-two years, and are just as likely to happen in children with AD/HD as others. Tourette Syndrome is a much rarer, but more severe tic disorder, where patients may make noises (e.g., barking a word or sound) and movements (e.g., repetitive flinching or eye blinking) on an almost daily basis for years. Tourette Syndrome often includes AD/HD, although the opposite is not true.

Tics can also become more noticeable when patients are treated with stimulants or — much less likely — bupropion. While these medicines no longer appear to cause tics, they may unmask or exaggerate tics. Accordingly, sometimes lowering the dose can decrease the tics. Other medicines such as nortriptyline (Pamelor or Aventyl), clonidine (Catapres), or guanfacine (Tenex) may be used to decrease tics while treating AD/HD.

## **LEARNING DISABILITIES**

Individuals with AD/HD frequently have difficulty learning in school. Depending on how learning disorders are defined, up to 50 percent of children with AD/HD have a co-existing learning disorder. Individuals with learning disabilities may have a specific problem reading or calculating, but they are not less intelligent than their peers are. Research indicates that students with both AD/HD and reading disorder (dyslexia) are no more

anxious, hyperactive, or aggressive than student with AD/HD only. However, the learning disorder does impact school performance, which may subsequently impact family and peer relationships.

Treatment requires careful attention to the student's unique strengths and weaknesses. If academic difficulties occur despite beneficial treatment (with psychosocial interventions and medication), then it is necessary to pursue an educational evaluation that assesses learning disabilities. Usually this requires that family members contact the school principal, teacher, or guidance department to initiate the process, which culminates with devising — when necessary — an individual

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educational plan (IEP) or Section 504 plan for the student. The IEP is reviewed at least annually by school personnel to ensure that educational planning is helping the student make academic progress. Medications do not specifically improve learning disorders, but may improve AD/HD symptoms so that learning can accelerate.

## **WHAT ABOUT SUBSTANCE ABUSE?**

Recent work suggests that youths with AD/HD are at increased risk for very early cigarette use, followed by alcohol and then drug abuse. Cigarette smoking is more common in adolescents with AD/HD, and adults with AD/HD have elevated rates of smoking and report particular difficulty in quitting. Youths with AD/HD are twice as likely to become addicted to nicotine as individuals without AD/HD.

As documented by current research, cocaine and stimulant abuse is not more common among individuals with AD/HD who were previously treated with stimulants: growing up taking stimulant medicines does not lead to substance abuse as these children become teenagers and adults. Indeed, those adolescents with AD/HD prescribed stimulant medication are less likely to subsequently use illegal drugs than are those not prescribed medication.

## SUGGESTED READING

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