



# Understanding ADHD:

## Information for Parents About Attention-Deficit/Hyperactivity Disorder

Almost all children have times when their behavior veers out of control. However, for some children, these kinds of behaviors are more than an occasional problem.

Children with attention-deficit/hyperactivity disorder (ADHD) have behavioral problems that are so frequent and severe that they interfere with their ability to live normal lives. An impulsive nature may put them in actual physical danger. They may speed about in constant motion, make noise nonstop, refuse to wait their turn, and crash into everything around them. At other times, they may drift as if in a daydream, unable to pay attention or finish what they start. Those who have trouble paying attention usually have trouble learning.

Left untreated, ADHD in some children will continue to cause serious, lifelong problems, such as poor grades in school, run-ins with the law, failed relationships, and the inability to keep a job. Children with ADHD often have trouble getting along with siblings and other children at school, at home, and in other settings. They may be labeled “bad kids” or “space cadets.”

If your child has ADHD, effective treatment is available. Your child’s doctor can offer a long-term treatment plan to help your child lead a happy and healthy life. As a parent, you have a very important role in this treatment. Here is more information from the American Academy of Pediatrics about ADHD and how you can help your child.

**NOTE:** To make reading this publication easier, the pronoun *he* is used to describe a child or teen.

### What is ADHD?

ADHD is a condition of the brain that makes it difficult for children to control their behavior. It is one of the most common chronic conditions of childhood. It affects 6% to 12% of school-aged children. ADHD is diagnosed about 3 times more often in boys than in girls. The condition affects behavior in specific ways. See section, *What are the symptoms of ADHD?*

### What are the symptoms of ADHD?

ADHD includes 3 groups of behavioral symptoms: inattention, hyperactivity, and impulsivity. See Table 1.

### Are there different types of ADHD?

Children with ADHD may have one or more of the symptoms listed in Table 1. The symptoms are usually classified as the following types of ADHD:

- **Inattentive only (formerly known as attention-deficit disorder [ADD])** — Children with this form of ADHD are not overly active. Because they do not disrupt the classroom or other activities, their symptoms may not be noticed. Among girls with ADHD, this form is more common.
- **Hyperactive/impulsive** — Children with this type of ADHD have both hyperactive and impulsive behavior, but they can pay attention. They are the least common group and are often younger.

**Table 1. Symptoms of ADHD**

| Symptom       | How a Child With This Symptom May Behave                           |
|---------------|--|
| Inattention   | Often has a hard time paying attention, daydreams                  |
|               | Often does not seem to listen                                      |
|               | Is easily distracted from work or play                             |
|               | Often does not seem to care about details, makes careless mistakes |
|               | Frequently does not follow through on instructions or finish tasks |
|               | Is disorganized  |
|               | Frequently loses a lot of important things                         |
|               | Often forgets things   |
| Hyperactivity | Frequently avoids doing things that require ongoing mental effort  |
|               | Is in constant motion, as if “driven by a motor”                   |
|               | Cannot stay seated   |
|               | Frequently squirms and fidgets                                     |
|               | Talks too much   |
| Impulsivity   | Often runs, jumps, and climbs when this is not permitted           |
|               | Cannot play quietly  |
|               | Frequently acts and speaks without thinking                        |
|               | May run into the street without looking for traffic first          |
|               | Frequently has trouble taking turns                                |
|               | Cannot wait for things   |
|               | Often calls out answers before the question is complete            |
|               | Frequently interrupts others                                       |

- **Combined inattentive/hyperactive/impulsive** — Children with this type of ADHD have behaviors from all 3 symptoms. It is the type most people think of when they think of ADHD.

### How can I tell if my child has ADHD?

Remember, it is common for all children to show some of these symptoms from time to time. Your child may be reacting to stress at school or at home. He may be bored or going through a difficult stage of life. It does not mean he has ADHD.

Sometimes a teacher is the first to notice inattention, hyperactivity, and/or impulsivity and will inform the parents.

## Keep Safety in Mind

If your child shows any symptoms of ADHD, it is very important that you pay close attention to safety. A child with ADHD may not always be aware of dangers and can get hurt easily. Be especially careful around

- Traffic
- Firearms
- Swimming pools
- Tools and equipment, such as lawn mowers
- Poisonous chemicals, cleaning supplies, or medicines

Maybe questions from your child's doctor raised the issue. At well-child visits, your child's doctor may ask

- How is your child doing in school?
- Are there any problems with learning that you or your child's teachers have seen?
- Is your child happy in school?
- Is your child having problems completing class work or homework?
- Are you concerned with any behavioral problems in school, at home, or when your child is playing with friends?

Your answers to these questions may lead to further evaluation for ADHD.

If your child has shown symptoms of ADHD on a regular basis for more than 6 months, discuss this with his doctor.

## How is ADHD diagnosed?

Your child's doctor will determine whether he has ADHD by using standard guidelines developed by the American Academy of Pediatrics specifically for children 4 to 18 years of age.

It is difficult to diagnose ADHD in children younger than 4 years. This is because younger children change very rapidly. It is also more difficult to diagnose ADHD once a child becomes a teen.

There is no single test for ADHD. The process requires several steps and involves gathering information from multiple sources. You, your child, your child's school, and other caregivers should be involved in assessing your child's behavior.

Children with ADHD show signs of inattention, hyperactivity, and/or impulsivity in specific ways. (See the behaviors listed in Table 1.) Your child's doctor will look at how your child's behavior compares to that of other children his age, based on the information reported about your child by you, his teacher, and any other caregivers who spend time with your child, such as coaches or child care workers.

Here are guidelines used to confirm a diagnosis of ADHD.

- Some symptoms occur in 2 or more settings, such as home, school, and social situations, and cause some impairment.
- In a child 4 to 17 years of age, 6 or more symptoms must be identified.
- In a teen 17 years and older, 5 or more symptoms must be identified.
- Symptoms significantly impair your child's ability to function in some daily activities, such as doing schoolwork, maintaining relationships

with parents and siblings, building relationships with friends, or having the ability to function in groups such as sports teams.

In addition to looking at your child's behavior, your child's doctor will conduct a physical and neurological examination. A full medical history will be needed to put your child's behavior in context and screen for other conditions that may affect his behavior. Your child's doctor will also talk with your child about how he acts and feels.

Your child's doctor may refer your child to a pediatric subspecialist or mental health clinician if there are concerns in any of the following areas:

- Intellectual disability (previously called *mental retardation*)
- Developmental disorder, such as speech or motor disorders or a learning disability
- Chronic illness being treated with a medication that may interfere with learning
- Trouble seeing and/or hearing
- History of abuse
- Major anxiety or major depression
- Severe aggression
- Possible seizure disorder
- Possible sleep disorder

## How can parents help with the diagnosis?

As a parent, you will provide crucial information about your child's behavior and how it affects his life at home, in school, and in other social settings. Your child's doctor will want to know what symptoms your child is experiencing, how long the symptoms have occurred, and how the behavior affects your child and your family. You may need to fill in checklists or rating scales about your child's behavior.

In addition, sharing your family history can offer important clues about your child's condition.

## How will my child's school be involved?

For an accurate diagnosis, your child's doctor will need to get information about your child directly from his classroom teacher or another school professional. Children at least 4 years and older spend many of their waking hours at preschool or school. Teachers provide valuable insights. Your child's teacher may write a report or discuss the following topics with your child's doctor:

- Your child's behavior in the classroom
- Your child's learning patterns
- How long the symptoms have been a problem
- How the symptoms are affecting your child's progress at school
- Ways the classroom program is being adapted to help your child
- Whether other conditions may be affecting the symptoms

In addition, your child's doctor may want to see report cards, standardized tests, and samples of your child's schoolwork.

## How will others who care for my child be involved?

Other caregivers may also provide important information about your child's behavior. Former teachers, religious and scout leaders, or coaches may have valuable input. If your child is homeschooled,

it is especially important to assess his behavior in settings outside of the home.

Your child may not behave the same way at home as he does in other settings. Direct information about the way your child acts in more than one setting is required. It is important to consider other possible causes of your child's symptoms in these settings.

In some cases, other mental health care professionals, such as child psychologists or psychiatrists, may also need to be involved in gathering information for the diagnosis.

## What are coexisting conditions?

As part of the diagnosis, your child's doctor will look for other conditions that cause the same types of symptoms as ADHD. Your child may simply have a different condition or ADHD combined with another condition (a *coexisting* condition). Most children with a diagnosis of ADHD have at least one additional condition.

### Common coexisting conditions include

- **Learning disabilities** — Learning disabilities are conditions that make it difficult for a child to master specific skills, such as reading or math. ADHD is not a learning disability. However, ADHD can make it hard for a child to do well in school. Diagnosing learning disabilities requires conducting evaluations, such as IQ and academic achievement tests, and it requires educational interventions.
- **Oppositional defiant disorder or conduct disorder** — Up to 35% of children with ADHD also have oppositional defiant disorder or conduct disorder.
  - Children with oppositional defiant disorder tend to lose their temper easily and annoy people on purpose, and they are defiant and hostile toward authority figures.
  - Children with conduct disorder break rules, destroy property, get suspended or expelled from school, violate the rights of other people, or can be cruel to other children or animals.
  - Children with coexisting conduct disorder are at much higher risk for getting into trouble with the law or having substance use problems than children who have only ADHD. Studies show that this type of coexisting condition is more common among children with the primarily hyperactive/impulsive and combination types of ADHD. Your child's doctor may recommend behavioral therapy for your child if he has this condition.
- **Mood disorders/depression** — About 18% of children with ADHD also have mood disorders, such as depression or bipolar disorder (formerly called *manic depressive disorder*). There is often a family history of these conditions. Coexisting mood disorders may put children at higher risk for suicide, especially during the teen years. These disorders are more common among children with inattentive and combined types of ADHD. Children with mood disorders or depression often require additional interventions or a different type of medication than those typically used to treat ADHD.
- **Anxiety disorders** — About 25% of children with ADHD also have anxiety disorders. Children with anxiety disorders have extreme feelings of fear, worry, or panic that make it difficult to function. These disorders can produce physical symptoms, such as racing pulse, sweating, diarrhea, and nausea. Counseling and/or different medication may be needed to treat these coexisting conditions.
- **Language disorders** — Children with ADHD may have difficulty with how they use language. This is referred to as a *pragmatic language disorder*. It may not show up with standard tests of

language. A speech-and-language clinician can detect it by observing how a child uses language in his day-to-day activities.

## Are there other tests for ADHD?

You may have heard theories about other tests for ADHD. There are no other proven diagnostic tests at this time.

Many theories have been presented, but studies have shown that the following evaluations add little value in diagnosing the disorder:

- Screening for thyroid problems
- Computerized continuous performance tests
- Brain imaging studies, such as computed tomography (CT) scans and magnetic resonance imaging (MRI)
- Electroencephalography (EEG) or brain-wave testing

While these evaluations are not helpful in diagnosing ADHD, your child's doctor may see other signs or symptoms in your child that warrant blood tests, brain imaging studies, or EEG.

## What causes ADHD?

ADHD is one of the most studied conditions of childhood, and it may be caused by a number of things.

Research to date has shown

- ADHD is a neurobiological condition in which symptoms are also dependent on the child's environment.
- A lower level of activity in the parts of the brain that control attention and activity level may be associated with ADHD.
- ADHD often runs in families. Sometimes ADHD is diagnosed in a parent at the same time it is diagnosed in the child.
- In very rare cases, toxins in the environment may lead to ADHD. For instance, lead in the body can affect child development and behavior. Lead may be found in many places, including homes built before 1978, when lead was added to paint.
- Significant head injuries may cause ADHD in some cases.
- Preterm birth increases the risk of developing ADHD.
- Prenatal substance exposures, such as alcohol or nicotine from smoking, increase the risk of developing ADHD.

There is little evidence that ADHD is caused by

- Eating too much sugar
- Food additives or food colorings
- Allergies
- Immunizations

## How is ADHD treated?

Once the diagnosis is confirmed, the outlook for most children who receive treatment for ADHD is encouraging. There is no specific cure for ADHD, but there are many treatment options available, and some children learn to compensate for the difficulties as they mature.

Each child's treatment must be tailored to meet his individual needs. In most cases, treatment for ADHD should include

- A long-term management plan with
  - Target outcomes for behavior
  - Follow-up activities
  - Monitoring

- Education about ADHD
- Teamwork among doctors, parents, teachers, caregivers, other health care professionals, and the child
- Behavioral therapy, including parent training
- Individual and family counseling
- Medication

Treatment for ADHD is based on the same principles that are used to treat other chronic conditions, like asthma or diabetes. Long-term planning for many children is needed because these conditions are not curable. However, some children learn to compensate once they are adults. Families must manage chronic conditions on an ongoing basis. In the case of ADHD, schools and other caregivers must also be involved in managing the condition.

Educating the people involved with your child is a key part of treatment for ADHD. As a parent, you will need to learn about the condition. Read about it and talk with people who understand it. This will help you manage the ways ADHD affects your child and your family on a day-to-day basis. It will also help your child learn to help himself.

### What are target outcomes?

At the beginning of treatment, your child’s doctor should help you set around 3 target outcomes (goals) for your child’s behavior. These target outcomes will guide the treatment plan. Your child’s target outcomes should be chosen to help him function as well as possible at home, at school, and in your community. You need to identify what behaviors are most preventing your child from succeeding.

Here are examples of target outcomes.

- Improved relationships with parents, siblings, teachers, and friends — for example, fewer arguments with brothers or sisters or being invited more often to friends’ houses or parties.
- Better schoolwork practices — for example, completing all classwork or homework assignments.
- More independence in self-care or homework — for example, getting ready for school in the morning without supervision.
- Improved self-esteem, such as feeling that he can get his work done.
- Fewer disruptive behaviors — for example, decreasing the number of times he refuses to obey rules.
- Safer behavior in the community — for example, being careful when crossing streets.

The target outcomes should be

- Realistic
- Something your child will be able to do
- Behaviors that you can observe and count (with rating scales)

Your child’s treatment plan will be set up to help him achieve these goals.

### What is behavioral therapy?

Most experts recommend using both behavioral therapy and medication to treat ADHD. This is known as a *multimodal treatment approach*.

There are many forms of behavioral therapy, but all have a common goal — to change the child’s physical and social environments to help the child improve his behavior.

**Table 2. Behavioral Therapy Techniques**

| Technique              | Description   | Example   |
|------------------------|---|---|
| Positive reinforcement | Complimenting the child and providing rewards or privileges in response to a desired behavior.  | The child completes an assignment and is permitted to play on the computer.   |
| Time-out               | Removing access to a desired activity because of unwanted behavior.   | The child hits a sibling and, as a result, must sit for 5 minutes in the corner of the room.  |
| Response cost          | Withdrawing rewards or privileges because of unwanted behavior.   | The child loses free-time privileges for not completing homework.   |
| Token economy          | Combining reward and consequence. The child earns rewards and privileges when exhibiting desired behaviors. He loses rewards and privileges for unwanted behaviors. | The child earns stars or points for completing assignments and loses stars for getting out of his seat. He cashes in the sum of his stars or points at the end of the week for a prize. |

### Behavioral therapy has 3 basic principles.

- 1. Set specific, doable goals.** Set clear and reasonable goals for your child, such as staying focused on homework for a certain amount of time or sharing toys with friends.
- 2. Provide rewards and consequences.** Give your child a specified reward (positive reinforcement) every time he demonstrates the desired behavior. Give your child a consequence (unwanted result or punishment) consistently when he exhibits inappropriate behaviors.
- 3. Keep using the rewards and consequences.** Using the rewards and consequences consistently for a long time will shape your child’s behavior in a positive way.

Under this approach, parents, teachers, and other caregivers learn better ways to work with and relate to the child with ADHD. You will learn how to set and enforce rules, help your child understand what he needs to do, use discipline effectively, and encourage good behavior. Your child will learn better ways to control his behavior as a result. You will learn how to be more consistent.

Table 2 shows specific behavioral therapy techniques that can be effective with children who have ADHD.

Behavioral therapy is designed to recognize the limits that having ADHD puts on a child. It focuses on how the important people and places in the child’s life can adapt to encourage good behavior and discourage unwanted behavior. It is different from play therapy or other therapies that focus mainly on the child and his emotions.

### How can I help my child control his behavior?

As the child’s primary caregivers, parents play a major role in behavioral therapy. Parent training is available to help you learn more about ADHD and specific, positive ways to respond to ADHD-type behaviors. This will help your child improve. In many cases, attending parenting classes with other parents will be sufficient, but with more challenging children, individual work with a counselor or coach may be needed.

Taking care of yourself will also help your child. Being the parent of a child with ADHD can be tiring and trying. It can test the limits of even the best parents. Parent training and support groups made up of other families who are dealing with ADHD can be a great source of help. Learn stress-management techniques to help you respond calmly to your child. Seek counseling if you feel overwhelmed or hopeless.

Ask your child's doctor to help you find parent training, counseling, and support groups in your community. See the *Resources* section.

### What you can do

- **Keep your child on a daily schedule.** Try to keep the time that your child wakes up, eats, bathes, leaves for school, and goes to sleep the same each day.
- **Cut down on distractions.** Loud music, computer games, and TV can be overstimulating to your child. Make it a rule to keep the TV or music turned off during mealtime and while your child is doing homework. Don't place a TV in your child's bedroom. Whenever possible, avoid taking your child to places that may be too stimulating, such as busy shopping malls.
- **Organize your house.** If your child has specific and logical places to keep his schoolwork, toys, and clothes, he is less likely to lose them. Save a spot near the front door for his school backpack so he can grab it on the way out the door.
- **Reward positive behavior.** Offer kind words, hugs, or small prizes for reaching goals in a timely manner or for good behavior. Praise and reward your child's efforts to pay attention.
- **Set small, reachable goals.** Aim for slow progress rather than instant results. Be sure that your child understands that he can take small steps toward learning to control himself.
- **Help your child stay "on task."** Use charts and checklists to track progress with homework or chores. Keep instructions brief. Offer frequent, friendly reminders.
- **Limit choices.** Help your child learn to make good decisions by giving him only 2 or 3 options at a time.
- **Find activities at which your child can succeed.** All children need to experience success to feel good about themselves.
- **Use calm discipline.** Use consequences such as time-out, removing the child from the situation, or distraction. Sometimes it is best to simply ignore the behavior. Physical punishment, such as spanking or slapping, is not helpful. Discuss your child's behavior with him when both of you are calm.
- **Reach out to teachers.** Develop a good communication system with your child's teachers so that you can coordinate your efforts and monitor your child's progress.

### How can my child's school help?

Your child's school is a key partner in providing effective behavioral therapy for your child. In fact, these principles work well in the classroom for most students.

Classroom management techniques may include

- Keeping a set routine and schedule for activities
- Using a system of clear rewards and consequences, such as a point system or token economy (see Table 2)
- Sending daily or weekly report cards or behavioral charts to parents to inform them about the child's progress
- Seating the child near the teacher

- Using small groups for activities
- Encouraging students to pause a moment before answering questions
- Keeping assignments short or breaking them into sections
- Supervising the child closely and giving frequent, positive cues to stay on task
- Changing where and how tests are given so students can succeed — for example, allowing students to take tests in a less distracting environment or allowing more time to complete tests

Your child's school should work with you and your child's doctor to develop strategies to assist your child in the classroom.

When a child has ADHD that is severe enough to interfere with his ability to learn, 2 federal laws offer help. These laws require public schools to provide or cover costs of evaluating the educational needs of the affected child and providing the needed services.

**1. The Individuals With Disabilities Education Act (IDEA), Part B,** requires public schools to provide or cover costs of evaluating the educational needs of the affected child and providing the needed special education services if your child qualifies because his learning is impaired by his ADHD. The diagnosis alone will not necessarily qualify your child for these services.

**2. Section 504 of the Rehabilitation Act of 1973** does not have strict qualification criteria but is limited to changes in the classroom, modifications in homework assignments, and taking tests in a less distracting environment or allowing more time to complete tests. Usually, the diagnosis alone will qualify your child for these services.

If your child has ADHD and a coexisting condition, he may need additional special services, such as a classroom aide, private tutoring, special classroom settings, or, in rare cases, a special school.

It is important to remember that once ADHD is diagnosed and treated, children with the disorder are more likely to achieve their goals in school.

### What types of medication relieve ADHD symptoms?

For most children, stimulant medications are a safe and effective way to relieve ADHD symptoms. Just as glasses focus a person's eyesight so they can see better, these medications help children with ADHD focus their thoughts better and ignore distractions. This makes them more able to pay attention and control their behavior.

Stimulants may be used alone or in combination with behavioral therapy. Studies show that about 80% of children with ADHD who are treated with stimulants improve a great deal once the right medication and dose are determined.

Two forms of stimulants are available: immediate release (short acting) and extended release (intermediate acting and long acting). (See Table 3.) Immediate-release medications are usually taken every 4 hours, when needed. They are the cheapest of the medications. Extended-release medications are usually taken once in the morning.

Children who use extended-release forms of stimulants can avoid taking medication at school or after school. It is important not to chew or crush extended-release capsules or tablets. However, extended-release capsules that are made up of beads and lisdexamfetamine can be opened and sprinkled onto food for children who have difficulties swallowing tablets or capsules.

Nonstimulants can be tried when stimulant medications don't work or if they cause bothersome side effects.

**Table 3. Common ADHD Medications**

| Type of Medication  | Brand Name     | Generic Name   | Duration       |
|---|----------------|--|----------------|
| Short-acting amphetamine stimulants                             | Adderall       | Mixed amphetamine salts                                | 4 to 6 hours   |
|   | Dexedrine      | Dextroamphetamine                                      | 4 to 6 hours   |
| Short-acting methylphenidate stimulants                         | Focalin        | Dexmethylphenidate                                     | 3 to 5 hours   |
|   | Methylin       | Methylphenidate (tablet, liquid, and chewable tablets) | 3 to 5 hours   |
|   | Ritalin        | Methylphenidate  | 3 to 5 hours   |
| Mildly extended-release methylphenidate stimulants              | Metadate ER    | Methylphenidate  | 4 to 6 hours   |
|   | Methylin ER    | Methylphenidate  | 4 to 6 hours   |
| Intermediate-acting extended-release methylphenidate stimulants | Focalin XR     | Dexmethylphenidate                                     | 6 to 8 hours   |
|   | Metadate CD    | Methylphenidate  | 6 to 8 hours   |
|   | Ritalin LA     | Methylphenidate  | 6 to 8 hours   |
| Long-acting extended-release amphetamine stimulants             | Adderall XR    | Mixed amphetamine salts                                | 8 to 12 hours  |
|   | Adzenys XR-ODT | Amphetamine  | 8 to 12 hours  |
|   | Dyanavel XR    | Amphetamine (liquid)                                   | 8 to 12 hours  |
|   | Vyvanse        | Lisdexamfetamine                                       | 8 to 12 hours  |
| Long-acting extended-release methylphenidate stimulants         | Concerta       | Methylphenidate  | 10 to 12 hours |
|   | Daytrana       | Methylphenidate (skin patch)                           | 11 to 12 hours |
|   | Quillivant XR  | Methylphenidate (liquid)                               | 10 to 12 hours |
| $\alpha$ -Adrenergic agents (nonstimulants)                     | Intuniv        | Guanfacine   | 24 hours       |
|   | Kapvay         | Clonidine  | 12 hours       |
| Selective norepinephrine reuptake inhibitors (nonstimulants)    | Strattera      | Atomoxetine  | 24 hours       |

Products are mentioned for informational purposes only and do not imply an endorsement by the American Academy of Pediatrics. Your doctor or pharmacist can provide you with important safety information for the products listed.

### Which medication is best for my child?

It may take some time to find the best medication, dosage, and dosing schedule for your child.

Your child may need to try different types of stimulants or other medication. Some children respond to one type of stimulant but not another.

The amount of medication (dosage) that your child needs may also need to be adjusted. The dosage is not based solely on his weight. Your child's doctor will vary the dosage over time to get the best results and control possible side effects.

The medication schedule may also be adjusted, depending on the target outcome. For example, if the goal is to relieve symptoms that mostly occur at school, your child may take the medication only on school days.

It is important for your child to have regular medical checkups to monitor how well the medication is working and check for possible side effects.

### What side effects can stimulants cause?

Side effects occur sometimes. These tend to happen early in treatment and are usually mild and short-lived, but in rare cases, they can be prolonged or more severe.

The most common side effects include

- Decreased appetite/weight loss

- Sleep problems

- Social withdrawal

Some less common side effects include

- Rebound effect (increased activity or a bad mood as the medication wears off)
- Transient muscle movements or sounds, called *tics*
- Minor growth delay

Very rare side effects include

- Significant increase in blood pressure or heart rate
- Bizarre behaviors
- Hallucinations

The same sleep problems do not exist for atomoxetine, but initially, this medication may make your child sleepy or upset his stomach. There have been very rare cases of atomoxetine needing to be stopped because it was causing liver damage. Rarely, atomoxetine increased thoughts of suicide. Extended-release guanfacine or clonidine can cause drowsiness, fatigue, or decreased blood pressure.

More than half of children who have tic disorders, such as Tourette syndrome, also have ADHD. Tourette syndrome is a familial condition associated with frequent tics and unusual vocal sounds. The effect of stimulants on tics is not predictable, although most studies indicate that stimulants are safe for children with ADHD and tic disorders in most cases. It is also possible to use atomoxetine or guanfacine for children with ADHD and Tourette syndrome.

Most side effects can be relieved by

- Changing the medication dosage
- Adjusting the schedule of medication
- Using a different stimulant or trying a nonstimulant (see Table 3)

Regular communication with your child's doctor is required until you find the best medication and dose for your child. After that, periodic monitoring by your doctor is important to maintain the best effects. To monitor the effects of the medication, your child's doctor will probably have you and your child's teacher(s) fill out behavior rating scales, observe changes in your child's target goals, notice any side effects, and monitor your child's height, weight, pulse, and blood pressure.

Stimulants, atomoxetine, and extended-release guanfacine or clonidine may not be an option for children who are taking certain other medications or who have some medical conditions, such as congenital heart disease.

### How do I know if my child's treatment plan is working?

Ongoing monitoring of your child's behavior and medications is required to find out if the treatment plan is working. Office visits, phone conversations, behavioral checklists, written reports from teachers, and behavioral report cards are common tools for following your child's progress.

Treatment plans for ADHD usually require long-term efforts on the part of families and schools. Medication schedules may be complex. Behavioral therapies require education and patience. Sometimes it can be hard for everyone to stick with it. Your efforts play an important part in building a healthy future for your child.

Ask your child's doctor to help you find ways to keep your child's treatment plan on track.

### What if my child does not reach his target outcomes?

Most school-aged children with ADHD respond well when their treatment plan includes both medication and behavioral therapy. If your child is not achieving his goals, your child's doctor will assess the following factors:

- Were the target outcomes realistic?
- Is more information needed about your child's behavior?
- Is the diagnosis correct?
- Is another condition hindering treatment?
- Is the treatment plan being followed?
- Has the treatment failed?

While treatment for ADHD should improve your child's behavior, it may not completely eliminate the symptoms of inattention, hyperactivity, and impulsivity. Children who are being treated successfully may still have trouble with their friends or schoolwork.

However, if your child is clearly not meeting his specific target outcomes, your child's doctor will need to reassess the treatment plan.

### How can I help my child during the teen years?

The teen years can be a special challenge. Academic and social demands increase. In some cases, symptoms may be better controlled as your child grows older; however, frequently, the demands for performance also increase, so that in most cases, ADHD symptoms persist and continue to interfere with your child's ability to function

adequately. According to the National Institute of Mental Health, about 80% of those who required medication for ADHD as children still need it during the teen years.

Parents play an important role in helping their teens become independent. Encourage your teen to help himself with strategies such as

- Using a daily planner for assignments and appointments
- Being safety conscious, such as always wearing seat belts and using protective gear for sports
- Getting enough sleep
- Keeping a routine
- Making lists
- Organizing storage for items such as school supplies, clothes, CDs, and sports equipment
- Setting aside a quiet time and place to do homework
- Talking about problems with someone he trusts
- Understanding his increased risk of abusing substances, such as tobacco and alcohol

Activities such as sports, drama, and debate teams can be good places to channel excess energy and develop friendships. Find what your teen does well and support his efforts to "go for it."

Milestones such as learning to drive and dating offer new freedom and risks. Parents must stay involved and set limits for safety. Your teen's ADHD increases his risk of incurring traffic violations and accidents.

It remains important for parents of teens to keep in touch with teachers and make sure that their teen's schoolwork is going well.

Talk with your teen's doctor if your teen shows signs of severe problems, such as depression, drug abuse, or gang-related activities.

### What about other types of treatments?

You may have heard media reports or seen advertisements for "miracle cures" for ADHD. Carefully research any such claims. Consider whether the source of the information is valid. At this time, there is no scientifically proven cure for this condition.

The following methods have no scientific evidence to prove that they work:

- Megavitamins and mineral supplements
- Anti-motion-sickness medication (to treat the inner ear)
- Treatment for *Candida* yeast infection
- EEG biofeedback (training to increase brain-wave activity)
- Applied kinesiology (realigning bones in the skull)
- Optometric vision training (which asserts that faulty eye movement and sensitivities cause the behavioral problems)

Always tell your child's doctor about any alternative therapies, supplements, or medications your child is using. These may interact with prescribed medications and harm your child.

### Frequently Asked Questions

#### Q: Will my child outgrow ADHD? What about a cure?

A: ADHD continues into adulthood in most cases. However, by developing their strengths, structuring their environments, and using medication when needed, adults with ADHD can lead very productive lives. In some careers, having a high-energy behavioral pattern can be an asset.

There is no cure for ADHD at this time. However, research is ongoing to learn more about the role of the brain in ADHD, long-term outcomes for people with ADHD, and the best ways to treat the disorder.

**Q: Why do so many children have ADHD?**

A: The number of children getting treatment for ADHD has risen. It is not clear whether more children have ADHD or more children are receiving a diagnosis of ADHD. Also, more children with ADHD are getting treatment for a longer period. ADHD is one of the most common and most studied conditions of childhood. Because of more awareness and better ways of diagnosing and treating this disorder, more children are being helped. It may also be the case that school performance has become more important because of the higher technical demand of many jobs, and ADHD often interferes with a child's ability to function in school.

**Q: Are schools putting children on ADHD medication?**

A: Teachers are often the first to notice behavioral signs of possible ADHD. However, only physicians can prescribe medications to treat ADHD. The diagnosis of ADHD should follow a careful process.

**Q: Can children get high on stimulant medications?**

A: When taken as directed by a doctor, there is no evidence that children are getting high on stimulant drugs such as methylphenidate and amphetamine. At therapeutic doses, these drugs also do not sedate or tranquilize children and do not increase the risk of addiction.

However, stimulants are classified as Schedule II drugs by the US Drug Enforcement Administration because there is potential for abuse of this class of medication. If your child is taking medication, it is always best to supervise the use of the medication closely. Atomoxetine and guanfacine are not Schedule II drugs because they don't have potential for abuse, even in adults.

**Q: Will use of stimulant medications lead to illegal drug or alcohol use?**

A: People with ADHD are naturally impulsive and tend to take risks. But patients with ADHD who are taking stimulants are not at a greater risk of using other drugs and may actually be at a lower risk. Children and teens who have ADHD combined with coexisting conditions may be at higher risk for drug and alcohol use, regardless of the medication used.

**Resources**

Here is a list of ADHD support groups and resources. Also, your child's doctor may know about resources in your community.

**CHADD-The National Resource Center on ADHD**  
800/233-4050  
www.chadd.org

**ADDA (Attention Deficit Disorder Association)**  
www.add.org

**Center for Parent Information and Resources**  
www.parentcenterhub.org

**National Institute of Mental Health**  
866/615-6464  
www.nimh.nih.gov

**Tourette Association of America**  
888/4-TOURET (486-8738)  
www.tourette.org

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