

Understanding ADHD: Information for Parents About Attention-Deficit/Hyperactivity Disorder



Almost all children have times when their behavior veers out of control. 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.

However, for some children, these kinds of behaviors are more than an occasional problem. Children with attention-deficit/hyperactivity disorder (ADHD) have behavior problems that are so frequent and severe that they interfere with their ability to live normal lives.

These children often have trouble getting along with siblings and other children at school, at home, and in other settings. Those who have trouble paying attention usually have trouble learning. An impulsive nature may put them in actual physical danger. Because children with ADHD have difficulty controlling this behavior, they may be labeled “bad kids” or “space cadets.”

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.

Effective treatment is available. If your child has ADHD, your pediatrician 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.

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 4% to 12% of school-aged children. ADHD is diagnosed in about 3 times more boys than girls.

The condition affects behavior in specific ways.

What are the symptoms of ADHD?

ADHD includes 3 groups of behavior symptoms: inattention, hyperactivity, and impulsivity. Table 1 explains these symptoms.

Are there different types of ADHD?

Not all children with ADHD have all the symptoms. They may have one or more of the symptom groups listed in Table 1. The symptoms usually are 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 show both hyperactive and impulsive behavior, but they can pay attention. They are the least common group and are frequently younger.
- **Combined inattentive/hyperactive/impulsive**—Children with this type of ADHD show a number of symptoms in all 3 dimensions. It is the type that most people think of when they think of ADHD.

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
	Often runs, jumps, and climbs when this is not permitted
Impulsivity	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	

How can I tell if my child has ADHD?

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

Sometimes a teacher is the first to notice inattention, hyperactivity, and/or impulsivity and bring these symptoms to the parents’ attention.

Perhaps questions from your pediatrician raised the issue. At routine visits, pediatricians often ask questions such as

- 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 behavior 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 your pediatrician.

Diagnosis

Your pediatrician will determine whether your child has ADHD using standard guidelines developed by the American Academy of Pediatrics. These diagnosis guidelines are 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 teenager.

There is no single test for ADHD. The process requires several steps and involves gathering a lot of 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 pediatrician will look at how your child's behavior compares to that of other children her own age, based on the information reported about your child by you, her teacher, and any other caregivers who spend time with your child, such as coaches or child care workers.

The following guidelines are used to confirm a diagnosis of ADHD.

- 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 child 17 years and older, 5 or more symptoms must be identified.
- Symptoms significantly impair your child's ability to function in some of the activities of daily life, such as schoolwork, relationships with you and siblings, relationships with friends, or the ability to function in groups such as sports teams.
- Symptoms start before the child reaches 12 years of age. However, these may not be recognized as ADHD symptoms until a child is older.
- Symptoms have continued for more than 6 months.

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

Your pediatrician may refer your child to a pediatric subspecialist or mental health clinician if there are concerns in one of the following areas:

- Intellectual disability (mental retardation)
- Developmental disorder such as speech problems, motor problems, 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

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 such as lawn mowers
- Poisonous chemicals, cleaning supplies, or medicines

How can parents help with the diagnosis?

As a parent, you will provide crucial information about your child's behavior and how it affects her life at home, in school, and in other social settings. Your pediatrician will want to know what symptoms your child is showing, 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 pediatrician will need to get information about your child directly from your child's 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 with your pediatrician:

- 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 pediatrician 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 may also need to be involved in gathering information for the diagnosis.

Coexisting conditions

As part of the diagnosis, your pediatrician will look for other conditions that show the same types of symptoms as ADHD. Your child may simply have a different condition or ADHD and another condition. Most children with a diagnosis of ADHD have at least one coexisting 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 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, and violate the rights of other people. Children with coexisting conduct disorder are at much higher risk for getting into trouble with the law or having substance abuse 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 pediatrician may recommend behavioral therapy for your child if she 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 depression). There is frequently a family history of these types of disorders. Coexisting mood disorders may put children at higher risk for suicide, especially during the teenage 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 normally used to treat ADHD.
- **Anxiety disorders**—These affect about 25% of children with ADHD. 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. It 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 her 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 tests for ADHD at this time.

Many theories have been presented, but studies have shown that the following tests have little value in diagnosing an individual child:

- Screening for high lead levels in the blood
- Screening for thyroid problems
- Computerized continuous performance tests
- Brain imaging studies such as CAT scans and MRIs
- Electroencephalogram (EEG) or brain-wave test

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

What causes ADHD?

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

Research to date has shown

- ADHD is a neurobiologic condition whose 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 frequently 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.
- Prematurity increases the risk of developing ADHD.
- Prenatal 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
- Allergies
- Immunizations

Treatment

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.

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
- Medication
- Behavior therapy including parent training
- Individual and family counseling

Treatment for ADHD uses the same principles that are used to treat other chronic conditions like asthma or diabetes. Long-term planning is needed because these conditions are not cured. Families must manage them 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 about ADHD is a key part of treating your child. As a parent, you will need to learn about ADHD. Read about the condition 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.

Setting target outcomes

At the beginning of treatment, your pediatrician 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 focus

Table 2. Common 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
	Dextrostat	Dextroamphetamine	4 to 6 hours
Short-acting methylphenidate stimulants	Focalin	Dexmethylphenidate	4 to 6 hours
	Methylin	Methylphenidate (tablet, liquid, and chewable tablets)	3 to 5 hours
	Ritalin	Methylphenidate	3 to 5 hours
Intermediate-acting methylphenidate stimulants	Metadate CD	Extended-release methylphenidate	6 to 8 hours
	Ritalin LA	Extended-release methylphenidate	6 to 8 hours
Long-acting amphetamine stimulants	Adderall-XR	Extended-release amphetamine	10 to 12 hours
	Dexedrine Spansule	Extended-release amphetamine	6+ hours
	Vyvanse	Lisdexamfetamine	10 to 12 hours
Long-acting methylphenidate stimulants	Concerta	Extended-release methylphenidate	10 to 12 hours
	Daytrana	Extended-release methylphenidate (skin patch)	11 to 12 hours
	Focalin XR	Extended-release dexmethylphenidate	8 to 12 hours
	Quillivant XR	Extended-release methylphenidate (liquid)	10 to 12 hours
Long-acting non-stimulants	Intuniv	Guanfacine	24 hours
	Kapvay	Clonidine	12 hours
	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.

on helping her 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 success.

The following are examples of target outcomes:

- Improved relationships with parents, siblings, teachers, and friends (eg, fewer arguments with brothers or sisters or being invited more frequently to friends' houses or parties)
- Better schoolwork (eg, completing class work or homework assignments)
- More independence in self-care or homework (eg, getting ready for school in the morning without supervision)
- Improved self-esteem (eg, increase in feeling that she can get her work done)

- Fewer disruptive behaviors (eg, decrease in the number of times she refuses to obey rules)
- Safer behavior in the community (eg, when crossing streets)

The target outcomes should be

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

Your child's treatment plan will be set up to help her achieve these goals.

Medication

For most children, stimulant medications are a safe and effective way to relieve ADHD symptoms. As glasses help people focus their eyes to see, 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 combined with behavior 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 2.) Immediate-release medications usually are taken every 4 hours, when needed. They are the cheapest of the medications. Extended-release medications usually are 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 can be opened and sprinkled onto food for children who have difficulties swallowing tablets or capsules.

Non-stimulants can be tried when stimulant medications don't work or cause bothersome side effects.

Which medication is best for my child?

It may take some time to find the best medication, dosage, and 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 also may need to be adjusted. The dosage is not based solely on his weight. Your pediatrician will vary the dosage over time to get the best results and control possible side effects.

The medication schedule also may be adjusted depending on the target outcome. For example, if the goal is to get relief from symptoms mostly 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

Principles for behavior therapy

Behavior 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 she shows the desired behavior. Give your child a consequence (unwanted result or punishment) consistently when she has 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.

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

The same sleep problems do not exist for atomoxetine, but initially it may make your child sleepy or upset her 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. Guanfacine can cause drowsiness, fatigue, or a decrease in blood pressure.

More than half of children who have tic disorders, such as Tourette syndrome, also have ADHD. Tourette syndrome is an inherited 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 non-stimulant (See Table 2.)

Close contact with your pediatrician 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 pediatrician 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 guanfacine may not be an option for children who are taking certain other medications or who have some medical conditions, such as congenital heart disease.

Behavior therapy

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

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

Table 3. Behavior therapy techniques

Technique	Description	Example
Positive reinforcement	Complimenting and providing rewards or privileges in response to desired behavior.	Child completes an assignment and is permitted to play on the computer.
Time-out	Removing access to desired activity because of unwanted behavior.	Child hits 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.	Child loses free-time privileges for not completing homework.
Token economy	Combining reward and consequence. Child earns rewards and privileges when performing desired behaviors. She loses rewards and privileges as a result of unwanted behavior.	Child earns stars or points for completing assignments and loses stars for getting out of seat. Child cashes in the sum of her stars at the end of the week for a prize.

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 3 shows specific behavior therapy techniques that can be effective with children with ADHD.

Behavior therapy recognizes 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 her behavior?

As the child's primary caregivers, parents play a major role in behavior 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 parenting classes with other parents will be sufficient, but with more challenging children, individual work with a counselor/coach may be needed.

Taking care of yourself also will 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 pediatrician to help you find parent training, counseling, and support groups in your community. Additional resources are listed at the end of this publication.

Tips for helping your child control his behavior

- **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 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 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.
- **Develop a good communication system with your child's teacher** 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 behavior 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 3.)
- Sending daily or weekly report cards or behavior 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
- Close supervision with frequent, positive cues to stay on task
- Changes to where and how tests are given so students can succeed (eg, 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 pediatrician to develop strategies to assist your child in the classroom. When a child has ADHD that is severe enough to interfere with her ability to learn, 2 federal laws offer help. These laws require public schools to cover costs of evaluating the educational needs of the affected child and providing the needed services.

1. The Individuals with Disabilities Education Act, Part B (IDEA) requires public schools to cover costs of evaluating the educational needs of the affected child and providing the needed special education services if your child qualifies because her learning is impaired by her ADHD.
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.

If your child has ADHD and a coexisting condition, she 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 it are more likely to achieve their goals in school.

Keeping the treatment plan on track

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

Treatment plans for ADHD usually require long-term efforts on the part of families and schools. Medication schedules may be complex. Behavior 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 pediatrician 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 behavior therapy. If your child is not achieving his goals, your pediatrician will assess the following factors:

- Were the target outcomes realistic?
- Is more information needed about the 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 clearly is not meeting his specific target outcomes, your pediatrician will need to reassess the treatment plan.

Unproven 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.

Teenagers with ADHD

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

Parents play an important role in helping teenagers become independent. Encourage your teenager to help herself with strategies such as

- Using a daily planner for assignments and appointments
- Making lists
- Keeping a routine
- Setting aside a quiet time and place to do homework
- Organizing storage for items such as school supplies, clothes, CDs, and sports equipment
- Being safety conscious (eg, always wearing seat belts, using protective gear for sports)
- Talking about problems with someone she trusts
- Getting enough sleep
- Understanding her 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 teenager does well and support her 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 child's ADHD increases her risk of incurring traffic violations and accidents.

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

Talk with your pediatrician if your teenager shows signs of severe problems such as depression, drug abuse, or gang-related activities.

The following methods **need more 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)
- Reducing sugar consumption
- Optometric vision training (asserts that faulty eye movement and sensitivities cause the behavior problems)

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

Will there be a cure for ADHD soon?

While there are no signs of a cure at this time, research is ongoing to learn more about the role of the brain in ADHD and the best ways to treat the

disorder. Additional research is looking at the long-term outcomes for people with ADHD.

Frequently asked questions

Will my child outgrow ADHD?

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 behavior pattern can be an asset.

Why do so many children have ADHD?

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 now 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 frequently interferes with school functioning.

Are schools putting children on ADHD medication?

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

Are children getting high on stimulant medications?

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.

Stimulants are classified as Schedule II drugs by the US Drug Enforcement Administration because there is abuse potential of this class of medication. If your child is on 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 abuse potential, even in adults.

Are stimulant medications gateway drugs leading to illegal drug or alcohol abuse?

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 and actually may be at a lower risk of using other drugs. Children and teenagers who have ADHD and also have coexisting conditions may be at higher risk for drug and alcohol abuse, regardless of the medication used.

Resources

The following is a list of support groups and additional resources for further information about ADHD. Check with your pediatrician for resources in your community.

National Resource Center on AD/HD

www.help4adhd.org

Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD)

800/233-4050

www.chadd.org

Attention Deficit Disorder Association

856/439-9099

www.add.org

National Dissemination Center for Children with Disabilities

800/695-0285

www.nichcy.org

National Institute of Mental Health

866/615-6464

www.nimh.nih.gov

National Tourette Syndrome Association, Inc

800/237-0717

www.tsa-usa.org

Listing of resources does not imply an endorsement by the American Academy of Pediatrics (AAP). The AAP is not responsible for the content of external resources. Information was current at the time of publication.

Products are mentioned for informational purposes only and do not imply an endorsement by the American Academy of Pediatrics.

The information contained in this publication should not be used as a substitute for the medical care and advice of your pediatrician. There may be variations in treatment that your pediatrician may recommend based on individual facts and circumstances.

From your doctor

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