



Attention Deficit and Hyperactive disorder (ADHD): Frequently asked questions

1. What is ADHD?

ADHD is one of the most common neurobehavioral disorder affecting children. ADHD is a condition of the brain that makes it difficult for children to control their behavior. It affects 4% to 12% of school-aged children. About 3 times more boys than girls are diagnosed with ADHD.

2. What are the symptoms of ADHD?

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

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
	Frequently avoids doing things that require ongoing mental effort
Hyperactivity	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
	Cannot play quietly
Impulsivity	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

3. **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 - 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 most common.

Hyperactive/Impulsive—Children with this type of ADHD show both hyperactive and impulsive behavior, but 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. This is the most common type of ADHD.

4. **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 he/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

- a) How is your child doing in school?
- b) Are there any problems with learning that you or your child's teachers have seen?
- c) Is your child happy in school?
- d) Is your child having problems completing class work or homework?
- e) 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

It is more difficult to diagnose ADHD in children 5 years of age and younger. This is because children change very rapidly during the preschool years. 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 his own 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.

To confirm a diagnosis of ADHD, symptoms

- Occur in more than one setting, such as home, school, and social situations and cause some impairment
- Significantly impair your child's ability to function in some of the activities of daily life, such as schoolwork, relationships with you and his brothers and/or sisters, and his relationship with friends or in his ability to function in groups such as sports teams
- Start before the child reaches 7 years of age
- (However, these may not be recognized as ADHD symptoms until a child is older.)
- 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 his behavior. Your pediatrician also will talk with your child about how he acts and feels. Your pediatrician may refer your child to a pediatric subspecialist if there are concerns in one of the following areas:
 - 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

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 5 years of age and older spend many of their waking hours at 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 and samples of your child's schoolwork.

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 biological disorder.
- 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 a parent is diagnosed with ADHD

In very rare cases, toxins in the environment may lead to ADHD.

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 very 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 to 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 3 to 6 target outcomes (goals) for your child's behavior. These target outcomes will guide the treatment plan. Your child's target outcomes should focus 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

The target outcomes should be Realistic, Something your child will be able to do, and Behaviors that you can observe and count

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.
- Different types of stimulants are available, in short-acting (immediate-release), intermediate-acting, and extended-release forms. (See Table 2.) Immediate-release forms usually are taken every 4 hours, when the medication is needed. They are the cheapest of the medications. Intermediate-acting and 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 on food for children who have difficulties swallowing tablets or capsules.

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 check-ups 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 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 tics

Very rare side effects include

- Significant increase in blood pressure or heart rate
- Growth delay
- Bizarre behaviors

Most side effects can be relieved by

- Changing the medication dosage
- Adjusting the schedule of medication
- Using a different stimulant or atomoxetine

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.

Stimulants and atomoxetine 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.
- 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. Behavior therapy has 3 basic principles.

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. Whenever possible, avoid taking your child to places that may be too stimulating, like 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.

Principles for behavior therapy

- Set specific goals. Set clear goals for your child, such as staying focused on homework for a certain time or sharing toys with friends.
- 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 fails to meet a goal.
- 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.

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

TABLE 3. Behavior therapy techniques		
Technique	Description	Example
Positive reinforcement	Complementing 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 the 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. The child cashes in the sum of her stars at the end of the week for a prize.

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.

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
- 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

Your child's school should work with you and your pediatrician to develop strategies to assist your child in the classroom. It is important to remember that once diagnosed and treated, children with ADHD 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.

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.

The following methods **have not been proven to work** in scientific studies: • 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.

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.