

# ADHD

*Parents Medication Guide*



Attention-Deficit/Hyperactivity Disorder

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# Introduction

Attention-Deficit/Hyperactivity Disorder (ADHD) is a neurobehavioral condition characterized by excessive restlessness, inattention, distraction, and impulsivity. It is usually first identified when children are school-aged, although it also can be diagnosed in people of all age groups. In an average classroom of 30 children, research suggests that at least one will have ADHD.<sup>1</sup>

High activity levels and short attention spans are a normal part of childhood for many children, but for those with ADHD, hyperactivity and inattentiveness are excessive and interfere with daily functioning. Some children with ADHD only have problems with attention; other children only have issues with hyperactivity and impulsivity; some children have problems with both. Over time, children with ADHD tend to shed some of the overactivity and impulsivity, but they often continue to have significant problems with inattention, distraction, and organization.



ADHD can interfere with a child's ability to perform in school and capacity to develop and maintain social (peer) relationships. ADHD can increase a child's risk of dropping out of school or having disciplinary problems. ADHD also is associated with an increased risk of having problems with hazardous driving, cigarette smoking, and substance abuse.

Effective treatments are available to help manage the inattention, hyperactivity, and impulsiveness symptoms of ADHD and can improve a person's ability to function at home, at school, and in other places.

This medication guide is intended to help parents, patients, and family members better understand the treatments used to care for children with ADHD.

Before treatment can begin, however, each child must have a careful review of his or her medical history, and a physical examination should be conducted. ADHD symptoms should be assessed by a health care professional qualified to evaluate children with ADHD. The professional treating your child for ADHD should be trained to diagnose and treat ADHD. They also should have a thorough understanding of normal child development (such as pediatricians, developmental pediatricians, child and adolescent psychiatrists, and pediatric neurologists). Treatment may include medication, behavioral therapy, or a combination of the two.

As a parent or guardian of a child or teenager diagnosed with ADHD, you may be aware of the debate surrounding the medication used to treat this condition. Recently, the U.S. Food and Drug Administration (FDA) reviewed several research studies involving children and adolescents who were prescribed medication for ADHD and concluded that these medications are effective and that the risks associated with these medications are known and can be managed.

While the FDA found that these medications are generally safe and effective, many children and teenagers who take medication for ADHD experience side effects at one time or another. Some of these side effects can be significant and should be closely monitored.

Recently, the FDA directed the makers of ADHD medication to develop medication guides to better inform patients and their families about the known potential side effects associated with these medicines—common and rare. These guides will be provided along with the ADHD medication when it is dispensed from the pharmacy. Parents and guardians of children being treated with ADHD medication should read the medication guides and talk to their child's doctor if they have any questions or concerns.<sup>2</sup>

For more information about the FDA's medication guides, please [click here](#).\*

## Causes, Symptoms & Choosing Treatment

### What is ADHD?

ADHD is a neurobehavioral condition with symptoms that include excessive restlessness, poor attention, and impulsive acts. Estimates show that between 3 and 7 percent of school-aged children and about 4 percent of adults have ADHD.<sup>3</sup>

No single biological cause for ADHD has been found. But most research points to genes inherited from parents as the leading contributor to ADHD. For example, studies clearly show that ADHD runs in families—seventy-six percent of children with ADHD have a relative with the condition.<sup>4</sup> Scientists are currently looking for which genes, or combinations of genes, influence how ADHD affects the behavior of those with the condition.

Being born prematurely, maternal smoking or extreme stress during pregnancy, being exposed to alcohol in the womb, and traumatic brain injury also may contribute to the development of ADHD.

\*<http://www.fda.gov/cder/drug/infopage/ADHD/default.htm>

### Potential Consequences when ADHD is Left Untreated

- Increased risk for school failure and dropout
- Behavior and discipline problems
- Social difficulties and family strife
- Accidental injury
- Alcohol and drug abuse
- Depression and other mental-health disorders
- Employment problems
- Driving accidents
- Unplanned pregnancy
- Delinquency, criminality, and arrest

## How do I find out if my child has ADHD?

Because there is no brain imaging scan or blood test to diagnose ADHD, it is important that a health care professional specifically trained to diagnose and treat ADHD evaluate your child's behavior. Clinicians, such as pediatricians and child and adolescent psychiatrists, will be able to tell whether your child's behaviors are symptoms of ADHD or if he or she is just unusually active or immature.

Most cases of ADHD are first diagnosed in the early school years. Children who are diagnosed with ADHD have symptoms that impair their ability to function as well as other children the same age. These symptoms must last at least 6 months before a child can be diagnosed with ADHD.

There are three subtypes of ADHD: primarily inattentive, primarily hyperactive/impulsive, and that with significant symptoms of both (called combined subtype).

Boys diagnosed with ADHD outnumber girls with the condition by about three to one. Some doctors think that just as many girls have ADHD as boys, but they are not diagnosed as often because they are less disruptive and because their symptoms may not become unmanageable until they are older. For instance, girls sometimes show their ADHD in less troublemaking ways, such as being inattentive. Now that more health care professionals are aware of the unique ways ADHD affects girls and boys, more girls are being diagnosed and receiving treatment.<sup>5</sup>

Some parents worry because more children are being diagnosed with ADHD now than in the past. Research indicates that the increase is largely due to enhanced awareness and improved detection of the condition—including diagnosing children who may have less severe forms of ADHD. Now that more people know about ADHD and its symptoms, younger children, adolescents, girls, and adults with this condition are more likely to be identified and treated.

Despite the rise in ADHD diagnoses and the fear that some children are still being incorrectly identified as having ADHD, underdiagnosis remains a problem. There are still many children with ADHD (almost half) who are not diagnosed and do not receive treatment.<sup>6</sup>

## What types of treatments are effective?

To help families make important decisions about treatment, the National Institute of Mental Health (NIMH) conducted the most in-depth study ever carried out for evaluating ADHD treatments. This study is called the Multimodal Treatment Study of Children with ADHD (or the MTA). Data from this study showed that methylphenidate (a commonly used stimulant medication for ADHD) is effective in treating the symptoms of ADHD, either alone or in

*“Before I was diagnosed, a lot of my time was spent coping with my ADHD symptoms.”*

—an adult with ADHD

combination with behavioral therapy. It also found that treatment that includes medication is more effective for the symptoms of ADHD (such as hyperactivity) than behavioral therapy alone. This is especially true when the medication's dosage is closely monitored and personalized for each child.<sup>7</sup>

The MTA study, along with dozens of other large-scale studies that have assessed the safety and effectiveness of ADHD medications, provides evidence that medication plays an important role in the treatment of children, adolescents, and adults with ADHD.

This research demonstrates that for most young people with ADHD, medication dramatically reduces hyperactivity, improves attention, and increases the ability to get along with others.

While medicine alone is a proven treatment for ADHD, the MTA study found that combining behavioral treatment with medicine was useful in helping families, teachers, and children learn ways to manage and modify the behaviors that cause problems at home and at school. In addition, some children receiving combined treatment were able to take lower doses of medicine.

Behavioral treatments in the MTA study included three approaches:

- **Parent Training:** Helps parents learn about ADHD and ways to manage ADHD behaviors.
- **Child-Focused Treatment:** Helps children and teens with ADHD learn to develop social, academic, and problem-solving skills.
- **School-Based Interventions:** Help teachers meet children's educational needs by teaching them skills to manage the children's ADHD behaviors in the classroom (such as rewards, consequences, and daily report cards sent to parents).

Children with ADHD who have other mental-health conditions, such as depression and anxiety, were especially helped by having individual and family treatment as part of their treatment plan.

## Will medication cure my child?

Medication is a highly effective way to treat the symptoms of ADHD, but it only works when it is taken as prescribed. Unlike antibiotics and similar medications that are taken for short periods of time to treat infections and other ailments,

## Most Common ADHD Medications

Trade Name	Generic Name
Adderall	mixed amphetamine salts
Adderall XR	mixed amphetamine salts
Concerta	methylphenidate
Daytrana	methylphenidate (patch)
Dexedrine	dextroamphetamine
Dexedrine Spansule	dextroamphetamine
Dextrostat	dextroamphetamine
Focalin	dexmethylphenidate
Focalin XR	dexmethylphenidate
Metadate	methylphenidate
Metadate CD	methylphenidate
Methylin	methylphenidate hydrochloride (liquid & chewable tablets)
Ritalin	methylphenidate
Ritalin LA	methylphenidate
Ritalin SR	methylphenidate
Strattera	atomoxetine
Vyvanse	lisdexamfetamine

Over time, this list will grow. Researchers are continuing to develop new medications for ADHD.

The FDA directed pharmaceutical companies to develop medication guides for each of these medications. These guides can be accessed by [clicking here](#).\*

\* <http://www.fda.gov/cder/drug/infopage/ADHD/default.htm>

there is no ADHD medication that will cure this condition. Fortunately, the majority of children with ADHD can improve significantly with a combination of medication and behavioral treatment.<sup>8</sup>

Research is ongoing to learn more about the way ADHD affects brain function and how to best treat the condition. Other research is looking at the long-term outcomes for people with ADHD.

## Choices in Medication

### What types of medication are available?

ADHD medications are grouped into two major categories: stimulant and non-stimulant.

Stimulant medications, such as methylphenidate and amphetamines, are highly effective treatments for ADHD and have been available for decades. Amphetamines have been prescribed for more than 70 years; methylphenidate for more than 50 years, and both types of medication have been very well studied. Evidence shows that stimulants are quite safe when prescribed to healthy patients and used under medical supervision.

The only FDA-approved non-stimulant medication, atomoxetine (Strattera), also has been shown to be an effective treatment for ADHD. Some parents prefer the non-stimulant atomoxetine (Strattera) because of their concerns about stimulant medication. Also, atomoxetine (Strattera) may be a good alternative for children who do not respond well to stimulant medication or have other conditions along with their ADHD.

Deciding which ADHD medication is right for your child takes time, because doctors often need to try more than one medication to find the one that works best.

Some ADHD medications might not be right for your child because of their side effects. Both stimulant and non-stimulant medications have side effects. A medication's side effects usually can be managed by adjusting the dose, changing the time it is administered, or switching medications.

Parents can help their child's doctor find the correct medication and dosage by keeping a medication diary or log book to track how well their child is doing and what side effects he or she may be experiencing.

If your child does not do well on any of the usual treatments for ADHD, some medications that have not been approved by the FDA for the treatment of ADHD may be helpful. However, these medications are usually only prescribed after first-line ADHD medications and behavioral treatment have already been tried.<sup>9</sup>

**Finding the correct ADHD medication and dose takes time. If your child's symptoms are not better after being on a full therapeutic dose of a particular ADHD medication for a week or more, the prescribing doctor may consider trying another medication or adjusting the dose.**

# Taking ADHD Medication

## How is ADHD medication taken?

**Stimulant Medications:** Stimulant medication comes in short-acting and long-acting forms. Short-acting stimulants are generally taken two to three times a day and last 4 to 5 hours per dose. Long-acting stimulants are usually taken once a day and last between 7 and 12 hours. Sometimes doctors will prescribe a combination of long-acting and short-acting stimulant medication, but this approach has not been systematically studied.

For those children who have difficulty swallowing pills, a patch applied to the skin, liquid medications, chewable pills, and capsules that can be opened and sprinkled on food also are available.

Most doctors start children at a low dosage of stimulant medication and increase the amount every 1 to 3 weeks until the ADHD symptoms are under control. It can take several months to find the correct dose of stimulant medication.

**Non-Stimulant Medications:** The non-stimulant medication atomoxetine (Strattera) is usually taken as a single daily dose in the morning or as two divided doses in the morning and late afternoon or early evening. Most doctors prescribe a lower dose initially and then gradually increase the dosage as the patient adjusts to the medication. It can take several weeks to build up to the correct dosage and several additional weeks to see the full effects.

There are other non-stimulant medications that are sometimes used for the treatment of ADHD, such as tricyclic antidepressants, guanfacine, clonidine, and bupropion (Wellbutrin). However, these drugs are not approved by the FDA for the treatment of ADHD.

It is important not to miss doses of *any* ADHD medication. Missing a single dose can leave your child without the beneficial effects of the medication, and the ADHD symptoms may return.

## Can over-the-counter or prescription medication interfere with ADHD medication?

Yes, some over-the-counter medications can interfere with your child's ADHD medications. For example, Benadryl (diphenhydramine) can cause agitation in some children with ADHD. Therefore, it is important to tell your child's

*“As soon as I started taking stimulant medication, it was as if a light came on in the room.”*

—an adult with ADHD





doctor about all of the over-the-counter (OTC) and prescription medications, herbal supplements, and vitamins your child is taking. Your child's prescribing doctor will let you know which medicines are okay to take while on ADHD medication, or you can ask the pharmacist about drug interactions before purchasing a non-prescription medication, supplement, or vitamin.

### **How do I know the medication is working?**

With stimulant medication, parents and teachers should see some beneficial effects within 30 to 90 minutes—depending on the dose and formulation used. However, if the dose of stimulant medication is too low, your child's symptoms may not be affected at all.

Some beneficial effects of the non-stimulant medication atomoxetine (Strattera) might be noticed within the first week of taking medication. However, it can take several weeks for the non-stimulant medication atomoxetine (Strattera) to reach its full effect—even if the dosage is correct.

When ADHD medication is working, many of the ADHD symptoms go away. It is not uncommon, though, for some symptoms to linger. Behavioral treatments may help with the remaining symptoms.

While it may take time to find an effective medication and dosage, ADHD medications do work. In fact, up to 90 percent of children with ADHD will find at least one medication or a combination of medications that works well for them.<sup>10</sup>

### **Are there times when my child can take a break from medication?**

In the past, doctors often recommended that children take a break from their ADHD medication after school, on weekends, and during the summer. Now, many doctors recommend that children stay on their ADHD medication full-time to get the benefits at home and at play. This can be especially true for teens who may benefit from ADHD medication outside of school to help make decisions about cigarette smoking, substance use, and risky behavior, as well as help with completing their homework and paying attention while driving.<sup>11</sup> However, some breaks from medication or reducing the medication's dose may be considered for less demanding times or if your child has troublesome side effects.

### **How will ADHD medication make my child feel?**

For most children, ADHD medication will make them feel calmer and more able to focus and concentrate. Some of these changes may go unnoticed by your child—although parents and teachers should notice positive behavioral changes if the medication is working properly. ADHD medication should not

*“My child is happier now she's on medication.”*

—a parent of a child with ADHD

change a child's basic personality even though it may make them less hyperactive and more attentive. Sometimes children report feeling a little unusual when they first start taking ADHD medication, but these feelings are usually minor and often go away with time. Also, some children taking non-stimulant atomoxetine (Strattera) medication report feeling more irritable than usual. Their irritability may improve with time, or changing the dose or medication also may help. If you notice a personality change (such as a "zombie"-like personality) or if your child is continually irritable while taking medication, talk with your child's doctor.



### **When is it okay to stop taking ADHD medication?**

Many children diagnosed with ADHD will continue to have problems with one or more symptoms of this condition later in life. In these cases, ADHD medication can be taken into adulthood to help control their symptoms.

For many others, the symptoms of ADHD lessen over time as they begin to "outgrow" ADHD or learn to compensate for their behavioral symptoms. The symptom most apt to lessen over time is hyperactivity.

Some signs that your child may be ready to reduce or stop ADHD medication are: 1) your child has been symptom-free for more than a year while on medication, 2) your child is doing better and better, but the dosage has stayed the same, 3) your child's behavior is appropriate despite missing a dose or two, or 4) your child has developed a newfound ability to concentrate.<sup>9</sup>

The choice to stop taking ADHD medication should be discussed with the prescribing doctor, teachers, family members, and your child. You may find that your child needs extra support from teachers and family members to reinforce good behavior once the medication is stopped. You also will need to monitor your child's behavior once he or she is off the medication to make sure any lingering symptoms are attended to.

### **How do I explain ADHD medication to my child?**

It is important that your child understands what ADHD medication is, why it is being prescribed, and how it can be helpful. This is especially true for older children and adolescents who may have concerns about being "different" because they are taking medicine. You may want to compare taking ADHD medications to wearing eyeglasses. Wearing glasses helps you see better just as ADHD medication gives you better control over behavior so that it is easier to focus, pay attention, learn, and behave.

*The information contained in this guide is not intended as, and is not a substitute for, professional medical advice. All decisions about clinical care should be made in consultation with a child's treatment team. No pharmaceutical funding was used in the development or maintenance of this guide.*

# Stimulant Medication & Addiction

## Is there a risk my child may become addicted to stimulant medication?

Some parents worry that stimulant medication may make their child susceptible to addiction. This is a common misconception about ADHD medication. According to the National Institute on Drug Abuse (NIDA), children who take medication to treat their ADHD are less likely to have problems with substance abuse than children with ADHD who don't receive treatment.<sup>12</sup>

**If taken appropriately, ADHD stimulant medications are not addictive.**

While few people who are prescribed ADHD medications abuse their medication, giving or selling stimulant medication to others remains a concern. Because of the known risk of abuse with these types of medications, the Drug Enforcement Administration (DEA) has classified stimulants as medications that require stricter control. These are referred to as Schedule II or controlled medications.

The children and adolescents who misuse stimulant medication often do so to “get high” or to improve school performance (“cram all night”). To ensure these medications are used correctly, parents and guardians should make sure they are kept in a secure place, and their use should be monitored. Parents also must inform the child's doctor if medication is missing or being taken inappropriately. If misuse is a concern, medication should be dispensed by a parent. If medication is taken during school hours, most school jurisdictions require that the medication be given by school personnel.

## Side Effects & ADHD Medication

### What are the most common side effects?

Most children treated with ADHD medication have some side effects. Some of the most common and predictable side effects from stimulant medication are reduced appetite, weight loss, problems sleeping, headaches, stomach pain, and irritability. These side effects usually get better within the first couple of months of treatment.

The non-stimulant atomoxetine (Strattera) also can cause nausea, reduced appetite, and weight loss. Some children complain of drowsiness or mild irritability during the day while taking this medication; however, these side effects usually go away after the first month of treatment.

Side effects usually are not dangerous, but they should *all* be reported to your child's doctor—especially if they cause discomfort or interfere with your child's everyday activities. Side effects often can be reduced by switching medications, using another form of the medication, adjusting the dose, or changing the time the medication is taken.

## What are the rare or serious side effects?

Heart-related problems, hallucinations and agitation, suicidal thoughts, and liver problems are some of the rare and serious side effects people on ADHD medication may be at risk of developing.

The FDA recommends that parents who are considering ADHD medication for their child work with the prescribing doctor to develop a treatment plan that includes a careful review of health history and regular medical exams. **In particular, you should tell the doctor about any heart or mental-health problems your child experiences while on ADHD medication and if there is a family history of these problems.**<sup>2</sup>

**Heart-Related Problems:** There have been rare reports of serious heart-related problems, such as sudden death, heart attack, and stroke, in patients taking ADHD medication. The FDA investigated these reports and found that many involved patients who had undiagnosed heart defects. The FDA concluded it was not possible to determine whether or not the hidden heart defect, the medication, or a combination of the two caused the heart-related problems in the reports. *It appears that there is no increased risk of sudden death, heart attack, or stroke for children taking ADHD medication if the child is healthy and has no current heart problems.* However, the FDA added a warning label to ADHD medication cautioning doctors about prescribing them for people who have heart defects.<sup>13</sup> Some children with heart defects may be able to take stimulants, but only under close supervision of their physician.

**Hallucinations and Agitation:** The FDA also investigated a small number of reports of visual hallucinations, psychosis, and aggressive outbursts in patients taking ADHD medication. Another FDA review of medications used to treat ADHD showed a slightly increased risk (about 1 per 1,000) for hearing voices, becoming suspicious for no reason, or becoming manic in patients who did not have these symptoms prior to starting medication.<sup>2</sup>

**Voicing Suicidal Thoughts:** The non-stimulant medication atomoxetine (Strattera) is associated with a rare, but potentially serious, side effect. There is a slightly increased risk (about 4 per 1,000) of voicing suicidal thoughts and feelings while taking the non-stimulant ADHD medication atomoxetine (Strattera). While this risk is very low, monitor your child's mental welfare carefully by asking them about their thoughts and feelings when they are on this medication—especially during the first few months after starting medication or when your child's dose is increased or decreased.<sup>14</sup>

**Pre-Existing Mental-Health Conditions:** Patients with pre-existing psychosis, bipolar disorder, or a history of drug abuse should be carefully monitored when using ADHD medication. Evidence shows that some ADHD medications may worsen pre-existing psychosis and bipolar disorder. Some children with these conditions, however, can benefit from ADHD medication but may need other

**Be sure to tell the doctor if your child has a history of heart problems or symptoms, such as fainting, dizziness, or irregular heart rate. Also, inform the doctor if there is a family history of major heart problems or sudden death.**

### When to Call the Doctor Immediately

- If your child is feeling faint or dizzy; complains of unusual heartbeats (such as rapid or skipped beats), chest pains, or shortness of breath; becomes agitated; begins having hallucinations; seems depressed; or voices suicidal thoughts
- If your child complains of itching, right upper belly pain, or unexplained flu-like symptoms or if he or she has dark urine or yellow eyes or skin

treatment as well. Also, patients with a history of drug abuse may be at increased risk of a relapse or misusing their medication if taking stimulant medication. The role of stimulants in the treatment of adolescents with ADHD and substance abuse problems remains unclear.

**Liver Problems:** There have been rare cases reported of the non-stimulant atomoxetine (Strattera) causing potentially serious liver problems. Signs to watch for are itching, right upper belly pain, dark urine, yellow skin or eyes, and unexplained flu-like symptoms.

To find out more about the FDA's warnings regarding cardiac risk and psychiatric side effects of ADHD medications, [click here](#).<sup>†</sup>

### Do I need to monitor my child's appetite, weight, and height?

Parents are in the best position to monitor their child's well-being—including mental and physical health.

As with any disorder, treatments and medication may have side effects. Some of the things that are important to watch when your child is on ADHD medication include changes in appetite and weight. Your child's growth rate also should be monitored.

Monitoring weight and height is primarily the doctor's responsibility, but it is helpful for parents to pay attention as well. The effect of ADHD treatment on growth has been studied for many years. Recent research shows that stimulant medication may be associated with a small reduction in growth (primarily weight related), at least during the first 1 to 3 years of treatment. However, most studies show that any reduction in growth rate is often temporary and unrelated to the child's ultimate height.

<sup>†</sup><http://www.fda.gov/bbs/topics/NEWS/2007/NEW01568.html>

If there is a change in your child's appetite or weight, you should contact your child's doctor. You, your child's doctor, and your child (if your child is involved in making decisions about treatment) can talk about changing eating habits to keep his or her weight within the normal range, as well as possible changes in dosing or medications.

### **How can I best manage some of the common side effects my child may experience?**

There are several things you can do to decrease problems caused by the most common side effects associated with ADHD medication.

**Decreased Appetite:** Some solutions for a decreased appetite include administering medication after breakfast so your child will be hungry for the morning meal, feeding your child large meals in the evening when the medication is beginning to wear off, or having food available when the child is hungry. It also is prudent to feed children taking ADHD medication a balanced diet with high-caloric foods and drinks, as appropriate, to overcome any loss in weight. If your child's reduced appetite continues for a long period of time, you may want to ask the prescribing doctor if it would be okay to stop or reduce the dose of the medication in the summertime or on the weekends.

**Sleep Problems:** Regardless of the cause of your child's sleep problems, setting up a healthy bedtime routine should help them get to sleep. This can include bathing, brushing teeth, reading, or being read to. These activities should be designed to relax your child. Also, try to avoid stimulating and distracting electronics, such as radios, computers, and televisions, before bedtime.

If your child is taking a stimulant medication and a bedtime routine does not help the sleep problems, talk with your doctor about administering the medication earlier in the day. For children taking a long-acting stimulant medication, you can ask about changing to a shorter-acting medication (8 hours instead of 12 hours, for example). If your child is already taking short-acting medication, you can talk to the doctor about reducing the dose or stopping the medication in the afternoon to help your child get to sleep. Or, in certain instances, a medication may be used to help with sleep.

**Drowsiness:** If your child is taking the non-stimulant atomoxetine (Strattera) and becomes sleepy in the daytime, your child's doctor may recommend giving the medication at bedtime instead of in the morning, dividing the dose and administering the medication twice a day, or lowering the dose to reduce drowsiness.



**Behavioral Rebound:** Some children taking stimulant medication may seem more irritable and have an increase in ADHD symptoms in the afternoon or evening. This is called “rebounding” by some doctors and may be caused by the medication wearing off. To remedy this, your child’s doctor may recommend trying a medication that lasts longer or taking a small dose of immediate-release stimulant later in the day.<sup>9</sup>

**Other Side Effects:** If you have questions or concerns about these or other side effects, contact your child’s doctor.

## School & the Child with ADHD

### How can the school help my child with ADHD?

Schools can work with families and doctors to help children with ADHD in school. Open communication between parents and school staff can be the key to a child’s success. Teachers often are the first to notice ADHD-like behaviors and can provide parents, guardians, and doctors with information that may help with diagnosis and treatment. Also, teachers and parents can work together to solve problems and plan ways to support a child’s learning at home as well as at school. For example, teachers will often use specific instructional and behavioral strategies in the classroom to help students with ADHD.



Students whose ADHD impairs their ability to learn may qualify for special education under the Individuals with Disabilities Act (IDEA) or for a [Section 504](#)<sup>15</sup> plan under the Rehabilitation Act of 1973. Special education and 504 plans provide assistance to students with disabilities and are designed to meet their unique learning and behavioral needs. Children with ADHD are eligible for special education in the “Other Health Impairment” disability category under IDEA. Children who do not qualify for special education may still be eligible for a 504 plan.

Public schools are required to evaluate students and provide [free appropriate public education \(FAPE\)](#)<sup>16</sup> to all students with disabilities. Families also can request that their child be tested to help decide if he or she can qualify for educational services. However, parents and guardians must give written permission before a school can provide testing or services to a child. Testing and services are confidential and are provided through the public school system at no cost to the family.

*“Finding out that our child had ADHD answered a lot of questions about why she wasn’t performing better at school.”*

—a parent of a child with ADHD

Some children may need to take their ADHD medication during school hours. If authorized by a parent or guardian, school staff can give a child prescription medicine. Parents and guardians should contact the school principal, nurse, or counselor if their child needs to take medicine while at school.

Federal law states that schools cannot make decisions about medicine for a child or require students to take medicine to attend school.

### **How does ADHD affect my child’s ability to form friendships?**

Children with ADHD often have difficulty with social relationships, which may cause conflict with family members or lead to rejection by other children their age. A lack of social skills combined with hyperactive, impulsive, and inattentive behavior may cause children with ADHD to act in ways that others think are mean, bossy, rude, thoughtless, or weird. In addition, children with ADHD, like children with other disabilities, are more frequently the targets of bullies.

Medicine for ADHD can have positive effects on social behavior and improve the way that a child relates to others. For example, they may be more able to wait their turn in games or conversations or less likely to blurt out comments without thinking. Parents can help foster good friendships for their children by letting teachers, school counselors, and coaches know about problems that might develop, arranging one-on-one play dates, and encouraging participation in school activities and peer-group programs.

*“ADHD always made me feel different from the other kids at school.”*

—an adult with ADHD

### **Does my child need treatment when not in school?**

The symptoms of ADHD are usually with your child—at school and at play as well as at home. Most doctors recommend that children stay on ADHD medication most of the waking day, especially if ADHD symptoms cause distress in situations outside of school. Not taking ADHD medication may put your child at risk. Younger children are at risk for injuries and for having social issues when they are not taking their ADHD medication, and adolescents are more at risk for motor vehicle accidents and other risky behaviors.

It is possible that your child’s doctor may direct you to give your child a break from medication during certain times, such as when they are out of school, to help manage side effects. It is important for you and your child to be aware that the symptoms of ADHD are likely to resurface once your child is off of medication.



# Disorders that Can Accompany ADHD

## What are some of the more common disorders that can accompany ADHD?

Research shows that two-thirds of children diagnosed with ADHD have at least one additional mental-health or learning disorder.

To ensure an accurate diagnosis, your child's doctor will look for other conditions that show the same types of symptoms as ADHD. The doctor may find that your child has ADHD, another condition, or ADHD *and* another condition. Having more than one condition is called having coexisting (also called comorbid) conditions.

Coexisting conditions can make diagnosing and treating ADHD more difficult. They also create more challenges for a child to overcome, so it is important to identify and treat these other conditions.

Some of the more common coexisting conditions are oppositional defiant disorder, learning and language disabilities, and anxiety and depressive disorders.

Studies have shown that half or more children with ADHD also have oppositional defiant disorder. Children with oppositional defiant disorder often are defiant of authority and have a tendency to intentionally bother others. Some children with ADHD who exhibit more significant behavioral problems are diagnosed with conduct disorder. Conduct disorder is a serious psychiatric disorder in which the child is aggressive to people and animals, is destructive to property, and frequently violates society's rules. Children with coexisting conduct disorder are at much higher risk for getting into trouble with the law than children who have only ADHD. Your child's doctor may recommend counseling if your child has either oppositional defiant disorder or conduct disorder.

Twenty-five to 35 percent of children with ADHD will have a coexisting language or learning problem. Children with these coexisting conditions often benefit from scholastic and language therapies, as well as extra help at school.

Additionally, 33 percent of children with ADHD also have a problem with anxiety or mood disorders (such as depression). Children with these problems may benefit from additional treatment as well, possibly including talk therapy, medication, or both.

### Disorders that Commonly Accompany ADHD

- Oppositional defiant disorder
- Conduct disorder
- Learning and language disabilities
- Anxiety disorders
- Depressive disorders
- Bipolar disorder
- Tourette's Disorder

One of the more serious coexisting conditions that can occur with ADHD is bipolar disorder. Some signs that suggest your child has bipolar disorder are overly happy mood, grandiosity (believing that they are much more talented than they really are), racing thoughts, and less need for sleep. On the other hand, many children with bipolar disorder as a coexisting condition appear highly irritable and overly sensitive and reactive and are often described as “an emotional roller coaster.”

Only a qualified mental-health clinician can determine whether your child’s behaviors are caused by ADHD, another condition, or a combination of the two. A thorough assessment and accurate diagnosis are essential to choosing the right treatments, including which medication might benefit your child the most and which medication might make certain disorders worse.<sup>9</sup>

**When ADHD medication fails to improve a child’s symptoms, it may be a sign of a coexisting condition.**

### **Can ADHD medication cause bipolar disorder?**

No. ADHD medication does not cause bipolar disorder. However, ADHD medications can make pre-existing manic symptoms worse. And, in rare instances, they also may cause manic episodes or behavior. If your child becomes manic or overly irritable while taking ADHD medication, contact your child’s doctor immediately.

### **Can my child take ADHD medication if there is a coexisting condition?**

If your child’s doctor determines that your child has one or more coexisting conditions, a treatment plan should be developed to address each coexisting condition as well as the ADHD.

Many children with ADHD and coexisting conditions take medication to help treat their ADHD. For example, children with ADHD and anxiety or disruptive behavior disorders have as good a response to stimulants as do patients who do not have these coexisting conditions.<sup>9</sup>

*Proceed with medication cautiously if your child is diagnosed with bipolar disorder as a coexisting condition.* There have been rare reports that stimulants worsen bipolar disorder. If your child suddenly becomes aggressive or depressed, or if he or she voices suicidal thoughts after starting an ADHD medication, contact your child’s doctor immediately.

Additional monitoring also is advised when treating youth with stimulant medications who have coexisting substance abuse disorders.

# Psychosocial Treatments

## What psychosocial or behavioral treatments can be useful?

Psychosocial (or behavioral) treatment alone, such as social skills training or individual therapies, has not been shown to be as effective as medicine for the core symptoms of ADHD. However, behavioral treatment on its own may be recommended as an initial treatment if the symptoms of ADHD are mild, the diagnosis of ADHD is uncertain, or the family prefers this type of treatment.

Whether or not your child is on medication, behavioral treatment can help manage ADHD symptoms and lessen their impact on your child. One study showed that you may be able to lower your child's medication dosage if behavioral therapy is working well. Many parents find that the best way to learn how to use these techniques is to work with a therapist who has experience in behavior issues. Most doctors recommend that parents and guardians attend parenting classes, particularly those focused on managing children with ADHD.

Teachers also can benefit from using behavioral training techniques. They can set up programs similar to those at home, giving rewards for good behaviors and consequences for unwanted behaviors to help children learn boundaries and how to deal with choices in the school setting.

### Home and School Strategies for Your Child

- Have the same routine every day.
- Organize everyday items.
- Use organizers for homework.
- Keep rules consistent and balanced.

# Unproven Treatments

## Do alternative treatments for ADHD, such as special diets or herbal supplements, really work?

Parents often hear reports of “miracle cures” for ADHD on the television, in magazines, or in advertisements. Before considering *any* treatment for ADHD, find out whether the source of this information is unbiased and whether the claims are valid, and discuss it with your child's doctor. Also keep in mind that there is no known cure for ADHD at this time.

Some of the more prevalent unproven treatments for ADHD are special diets, herbal supplements, homeopathic treatments, vision therapy, chiropractic adjustments, yeast infection treatments, anti-motion-sickness medication, metronome training, auditory stimulation, applied kinesiology (realigning bones in the skull), and brain wave biofeedback.<sup>17</sup>

While it would be wonderful if these treatments worked, rigorous scientific research has not found these alternatives to be effective managing the symptoms of ADHD—and they are definitely not “cures.”

Always tell your child's doctor about any alternative therapies, supplements, or over-the-counter medications that your child is using. They may interact with prescribed medications and hinder your child's progress or compromise your child's safety.

If you plan to try this type of treatment, it is helpful to use the same measures you would use to tell if one of the FDA-approved medications is working. These include behavior rating scales and specific target goals that you set up in consultation with your child's doctor.

## What Does the Future Hold?

It was once thought that most children would outgrow ADHD by their teenage years. We now know this is not true. While some of the symptoms of ADHD can diminish over time,<sup>10</sup> and some children may outgrow the disorder, most children with ADHD will continue to experience some ADHD symptoms during their later years.<sup>9</sup>

For some people, ADHD is a lifelong condition. Almost 50 percent of children with ADHD still have symptoms that require treatment in adulthood.<sup>9</sup> Early diagnosis can help these individuals learn how to manage their symptoms and succeed in life.

*“Once I started ADHD medication, I had the perspective to look back on my life and see why some things I tried had failed.”*

—an adult with ADHD

# For More Information about ADHD

## National Organizations

American Academy of Child and Adolescent Psychiatry (AACAP)  
 3615 Wisconsin Avenue, NW  
 Washington, DC 20016-3007  
 1-202-966-7300  
<http://www.aacap.org>

American Academy of Family Physicians (AAFP)  
 11400 Tomahawk Creek Parkway  
 Leawood, KS 66211-2672  
 1-800-274-2237  
<http://www.aafp.org>

American Academy of Pediatrics (AAP)  
 141 Northwest Point Boulevard  
 Elk Grove Village, IL 60007-1098  
 1-847-434-4000  
<http://www.aap.org>

American Psychiatric Association (APA)  
 1000 Wilson Boulevard, Suite 1825  
 Arlington, VA 22209  
 1-703-907-7300  
<http://www.psych.org>

Attention Deficit Disorder Resources  
 223 Tacoma Avenue, South, #100  
 Tacoma, WA 98402  
 1-253-759-5085  
<http://www.addresources.org>

Centers for Disease Control and Prevention (CDC)  
 1600 Clifton Road  
 Atlanta, GA 30333  
 1-404-639-3311  
<http://www.cdc.gov>

Child & Adolescent Bipolar Foundation  
 1000 Skokie Boulevard, Suite 570  
 Wilmette, Illinois 60091  
 1-847-256-8525  
<http://www.bpkids.org>

Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD)  
 8181 Professional Place, Suite 150  
 Landover, MD 20785  
 1-800-233-4050  
<http://www.chadd.org>

Federation of Families for Children's Mental Health  
 9605 Medical Center Drive, Suite 280  
 Rockville, MD  
 1-240-403-1901  
<http://www.ffcmh.org>

LD OnLine  
 WETA Public Television  
 2775 South Quincy Street  
 Arlington, VA 22206  
<http://www.ldonline.org>

National Association of State Directors of Special Education, Inc. (NASDSE)  
 IDEA Partnership  
 1800 Diagonal Road, Suite 320  
 Alexandria, VA 22314  
 1-877-IDEA-info  
<http://www.ideapartnership.org>

National Dissemination Center for Children with Disabilities (NICHCY)  
 P.O. Box 1492  
 Washington, DC 20013  
 1-800-695-0285  
<http://www.nichcy.org>

National Institute of Mental Health (NIMH)  
 6001 Executive Boulevard  
 Bethesda, MD 20892  
 1-866-615-6464  
<http://www.nimh.nih.gov>

Public Information and Communications Branch  
 National Institute of Mental Health (NIMH)  
 6001 Executive Boulevard, Room 8184, MSC 9663  
 Bethesda, MD 20892-9663  
 1-866-615-6464  
<http://www.nimh.nih.gov>

National Resource Center on AD/HD  
 8181 Professional Place, Suite 150  
 Landover, MD 20785  
 1-800-233-4050  
<http://www.help4adhd.org>

Parent Advocacy Coalition for Educational Rights (PACER Center)  
 8161 Normandale Boulevard  
 Minneapolis, MN 55437  
 1-888-248-0822  
<http://www.pacer.org>

## Fact Sheets about ADHD in English

Children Who Can't Pay Attention

<http://www.aacap.org/page.ww?section=Facts%20for%20Families&name=Children%20Who%20Can't%20Pay%20Attention/ADHD>

What We Know

<http://www.help4adhd.org/en/about/wwk>

The Disorder Named ADHD

<http://www.help4adhd.org/documents/WWK1.pdf>

Parenting a Child with AD/HD

<http://www.help4adhd.org/documents/WWK2.pdf>

Managing Medication for Children and Adolescents with AD/HD

<http://www.help4adhd.org/documents/WWK3.pdf>

<http://www.help4adhd.org/documents/WWK3s.pdf> (short version)

Educational Rights for Children with AD/HD

<http://www.help4adhd.org/documents/WWK4.pdf>

AD/HD and Co-Existing Disorders

<http://www.help4adhd.org/documents/WWK5.pdf>

AD/HD and Coexisting Conditions: Tics and Tourette Syndrome

<http://www.help4adhd.org/documents/WWK5a1.pdf>

AD/HD and Coexisting Conditions: Disruptive Behavior Disorders

<http://www.help4adhd.org/documents/WWK5b3.pdf>

AD/HD and Coexisting Conditions: Depression

<http://www.help4adhd.org/documents/WWK5c.pdf>

Complementary and Alternative Treatments

<http://www.help4adhd.org/documents/WWK6.pdf>

Deciding on a Treatment for AD/HD (short version)

<http://www.help4adhd.org/documents/WWK6s.pdf>

Psychosocial Treatment for Children and Adolescents with AD/HD

<http://www.help4adhd.org/documents/WWK7.pdf>

Behavioral Treatment for Children and Teenagers with AD/HD  
<http://www.help4adhd.org/documents/WWK7s.pdf>

AD/HD Predominantly Inattentive Type  
<http://www.help4adhd.org/documents/WWK8.pdf>

Medication Diversion  
<http://www.help4adhd.org/en/living/parenting/diversion>

## Fact Sheets about ADHD in Spanish

Hoja de Datos de CHADD  
 Spanish-Language Fact Sheets  
<http://www.help4adhd.org/espanol.cfm>

El Trastorno Llamado TDA/H  
<http://209.126.179.236/fs/sfs1.htm>

Criando a un niño con el Trastorno por Déficit de Atención e Hiperactividad  
<http://209.126.179.236/fs/sfs2.htm>

Manejo médico de los niños y adultos con el TDA/H  
<http://209.126.179.236/fs/sfs3.htm>

Derechos educacionales de los niños con el TDA/H  
<http://209.126.179.236/fs/sfs4.htm>

TDA/H y Trastornos Coexistentes  
<http://209.126.179.236/fs/sfs5.htm>

Evaluando las Intervenciones Complementarias y/o Controvertibles  
<http://209.126.179.236/fs/sfs6.htm>

Educational Rights for Children with Attention-Deficit/Hyperactivity Disorder:  
 A Primer for Parents (1996)—free bilingual booklet  
<http://www.help4adhd.org/pr060106.cfm>

## Recommended Reading for Children

*Learning To Slow Down & Pay Attention: A Book for Kids About ADHD* (2004)  
 Kathleen G. Nadeau, Ellen B. Dixon, and Charles Beyl

*Jumpin' Johnny Get Back to Work! A Child's Guide to ADHD/Hyperactivity* (1991)  
 Michael Gordon

*The Survival Guide for Kids with ADD or ADHD* (2006)  
 John F. Taylor



*Joey Pigza Loses Control* (2005)  
Jack Gantos

*50 Activities and Games for Kids with ADHD* (2000)  
Patricia O. Quinn (Editor)

*The Girls' Guide To AD/HD: Don't Lose This Book!* (2004)  
Beth Walker

## **Recommended Reading for Adults**

*Taking Charge of ADHD: The Complete, Authoritative Guide for Parents*  
(revised edition) (2000)  
Russell Barkley

*Raising Resilient Children: Fostering Strength, Hope, and Optimism in Your Child* (2002)  
Robert Brooks and Sam Goldstein

*Attention Deficit Disorder: The Unfocused Mind in Children and Adults* (2006)  
Tom Brown

*Teenagers with ADD and ADHD: A Guide for Parents and Professionals*  
(revised edition) (2006)  
Chris Dendy

*A Bird's-Eye View of Life with ADD and ADHD: Advice from Young Survivors* (2003)  
Chris Dendy and Alex Dendy

*Making the System Work for Your Child with ADHD* (2004)  
Peter Jensen

*Practical Suggestions for AD/HD* (2003)  
Clare Jones

*Kids in the Syndrome Mix of ADHD, LD, Asperger's, Tourette's, Bipolar, and More!*  
*The One-Stop Guide for Parents, Teachers, and Other Professionals* (2005)  
Martin Kutscher, Tony Attwood, and Robert Wolff

*Help4ADD@High School* (1998)  
Kathleen Nadeau

*Putting on the Brakes: Young People's Guide to Understanding Attention Deficit  
Hyperactivity Disorder* (2001)  
Patricia Quinn and Judith Stern

*The ADHD Book of Lists: A Practical Guide for Helping Children and Teens with Attention  
Deficit Disorders* (2003)  
Sandra Rief

*Parenting Children with ADHD: 10 Lessons That Medicine Cannot Teach*  
(APA Lifetools) (paperback) (2004)  
Vincent J. Monastra, Ph.D.

*Straight Talk About Psychiatric Medications for Kids* (revised edition)  
(paperback) (2004)  
Timothy E. Wilens, M.D.

*The Gift of ADHD: How to Transform Your Child's Problems into Strengths* (paperback) (2005)  
Lara Honos-Webb

*Twelve Effective Ways to Help Your ADD/ADHD Child: Drug-Free Alternatives for Attention-Deficit Disorders* (paperback) (2000)  
Laura J. Stevens

*Thom Hartmann's Complete Guide to ADHD: Help for Your Family at Home, School and Work* (paperback) (2000)  
Thom Hartmann, Lucy Jo Palladino (Foreword), and Peter Jaksa (Afterword)

*ADD & ADHD Answer Book: The Top 275 Questions Parents Ask*  
(paperback) (2005)  
Susan Ashley

## **Contributors**

American Academy of Child and Adolescent Psychiatry (AACAP)

American Psychiatric Association (APA)

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

Child and Adolescent Bipolar Foundation

Federation of Families for Children's Mental Health

Mental Health America

National Alliance on Mental Illness (NAMI)

National Institute of Mental Health (NIMH)

## Endnotes

- <sup>1</sup> Available at: <http://www.nimh.nih.gov/publicat/adhd.cfm#intro>. Accessed 4/12/07.
- <sup>2</sup> Available at: <http://www.fda.gov/bbs/topics/NEWS/2007/NEW01568.html>. Accessed 3/12/07.
- <sup>3</sup> American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV-TR)*. Washington, DC: American Psychiatric Association, 2004.
- <sup>4</sup> Faraone SV, Perlis RH, Doyle AE, Smoller JW, Goralnick JJ, Holmgren MA, Sklar P, Molecular genetics of attention-deficit/hyperactivity disorder. *Biol Psychiatry* 2005;57:1313–1323.
- <sup>5</sup> WebMD Health News. ADHD in girls may often go undiagnosed. Available at: <http://www.medscape.com/viewarticle/517925>. Accessed 2/13/07.
- <sup>6</sup> Psychiatric Times. Overcoming the specter of overdiagnoses. Available at: <http://www.psychiatristimes.com/p020801b.html>. Accessed 2/13/07.
- <sup>7</sup> Available at: <http://www.nimh.nih.gov/childhp/mtaqa.cfm>. Accessed 2/10/07.
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- <sup>9</sup> American Academy of Child and Adolescent Psychiatry, Practice parameter for the assessment and treatment of children, adolescents, and adults with attention-deficit/hyperactivity disorder. *J Am Acad Child Adolesc Psychiatry* 2007;46(7):894-921.
- <sup>10</sup> Goldman LS, Genel M, Bezman RJ, Slanetz PJ, Diagnosis and treatment of attention-deficit/hyperactivity disorder in children and adolescents. Council on Scientific Affairs. *JAMA* 1998;279:1100–1107.
- <sup>11</sup> U.S. Department of Transportation National Highway Traffic Safety Administration, Study shows that young adults diagnosed with severe attention deficit hyperactivity disorder as children have more driving risks. *Traffic Tech* 1996;131.
- <sup>12</sup> Available at: [http://www.drugabuse.gov/NIDA\\_Notes/NNVol14N4/ADHD.html](http://www.drugabuse.gov/NIDA_Notes/NNVol14N4/ADHD.html). Accessed 2/22/07.
- <sup>13</sup> Available at: <http://www.fda.gov/medwatch/safety/2006/safety06.htm#Dexedrine>. Accessed 2/12/07.
- <sup>14</sup> Available at: <http://www.fda.gov/bbs/topics/NEWS/2005/NEW01237.html>. Accessed 2/12/07.
- <sup>15</sup> Available at: <http://www.hhs.gov/ocr/504.html>. Accessed 4/29/07.
- <sup>16</sup> Available at: <http://www.ed.gov/about/offices/list/ocr/docs/edlite-FAPE504.html>. Accessed 4/29/07.
- <sup>17</sup> Available at: <http://www.aap.org/healthtopics/adhd.cfm>. Accessed 4/12/07.