

# Attention Deficit Hyperactivity Disorder: Module 3

The information in this training module was taken from an online article by the **National Institute of Mental Health**. (<http://www.nimh.nih.gov/health/publications/adhd/complete-publication.shtml>)

## Objectives:

- Caregiver will be able to describe the treatment options.
- Caregiver will be able to describe the side effects of medications most often used with ADHD.
- Caregiver will be able to list interventions for the ADHD child and the child's family.
- Caregiver will be able to give reasons why the parent can be the child's best advocate.

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## The Treatment of ADHD

Every family wants to determine what treatment will be most effective for their child. This question needs to be answered by each family in consultation with their health care professional. To help families make this important decision, the National Institute of Mental Health (NIMH) has funded many studies of treatments for ADHD and has conducted the most intensive study ever undertaken for evaluating the treatment of this disorder. This study is known as the Multimodal Treatment Study of Children with Attention Deficit Hyperactivity Disorder (MTA).<sup>12</sup> The NIMH is now conducting a clinical trial for younger children ages 3 to 5.5 years (Treatment of ADHD in Preschool-Age Children).

### The Multimodal Treatment Study of Children with Attention Deficit Hyperactivity Disorder

The MTA study included 579 (95-98 at each of 6 treatment sites) elementary school boys and girls with ADHD, who were randomly assigned to one of four treatment programs: (1) medication management alone; (2) behavioral treatment alone; (3) a combination of both; or (4) routine community care. In each of the study sites, three groups were treated for the first 14 months in a specified protocol and the fourth group was referred for community treatment of the parents' choosing. All of the children were reassessed regularly throughout the

study period. An essential part of the program was the cooperation of the schools, including principals and teachers. Both teachers and parents rated the children on hyperactivity, impulsivity, and inattention, and symptoms of anxiety and depression, as well as social skills.

The children in two groups (medication management alone and the combination treatment) were seen monthly for one-half hour at each medication visit. During the treatment visits, the prescribing physician spoke with the parent, met with the child, and sought to determine any concerns that the family might have regarding the medication or the child's ADHD-related difficulties. The physicians, in addition, sought input from the teachers on a monthly basis. The physicians in the medication-only group did not provide behavioral therapy but did advise the parents when necessary concerning any problems the child might have.

In the behavior treatment-only group, families met up to 35 times with a behavior therapist, mostly in group sessions. These therapists also made repeated visits to schools to consult with children's teachers and to supervise a special aide assigned to each child in the group. In addition, children attended a special 8-week summer treatment program where they worked on academic, social, and sports skills, and where intensive behavioral therapy was delivered to assist children in improving their behavior.

Children in the combined therapy group received both treatments, that is, all the same assistance that the medication-only received, as well as all of the behavior therapy treatments.

In routine community care, the children saw the community-treatment doctor of their parents' choice one to two times per year for short periods of time. Also, the community-treatment doctor did not have any interaction with the teachers.

The results of the study indicated that long-term combination treatments and the medication-management alone were superior to intensive behavioral treatment and routine community treatment. And in some areas—anxiety, academic performance, oppositionality, parent-child relations, and social skills—the combined treatment was usually superior. Another advantage of combined treatment was that children could be successfully treated with lower doses of medicine, compared with the medication-only group.

### **Treatment of Attention Deficit Hyperactivity Disorder in Preschool-Age Children (PATS)**

Because many children in the preschool years are diagnosed with ADHD and are given medication, it is important to know the safety and efficacy of such treatment. The NIMH is sponsoring an ongoing multi-site study, "Preschool ADHD Treatment Study" (PATS). It is the first major effort to examine the safety and efficacy of a stimulant, methylphenidate, for ADHD in this age group. The PATS study uses a randomized, placebo-controlled, double-blind design.

Children ages 3 to 5 who have severe and persistent symptoms of ADHD that impair their functioning are eligible for this study. To avoid using medications at such an early age, all children who enter the study are first treated with behavioral therapy. Only children who do not show sufficient improvement with behavior therapy are considered for the medication part of the study. The study is being conducted at New York State Psychiatric Institute, Duke University, Johns Hopkins University, New York University, the University of California at Los Angeles, and the University of California at Irvine. Enrollment in the study will total 165 children.

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### Test Questions:

#### 1. *In the MTA study*

- a.  only mental health professionals rated the children on hyperactivity, impulsivity, and inattention, and symptoms of anxiety and depression, as well as social skills.
- b.  parents rated the children on hyperactivity, impulsivity, and inattention, and symptoms of anxiety and depression, as well as social skills.
- c.  both teachers and parents rated the children on hyperactivity, impulsivity, and inattention, and symptoms of anxiety and depression, as well as social skills.
- d.  teachers rated the children on hyperactivity, impulsivity, and inattention, and symptoms of anxiety and depression, as well as social skills.

#### 2. *The results of the MTA study indicated*

- a.  that long-term combination treatments and the medication-management alone were superior to intensive behavioral treatment and routine community treatment.
  - b.  that long-term combination treatments was superior to intensive behavioral treatment, medication-management alone, and routine community treatment.
  - c.  that medication-management alone were superior to that long-term combination treatments, intensive behavioral treatment, and routine community treatment.
  - d.  all the treatment methods were equally as successful.
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## Which Treatment Should My Child Have?

For children with ADHD, no single treatment is the answer for every child. A child may sometimes have undesirable side effects to a medication that would make that particular treatment unacceptable. And if a child with ADHD also has anxiety or depression, a treatment combining medication and behavioral therapy might be best. Each child's needs and personal history must be carefully considered.

### Medications

For decades, medications have been used to treat the symptoms of ADHD.

The medications that seem to be the most effective are a class of drugs known as stimulants. Following is a list of the stimulants, their trade (or brand) names, and their generic names. "Approved age" means that the drug has been tested and found safe and effective in children of that age.

Trade Name	Generic Name	Approved Age
Adderall	amphetamine	3 and older
Concerta	methylphenidate (long acting)	6 and older
Cylert*	pemoline	6 and older
Dexedrine	dextroamphetamine	3 and older
Dextrostat	dextroamphetamine	3 and older
Focalin	dexmethylphenidate	6 and older
Metadate ER	methylphenidate (extended release)	6 and older
Metadate CD	methylphenidate (extended release)	6 and older
Ritalin	methylphenidate	6 and older
Ritalin SR	methylphenidate	6 and older

	(extended release)	
Ritalin LA	methylphenidate (long acting)	6 and older
*Because of its potential for serious side effects affecting the liver, Cylert should not ordinarily be considered as first-line drug therapy for ADHD.		

The U.S. Food and Drug Administration (FDA) recently approved a medication for ADHD that is not a stimulant. The medication, Strattera®, or atomoxetine, works on the neurotransmitter norepinephrine, whereas the stimulants primarily work on dopamine. Both of these neurotransmitters are believed to play a role in ADHD. More studies will need to be done to contrast Strattera with the medications already available, but the evidence to date indicates that over 70 percent of children with ADHD given Strattera manifest significant improvement in their symptoms.

Some people get better results from one medication, some from another. It is important to work with the prescribing physician to find the right medication and the right dosage. For many people, the stimulants dramatically reduce their hyperactivity and impulsivity and improve their ability to focus, work, and learn. The medications may also improve physical coordination, such as that needed in handwriting and in sports.

The stimulant drugs, when used with medical supervision, are usually considered quite safe. Stimulants do not make the child feel “high,” although some children say they feel different or funny. Such changes are usually very minor. Although some parents worry that their child may become addicted to the medication, to date there is no convincing evidence that stimulant medications, when used for treatment of ADHD, cause drug abuse or dependence. A review of all long-term studies on stimulant medication and substance abuse, conducted by researchers at Massachusetts General Hospital and Harvard Medical School, found that teenagers with ADHD who remained on their medication during the teen years had a lower likelihood of substance use or abuse than did ADHD adolescents who were not taking medications.<sup>13</sup>

The stimulant drugs come in long- and short-term forms. The newer sustained-release stimulants can be taken before school and are long-lasting so that the child does not need to go to the school nurse every day for a pill. The doctor can discuss with the parents the child’s needs and decide which preparation to use and whether the child needs to take the medicine during school hours only or in the evening and on weekends too.

If the child does not show symptom improvement after taking a medication for a week, the doctor may try adjusting the dosage. If there is still no improvement, the child may be switched to another medication. About one out of ten children is not helped by a stimulant medication. Other types of medication may be used if stimulants don't work or if the ADHD occurs with another disorder. Antidepressants and other medications can help control accompanying depression or anxiety.

Sometimes the doctor may prescribe for a young child a medication that has been approved by the FDA for use in adults or older children. This use of the medication is called "off label." Many of the newer medications that are proving helpful for child mental disorders are prescribed off label because only a few of them have been systematically studied for safety and efficacy in children. Medications that have not undergone such testing are dispensed with the statement that "safety and efficacy have not been established in pediatric patients."

### **Side Effects of the Medications**

Most side effects of the stimulant medications are minor and are usually related to the dosage of the medication being taken. Higher doses produce more side effects. The most common side effects are decreased appetite, insomnia, increased anxiety, and/or irritability. Some children report mild stomach aches or headaches.

Appetite seems to fluctuate, usually being low during the middle of the day and more normal by suppertime. Adequate amounts of food that is nutritional should be available for the child, especially at peak appetite times.

If the child has difficulty falling asleep, several options may be tried—a lower dosage of the stimulant, giving the stimulant earlier in the day, discontinuing the afternoon or evening dosage, or giving an adjunct medication such as a low-dosage antidepressant or clonidine. A few children develop tics during treatment. These can often be lessened by changing the medication dosage. A very few children cannot tolerate any stimulant, no matter how low the dosage. In such cases, the child is often given an antidepressant instead of the stimulant.

When a child's schoolwork and behavior improve soon after starting medication, the child, parents, and teachers tend to applaud the drug for causing the sudden changes. Unfortunately, when people see such immediate improvement, they often think medication is all that's needed. But medications don't cure ADHD; they only control the symptoms on the day they are taken. Although the medications help the child pay better attention and complete school work, they can't increase knowledge or improve academic skills. The medications help the child to use those skills he or she already possesses.

Behavioral therapy, emotional counseling, and practical support will help ADHD children cope with everyday problems and feel better about themselves.

### **Facts to Remember About Medication for ADHD**

- Medications for ADHD help many children focus and be more successful at school, home, and play. Avoiding negative experiences now may actually help prevent addictions and other emotional problems later.
- About 80 percent of children who need medication for ADHD still need it as teenagers. Over 50 percent need medication as adults.

### **Medication for the Child with Both ADHD and Bipolar Disorder**

Since a child with bipolar disorder will probably be prescribed a mood stabilizer such as lithium or Depakote®, the doctor will carefully consider whether the child should take one of the medications usually prescribed for ADHD. If a stimulant medication is prescribed, it may be given in a lower dosage than usual.

## **The Family and the ADHD Child**

Medication can help the ADHD child in everyday life. He or she may be better able to control some of the behavior problems that have led to trouble with parents and siblings. But it takes time to undo the frustration, blame, and anger that may have gone on for so long. Both parents and children may need special help to develop techniques for managing the patterns of behavior. In such cases, mental health professionals can counsel the child and the family, helping them to develop new skills, attitudes, and ways of relating to each other. In individual counseling, the therapist helps children with ADHD learn to feel better about themselves. The therapist can also help them to identify and build on their strengths, cope with daily problems, and control their attention and aggression. Sometimes only the child with ADHD needs counseling support. But in many cases, because the problem affects the family as a whole, the entire family may need help. The therapist assists the family in finding better ways to handle the disruptive behaviors and promote change. If the child is young, most of the therapist's work is with the parents, teaching them techniques for coping with and improving their child's behavior.

Several intervention approaches are available. Knowing something about the various types of interventions makes it easier for families to choose a therapist that is right for their needs.

**Psychotherapy** works to help people with ADHD to like and accept themselves despite their disorder. It does not address the symptoms or underlying causes of the disorder. In psychotherapy, patients talk with the therapist about upsetting thoughts and feelings, explore self-defeating patterns of behavior, and learn

alternative ways to handle their emotions. As they talk, the therapist tries to help them understand how they can change or better cope with their disorder.

**Behavioral therapy (BT)** helps people develop more effective ways to work on immediate issues. Rather than helping the child understand his or her feelings and actions, it helps directly in changing their thinking and coping and thus may lead to changes in behavior. The support might be practical assistance, like help in organizing tasks or schoolwork or dealing with emotionally charged events. Or the support might be in self-monitoring one's own behavior and giving self-praise or rewards for acting in a desired way such as controlling anger or thinking before acting.

**Social skills training** can also help children learn new behaviors. In social skills training, the therapist discusses and models appropriate behaviors important in developing and maintaining social relationships, like waiting for a turn, sharing toys, asking for help, or responding to teasing, then gives children a chance to practice. For example, a child might learn to "read" other people's facial expression and tone of voice in order to respond appropriately. Social skills training helps the child to develop better ways to play and work with other children.

**Support groups** help parents connect with other people who have similar problems and concerns with their ADHD children. Members of support groups often meet on a regular basis (such as monthly) to hear lectures from experts on ADHD, share frustrations and successes, and obtain referrals to qualified specialists and information about what works. There is strength in numbers, and sharing experiences with others who have similar problems helps people know that they aren't alone. National organizations are listed at the end of this document.

**Parenting skills training**, offered by therapists or in special classes, gives parents tools and techniques for managing their child's behavior. One such technique is the use of token or point systems for immediately rewarding good behavior or work. Another is the use of "time-out" or isolation to a chair or bedroom when the child becomes too unruly or out of control. During time-outs, the child is removed from the agitating situation and sits alone quietly for a short time to calm down. Parents may also be taught to give the child "quality time" each day, in which they share a pleasurable or relaxing activity. During this time together, the parent looks for opportunities to notice and point out what the child does well, and praise his or her strengths and abilities.

This system of rewards and penalties can be an effective way to modify a child's behavior. The parents (or teacher) identify a few desirable behaviors that they want to encourage in the child—such as asking for a toy instead of grabbing it, or completing a simple task. The child is told exactly what is expected in order to earn the reward. The child receives the reward when he performs the desired behavior and a mild penalty when he doesn't. A reward can be small, perhaps a

token that can be exchanged for special privileges, but it should be something the child wants and is eager to earn. The penalty might be removal of a token or a brief time-out. *Make an effort to find your child being good.* The goal, over time, is to help children learn to control their own behavior and to choose the more desired behavior. The technique works well with all children, although children with ADHD may need more frequent rewards.

In addition, parents may learn to structure situations in ways that will allow their child to succeed. This may include allowing only one or two playmates at a time, so that their child doesn't get overstimulated. Or if their child has trouble completing tasks, they may learn to help the child divide a large task into small steps, then praise the child as each step is completed. Regardless of the specific technique parents may use to modify their child's behavior, some general principles appear to be useful for most children with ADHD. These include providing more frequent and immediate feedback (including rewards and punishment), setting up more structure in advance of potential problem situations, and providing greater supervision and encouragement to children with ADHD in relatively unrewarding or tedious situations.

Parents may also learn to use stress management methods, such as meditation, relaxation techniques, and exercise, to increase their own tolerance for frustration so that they can respond more calmly to their child's behavior.

## Some Simple Behavioral Interventions

Children with ADHD may need help in organizing. Therefore:

- **Schedule.** Have the same routine every day, from wake-up time to bedtime. The schedule should include homework time and playtime (including outdoor recreation and indoor activities such as computer games). Have the schedule on the refrigerator or a bulletin board in the kitchen. If a schedule change must be made, make it as far in advance as possible.
- **Organize needed everyday items.** Have a place for everything and keep everything in its place. This includes clothing, backpacks, and school supplies.
- **Use homework and notebook organizers.** Stress the importance of writing down assignments and bringing home needed books.

Children with ADHD need consistent rules that they can understand and follow. If rules are followed, give small rewards. Children with ADHD often receive, and expect, criticism. Look for good behavior and praise it.

## Your ADHD Child and School

**You are your child's best advocate.** To be a good advocate for your child, learn as much as you can about ADHD and how it affects your child at home, in school, and in social situations.

If your child has shown symptoms of ADHD from an early age and has been evaluated, diagnosed, and treated with either behavior modification or medication or a combination of both, when your child enters the school system, let his or her teachers know. They will be better prepared to help the child come into this new world away from home.

If your child enters school and experiences difficulties that lead you to suspect that he or she has ADHD, you can either seek the services of an outside professional or you can ask the local school district to conduct an evaluation. Some parents prefer to go to a professional of their own choice. But it is the school's obligation to evaluate children that they suspect have ADHD or some other disability that is affecting not only their academic work but their interactions with classmates and teachers.

If you feel that your child has ADHD and isn't learning in school as he or she should, you should find out just who in the school system you should contact. Your child's teacher should be able to help you with this information. Then you can request—in writing—that the school system evaluate your child. The letter should include the date, your and your child's names, and the reason for requesting an evaluation. Keep a copy of the letter in your own files.

Until the last few years, many school systems were reluctant to evaluate a child with ADHD. But recent laws have made clear the school's obligation to the child suspected of having ADHD that is affecting adversely his or her performance in school. If the school persists in refusing to evaluate your child, you can either get a private evaluation or enlist some help in negotiating with the school. Help is often as close as a local parent group. Each state has a Parent Training and Information (PTI) center as well as a Protection and Advocacy (P&A) agency. (For information on the law and on the PTI and P&A, see the section on support groups and organizations at the end of this document.)

Once your child has been diagnosed with ADHD and qualifies for special education services, the school, working with you, must assess the child's strengths and weaknesses and design an Individualized Educational Program (IEP). You should be able periodically to review and approve your child's IEP. Each school year brings a new teacher and new schoolwork, a transition that can be quite difficult for the child with ADHD. Your child needs lots of support and encouragement at this time.

Never forget the cardinal rule—**you are your child's best advocate.**

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### Test Questions:

**3. Stimulants do not make the child feel “high,” although some children say they feel different or funny.**

True     False

**4. About one out of five children is not helped by a stimulant medication.**

True     False

**5. Medications don’t cure ADHD; they only control the symptoms on the day they are taken.**

True     False

**6. If the child is young, most of the therapist’s work is with the parents, teaching them techniques for coping with and improving their child’s behavior.**

True     False

**7. Behavioral Therapy helps directly in changing thinking and coping and thus may lead to changes in behavior.**

True     False

**8. Once a child has been diagnosed with ADHD and qualifies for special education services, the school, working with the parent or guardian, must assess the child’s strengths and weaknesses and design an Individualized Educational Program.**

True     False

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