
101 WAYS TO HELP CHILDREN WITH ADD LEARN:

Tips from Successful Teachers

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101 WAYS TO HELP CHILDREN WITH ADD LEARN:

Tips from Successful Teachers

Research shows there are an estimated 3 to 5 percent of school-age children with Attention Deficit Disorder. In response to the needs expressed by teachers for teaching strategies that work with these children, the U.S. Department of Education has supported research in classrooms to determine successful teaching techniques employed by elementary school teachers to keep children focused and on task. The following tips, for experienced and inexperienced elementary school teachers alike, are tried and true methods for reaching children with ADD.

Children with ADD typically have problems with inattention, impulsiveness, and hyperactivity. They often have difficulty paying attention in class and seem to shift aimlessly from one unfinished activity to another. These children generally appear restless, fidgeting constantly in their seats, playing with pencils or other objects, or disturbing nearby students. Many children with ADD also have difficulty following their teachers' instructions or forming friendships with other children in the class.

Like other children with disabilities, children with ADD learn best when their teachers understand their special needs and individualize their educational program to meet these needs.

101 Ways To Help Children with ADD Learn is a how-to guide with instructional practices you can use to help children with ADD in your class. The practices themselves should be part of an educational program based around three key components—classroom accommodations, behavior management, and individualized academic instruction.

To make this book as valuable a resource as possible, you should consider these steps in de-

veloping an effective educational program for your students with ADD:

- **Evaluate the Child's Individual Needs.** Assess the unique educational needs of a child with ADD in your class. Working with a multi-disciplinary team, consider both academic and behavioral needs, using formal diagnostic assessments and informal classroom observations.
- **Select Appropriate Instructional Practices.** Determine which instructional practices will meet the academic and behavioral needs you have identified for the child. Select practices that fit the content, are age appropriate, and gain the cooperation of the child.
- **Integrate Appropriate Practices Within an Individualized Program.** Combine the practices you have selected into an individualized educational program. Plan how to integrate the educational activities provided to other children in your class with those selected for the child with ADD.

Because no two children with ADD are alike, no single educational program, practice, or setting will be best for all children.

ADD: What Teachers Should Know, which is also in the information kit, describes ways in which effective teachers have individualized educational programs for children with ADD in their classes. Illustrated with real-life stories of effective educational practices for 12 children with ADD, these ideas can guide you in determining how best to design and implement an effective program for children with ADD in your class.

Academic Instruction

Children with ADD often have difficulty learning and achieving academically in school. Effective teachers constantly monitor the child and adapt and individualize academic instruction.

General Instructional Principles

Effective teachers help prepare their students to learn when they introduce, conduct, and conclude each academic lesson. These principles of effective instruction, which reflect what we know about how to educate all children in the class, will especially help a child with ADD to stay focused on his assigned tasks as he transitions from one lesson to another throughout the school day.

Students with ADD benefit from clear statements about their teacher's expectations at the beginning of the lesson. Consider these strategies.

1. **Review Previous Lessons.** Review information about previous lesson on this topic. For example, remind children that yesterday's lesson focused on learning how to regroup in subtraction. Review several problems before describing the current lesson.
2. **Set Learning Expectations.** State what students are expected to learn during the lesson. For example, explain to students that a language arts lesson will involve reading a story about Paul Bunyan and identifying new vocabulary words in the story.
3. **Set Behavioral Expectations.** Describe how students are expected to behave during the lesson. For example, tell children that they may talk quietly to their neighbors as they work on a seatwork assignment or raise their hands to get your attention.
4. **State Needed Materials.** Identify all materials that the child will need during the lesson. For example, specify that children need their journals and pencils

for journal writing or their crayons, scissors, and colored paper for an art project; rather than leaving children to figure out on their own the materials required for a lesson.

5. **Explain Additional Resources.** Tell students how to obtain help in mastering the lesson. For example, remind the children to refer to a particular page in the text book to get help in completing a worksheet.

When conducting an academic lesson, effective teachers use some of the following strategies.

6. **Use Audio-visual Materials.** Use a variety of audio-visual materials to present academic lessons. For example, use an overhead projector to demonstrate how to solve an addition problem requiring regrouping. The students can work on the problem at their desks, while you manipulate counters on the projector screen.
7. **Check Student Performance.** Question individual students about their mastery of the lesson. For example, you can ask a student doing seatwork to demonstrate how he or she arrived at the answer to a problem or ask individual students to state, in their own words, how the main character felt at the end of the story.
8. **Ask Probing Questions.** Probe for the correct answer before calling on another student and allow children sufficient time to work out the answer to a question. Count at least 15 seconds before giving the answer and ask follow-up questions that give the child an opportunity to demonstrate what he or she knows.

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9. Perform On-going Student Evaluation. Identify students who need additional assistance. Watch for signs of lack of comprehension, such as day-dreaming or visual or verbal indications of frustration. Provide these children with extra explanation or ask another student to serve as a peer tutor for the lesson.

10. Help Students Self-Correct Their Own Mistakes. Describe how students can identify and correct their own mistakes. For example, remind students that they should check their calculations in mathematics problems and reiterate how they can do that; remind students of particularly difficult spelling rules and how students can watch out for "easy-to-make" errors.

11. Focus Dawdling Students. Remind students who dawdle to keep working and redirect these students to focus on their assigned task. For example, you can provide follow-up directions or assign learning partners. These practices can be directed at individual children or at the entire class.

12. Lower Noise Level. Monitor the noise level in the classroom and provide corrective feedback, as needed. If the noise level exceeds the level appropriate for the type of lesson, remind all students -- or individual students -- about the behavior rules stated at the beginning of the lesson.

Students with ADD often have difficulty refocusing their attention as they end one academic lesson and move on to the next lesson. Effective teachers help their students prepare for these transitions when concluding a lesson.

13. Provide Advance Warnings. Provide advance warning that a lesson is about to end. Announce five or ten minutes prior to the end of the lesson (particularly for seatwork and group projects)

how much time remains. You may also want to tell students at the beginning of the lesson how much time they will have to complete it.

14. Check Assignments. Check completed assignments for at least some students. Review with some students what they have learned during the lessons, to get a sense of how ready the class was for the lesson and how to plan the next lesson.

15. Preview the Next Lesson. Instruct students how to begin preparing for the next lesson. For example, inform children that they need to put away their textbooks and come to the front of the room for a large group spelling lesson.

Individualized Instructional Practices

Effective teachers individualize their instructional practices based on the needs of their students in different academic subjects. Students have different ways of getting information, not all of which involve traditional reading and listening. Individualized lessons in language arts, mathematics, and organizational skills benefit not only children with ADD, but also other children who have diverse learning needs.

Language Arts Reading Comprehension

To help children with ADD who are poor readers improve their reading comprehension skills, try the following instructional practices:

16. Silent Reading Time. Establish a fixed time each day for silent reading (e.g., DEAR: Drop Everything And Read).

17. Follow-Along Reading. Ask the child to read a story silently while listening to other students or the teacher read the story out loud to the entire class.

18. Partner Reading Activities. Pair the child with ADD with another student

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partner who is a strong reader. The partners take turns reading orally and listening to each other.

19. **Storyboards.** Ask the child to make storyboards that illustrate the sequence of main events in a story.
20. **Storytelling.** Schedule "storytelling" sessions where the child can retell a story he or she has read recently.
21. **Play-acting.** Schedule "play-acting" sessions where the child can role play different characters in a favorite story.
22. **Word Bank.** Keep a word bank or dictionary of new or "hard-to-read" sight vocabulary words.
23. **Board Games for Reading Comprehension.** Play board games that provide practice with target reading comprehension skills or sight vocabulary words.
24. **Computer Games for Reading Comprehension.** Schedule computer time for the child to have "drill-and-practice" with sight vocabulary words.

Phonics and Grammar

To help children with ADD master phonics and grammar rules, the following are effective:

25. **Mnemonics for Phonics and Grammar.** Teach the child mnemonics that provide reminders about hard-to-learn grammatical rules such as (a) correct punctuation, (b) irregular verb tenses, and (c) correct capitalization.
26. **Word Families.** Teach the child to recognize and read word families that illustrate particular phonetic concepts (e.g., "ph" sounds).
27. **"Everyday" Examples of Grammar Rules.** Take advantage of naturally occurring events to teach grammar rules

skills in the context of everyday life. For example, ask a boy and a girl who are reading a story together questions about the proper use of male and female pronouns.

28. **Board Games for Phonics and Grammar.** Play board games that practice phonetically irregular words.
29. **Computer Games for Phonics and Grammar.** Use a computer to provide opportunities to have "drill-and-practice" with phonics or grammar lessons.
30. **Structured Programs for Phonics and Grammar.** Teach phonics and grammar skills through a structured program such as Sandy Rief's *Simply Phonics* program.

In composing stories or other writing assignments, children with ADD benefit from the following practices:

31. **Standards for Writing Assignments.** Identify and teach the child classroom-wide standards for acceptable written work.
32. **Recognizing Parts of a Story.** Teach the student how to describe the major parts of a story (e.g., plot, main characters, setting, conflict, and resolution).
33. **Post Office.** Establish a "post office" in the classroom and provide students with opportunities to write, mail, and receive letters to and from their classmates and teacher.
34. **Visualizing Compositions.** Ask the child to close his or her eyes and visualize a paragraph that the teacher reads aloud. Another variation of this technique is to ask a student to describe a recent event while the other students have their eyes closed.

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- 35. Proofreading Compositions.** Require that the child proofread his or her work before turning in written assignments. Provide the child with a list of items to check when proofreading his or her own work.

To help children with ADD who are poor spellers master their spelling lessons, the following have been found to be helpful:

- 36. Teaching Frequently Used Spelling Words.** Assign spelling words that the child routinely uses in his or her speech each day.
- 37. Creating a Dictionary of Misspelled Words.** Ask the child to keep a personal dictionary of frequently misspelled words.
- 38. Using Partner Spelling Activities.** Pair the child with another student. Ask the partners to quiz each other about how to spell new words. Encourage both students to guess the correct spelling.
- 39. Working with Manipulatives.** Use cut out letters or other manipulatives to spell out hard-to-learn words.
- 40. Using Color-Coded Letters.** Color code different letters in "hard-to-spell" words (e.g., receipt).
- 41. Using Movement Activities.** Combine movement activities with spelling lessons (e.g., jump rope while spelling words out loud).
- 42. Using "Everyday" Examples of Hard-to-Spell Words.** Take advantage of naturally occurring events to teach difficult spelling words in context. For example, ask a child eating a cheese sandwich to spell "sandwich."

Handwriting

Students with ADD who have difficulty with manuscript or cursive writing benefit from these instructional practices.

- 43. Individual Chalkboards.** Ask the child to practice copying and erasing the target words on a small, individual chalkboard. Two children can be paired to practice their target words together.
- 44. Quiet Places for Handwriting.** Provide the child with a special "quiet place" (e.g., on a table outside the classroom) to complete his or her handwriting assignments.
- 45. Spacing Words on a Page.** Teach the child to use his or her finger to measure how much space to leave between each word in a written assignment.
- 46. Special Writing Paper.** Ask the child to use special paper with vertical lines to learn to space letters and words on a page.
- 47. Tape Recorders.** Ask the student to dictate writing assignments into a tape recorder.
- 48. Dictating Writing Assignments.** Have the teacher or another student write down a story told by a child with ADD.
- 49. Structured Programs for Handwriting.** Teach handwriting skills through a structured program such as Jan Olson's *Handwriting Without Tears* program.

Mathematics

There are several individualized instructional practices that can help children with ADD improve their basic computation skills. The following are just a few:

50. Recognizing Patterns in Mathematics. Teach the student to recognize patterns when adding, subtracting, multiplying, or dividing whole numbers.

51. Partner Mathematics Activities. Pair a child with ADD with another student and provide opportunities for the partners to quiz each other about basic computation skills.

52. Mnemonics for Basic Computation. Teach the child mnemonics that describe basic steps in computing whole numbers. For example, "Don't Miss Susie's Boat" can be used to help the student recall the basic steps in long division (i.e., divide, multiply, subtract, and bring down).

53. "Real Life" Examples of Money Skills. Provide the child with naturally occurring, "real life" opportunities to practice target money skills. For example, ask the child to calculate his or her change when paying for lunch in the school cafeteria.

54. Color Coding Arithmetic Symbols. Color code basic arithmetic symbols such as +, -, and = to provide visual cues for children when they are computing whole numbers.

55. Using Calculators To Check Basic Computation. Ask the child to use a calculator to check his addition, subtraction, multiplication, or division.

56. Board Games for Basic Computation. Ask the child to play board games to practice adding, subtracting, multiplying, and dividing whole numbers.

57. Computer Games for Basic Computation. Schedule computer time for the child for "drill-and-practice" with basic computation facts.

58. Structured Programs for Basic Computation. Teach basic computation skills through a structured program such as Innovative Learning Concepts' *Touch Math* program.

Solving Word Problems

To help children with ADD improve their skill in solving word problems in mathematics, try the following.

59. Rereading the Problem. Teach the child to read a word problem *two times* before beginning to compute the answer.

60. Using Clue Words. Teach the child "clue words" that identify which operation to use when solving word problems. For example, words such as "sum," "total," or "all together" may indicate an addition operation.

61. Mnemonics for Word Problems. Teach students mnemonics that help remind them of basic questions to ask in solving word problems (e.g., what is the question asked in the problem, what information do you have to figure out the answer, and what operation should you use to compute the answer).

62. "Real Life" Examples of Word problems. Ask the student to create and solve word problems that provide practice with specific target operations such as addition, subtraction, multiplication, or division. These problems can be based on recent, "real life" events in the children's lives.

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- 63. Using Calculators to Check Word Problems.** Ask the student to use a calculator to check his or her answers to assigned word problems.

Special Materials

Some children with ADD benefit from using special materials to help them complete their mathematics assignments.

- 64. Number lines.** Provide a number line for the child to use when computing whole numbers.
- 65. Manipulatives.** Use manipulatives to help students gain basic computation skills such as counting poker chips when adding single-digit numbers.
- 66. Graph Paper.** Ask the child to use graph paper to help organize columns when adding, subtracting, multiplying, or dividing whole numbers.

Organizational Skills

Many students with ADD are easily distracted and have difficulty focusing their attention on assigned tasks. However, there are several practices that can help children with ADD improve their organization of homework and other daily assignments.

- 67. Assignment Notebook.** Provide the child with an assignment notebook to help organize homework and other seatwork.
- 68. Color-Coded Folders.** Provide the child with color-coded folders to help organize assignments for different academic subjects (e.g., reading, mathematics, social science, and science).
- 69. Homework Partners.** Assign the child a partner to help record homework and other seatwork in the proper folders and assignment notebook.

- 70. Cleaning Out Desks and Book Bags.** Ask the child to periodically sort through and clean out his or her desk, book bag, and other special places where written assignments are stored.

Children with ADD who have difficulty finishing their assignments on time can also benefit from individualized instruction that helps them improve their time management skills.

- 71. Using a Wristwatch.** Teach the child how to read and use a wristwatch to manage his or her time when completing assigned work.
- 72. Using a Calendar.** Teach the child how to read and use a calendar to schedule his or her assignments.
- 73. Practicing Sequencing Activities.** Provide the child with supervised opportunities to break down a long assignment into a sequence of short, interrelated activities.
- 74. Creating a Daily Activity Schedule.** Tape a schedule of planned daily activities to the child's desk.

Study Skills

- 75. Using Ven Diagrams.** Teach a child with ADD how to use ven diagrams to help illustrate and organize key concepts in reading, mathematics, or other academic subjects.
- 76. Note-Taking Skills.** Teach a child with ADD how to take notes when organizing key academic concepts that he or she has learned with a program such as Anita Archer's *Skills for School Success*.
- 77. Developing a Checklist of Frequent Mistakes.** Provide the child with a checklist of mistakes that he or she frequently

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makes in written assignments (e.g., punctuation or capitalization errors), mathematics (e.g., addition or subtraction errors), or other academic subjects. Teach the child how to use this list when proof-reading his or her work at home and school.

78. Using a Checklist of Homework Supplies. Provide the child with a checklist that identifies categories of items needed for homework assignments (e.g., books, pencils, and homework assignment sheets).

79. Preparing Uncluttered Workspace. Teach a child with ADD how to prepare an uncluttered workspace to complete his assignments. For example, instruct the child to clear away unnecessary books or other materials *before* beginning a seatwork assignment.

80. Monitoring Homework Assignments. Keep track of how well your students with ADD complete their assigned homework. Discuss and resolve with them and their parents any problems in completing these assignments. For example, evaluate the difficulty of the assignments and how long the children spend on their homework each night.

Behavior Management

Children with ADD often are impulsive and hyperactive. Effective teachers use behavior management techniques to help these children learn how to control their behavior.

Verbal Reinforcement

Students with ADD benefit from frequent reinforcement of appropriate behavior and correction of inappropriate behavior. Verbal reinforcement takes on the form of praise and reprimands.

In addition, it is sometimes helpful to selectively ignore inappropriate behavior.

81. Verbal Praise. Simple phrases such as "good job" encourage a child to act appropriately. Praise children frequently, and look for a behavior to praise before -- not after -- a child is off task.

82. Verbal Reprimands. Do not hesitate to request that a child change his or her behavior. The most effective reprimands are brief and directed at the child's behavior -- not at the child.

83. Selective Ignoring of Inappropriate Behavior. Carefully evaluate whether to intervene when a child misbehaves. In some instances, it is helpful to ignore the child's inappropriate behavior, particularly if a child is misbehaving to get your attention.

Behavioral Management

Effective teachers also use behavioral prompts with their students with ADD, as well as with other students in the class. These prompts help remind students about your expectations for their learning and behavior in the classroom.

84. Visual Cues. Establish simple, non-intrusive visual cues to remind the child to remain on task. For example, you can point at the child while looking him or her in the eye, or hold out your hand, palm down, near the child.

85. Proximity Control. When talking to a child, move to where the child is standing or sitting. Your physical proximity to the child will help the child to focus and pay attention to what you are saying.

Counseling

In some instances, children with ADD need counseling to learn how to manage their own behavior.

86. Classroom Interviews. Discuss how to resolve social conflicts with classroom interviews. Conduct impromptu counseling sessions with one student or a small group of students in the classroom where the conflict arises. In this setting, ask two children who are arguing about a game to discuss how to settle their differences. Encourage the children to resolve their problem by talking to each other, while you quietly monitor their interactions during the interview.

87. Social Skills Classes. Teach children with ADD appropriate social skills using a structured pull-out class. For example, you can ask the children to role play and model different solutions to common social problems. It is critical to provide for the generalization of these skills, including structured opportunities for the children to use the social skills they learn.

For some children with ADD, behavioral contracts, tangible rewards, or token economy systems are helpful in teaching them how to manage their own behavior. Because students' individual needs are different, it is important for teachers to evaluate whether these practices are appropriate for their classrooms.

88. Behavioral Contract. Identify specific academic or behavioral goals for the child with ADD. Work together with the child to cooperatively identify appropriate goals such as completing homework assignments on time and obeying safety rules on the school playground. Take the time to ensure that the child agrees that his or her goals are important to master.

89. Tangible Rewards. Use tangible rewards to reinforce appropriate behavior. These rewards can include (a) stickers such as "happy faces" or sports team emblems or (b) privileges, such as extra time on the computer or lunch with the teacher. In some cases, you may be able to enlist the support of parents in rewarding the children at home.

90. Token Economy System. Use token economy systems to motivate a child to achieve a goal identified in a behavioral contract. For example, a child can earn points for each homework assignment completed on time. In some cases, students also lose points for each homework assignment not completed on time. After earning a specified number of points, the student receives a tangible reward such as extra time on a computer or a "free period" on Friday afternoon.

Classroom Accommodations

Many children with ADD benefit from accommodations that reduce distractions in the classroom environment. These accommodations, which include modifications within both the physical environment and learning environment of the classroom, help some children with ADD stay on task and learn.

Accommodations of the physical environment include determining where a child with ADD will sit in the classroom. There are two main types of special seat assignments.

91. Seat Near the Teacher. Assign a child a seat near your desk or the front of the room. This seat assignment provides opportunities for you to monitor and reinforce the child's on-task behavior.

92. Seat Near a Student Role Model. Assign a child a seat near a student role model. This seat arrangement provides

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opportunities for children to work co-operatively and learn from their peers in the class.

Effective teachers also use different environmental prompts to make accommodations within the physical environment of the classroom.

93. Hand Gestures. Use hand signals to communicate privately with a child with ADD. For example, ask the child to raise his or her hand every time you ask a question. A closed fist can signal that the child knows the answer; an open palm can signal that he or she does not know the answer. You would call on the child to answer only when he or she makes a fist.

94. Egg Timers. Note for the children the time at which the lesson is starting and the time at which it will conclude. Set a timer to indicate to children how much time remains in the lesson and place it at the front of the classroom; the children can check the timer to see how much time remains. Interim prompts can be used as well. For instance, children can monitor their own progress during a 30-minute lesson if the timer is set for 10 minutes three times.

95. Classroom Lights. Turning the classroom lights "on and off" prompts children that the noise level in the room is too high and they should be quiet. This practice can also be used to signal that it is time to begin preparing for the next lesson.

96. Music. Play music on a tape recorder or chords on a piano to prompt children that they are too noisy. In addition, playing different types of music on a tape recorder communicates to children what level of activity is appropriate for a particular lesson. For example, play quiet classical music for quiet seat activities and jazz for active group activities.

Effective teachers make accommodations in the learning environment by guiding children with ADD with follow-up directions.

97. Follow-Up Oral Directions. After giving directions to the class as a whole, provide additional, oral directions for a child with ADD. For example, ask the child if he or she understood the directions, and repeat the directions together.

98. Follow-up Written Directions. Provide follow-up directions in writing. For example, write the page number for an assignment on the blackboard. You can remind the child to look at the blackboard if he or she forgets the assignment.

Effective teachers also use special instructional tools to modify the classroom learning environment and accommodate the special needs of their students with ADD.

99. Highlighting Key Words. Highlight key words in the instructions on worksheets to help the child with ADD focus on the directions. You can prepare the worksheet before the lesson begins or underline key words as you and the child read the directions together.

100. Using Pointers. Teach the child to use a pointer to help visually track written words on a page. For example, provide the child with a bookmark to help him or her follow along when students are taking turns reading aloud.

101. Adapting Worksheets. Teach a child how to adapt instructional worksheets. For example, help a child fold his or her reading worksheet to reveal only one question at a time. The child can also use a blank piece of paper to cover the other questions on the page.

ATTENTION DEFICIT DISORDER: BEYOND THE MYTHS

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ATTENTION DEFICIT DISORDER: Beyond the Myths

MYTH: Attention Deficit Disorder (ADD) does not really exist. It is simply the latest excuse for parents who do not discipline their children.

FACT: Scientific research tells us ADD is a biologically-based disorder that includes distractibility, impulsiveness, and sometimes hyperactivity. While the causes of ADD are not fully understood, recent research suggests that ADD can be inherited and may be due to an imbalance of neurotransmitters — chemicals used by the brain to control behavior — or abnormal glucose metabolism in the central nervous system. Before a student is labeled ADD, other possible causes of his or her behavior are ruled out.

MYTH: Children with ADD are no different from their peers; all children have a hard time sitting still and paying attention.

FACT: Before children are considered to have ADD, they must show symptoms that demonstrate behavior greatly different from what is expected for children of their age and background. They start to show the behaviors characteristic of ADD between ages three and seven, including fidgeting; restlessness; difficulty remaining seated; being easily distracted; difficulty waiting their turn; blurting out answers; difficulty obeying instructions; difficulty paying attention; shifting from one uncompleted activity to another; difficulty playing quietly; talking excessively; interrupting; not listening; often losing things; and not considering the consequences of their actions.

These behaviors are persistent and occur in many different settings and situations. Furthermore, the behavior must be causing significant social, academic, or occupational impairment for the child to be diagnosed educationally as having ADD.

MYTH: Only a few people really have ADD.

FACT: Estimates of who has ADD range from 3 to 5 percent of the school age population (between 1.46 and 2.44 million children.) While boys outnumber girls by 4:1 to 9:1, experts believe that many girls with ADD are never diagnosed.

MYTH: ADD can be prevented.

FACT: While scientists are not certain they understand the causes of ADD, they have ruled out most of the factors controlled by parents. A poor diet does not cause ADD; nor does sugar or food additives. Normal quantities of lead will not cause ADD. Since the causes of ADD are genetic and biological, the parents cannot cause ADD by being too strict or too lenient.

However, actions by the parents can influence the child's ability to control his or her ADD behavior. Recently, some studies suggest a few cases of ADD may be caused by the use of alcohol and drugs by the mother while pregnant.

MYTH: All children with ADD are hyperactive and have learning disabilities.

FACT: While 10 to 33 percent of children with ADD also have learning disabilities, the two disorders cause different problems for children. ADD primarily affects the behavior of the child — causing inattention and impulsivity — while learning disabilities primarily affect the child's ability to learn — mainly in processing information.

Not all students with ADD are hyperactive and constantly in motion; many are considered to have undifferentiated ADD (Attention Deficit Disorder without hyperactivity). Because these children do not behave in the same way as hyperactive ADD students, their disorder frequently is

not recognized, and they are often considered unmotivated or lazy.

MYTH: Many children are incorrectly diagnosed as having ADD.

FACT: There are several national psychological tests that schools use to identify students with ADD. Children suspected of having ADD are referred to a child specialist (e.g., school counselor, psychologist, pediatrician) for clinical evaluation. Observations and reports from parents and teachers are critical to proper diagnosis. Sometimes, children are given intelligence, attention, and achievement tests. Doctors may also administer neuropsychological tests and neurological examinations.

Most importantly, it is a team of professionals in education, medicine, and psychology who pool test results and make a final determination. Since a child's hyperactivity, distractibility, and impulsive behavior may be due to other factors, such as a limited home environment or learning problems, the specialists check for other causes of these behaviors before making a diagnosis of ADD.

MYTH: Medication can cure students with ADD.

FACT: Medicine cannot cure ADD but can sometimes temporarily moderate its effects. Stimulant medication such as Ritalin, Cylert, and Dexedrine is effective in 70 percent of the children who take it. In those cases, medication causes children to exhibit a clear and immediate short-term increase in attention, control, concentration, and goal-directed effort. Medication also reduces disruptive behaviors, aggression, and hyperactivity.

However, there are side effects and no evidence for long-term effectiveness of medication. For example, recent studies show that medication has only limited short-term benefits on social adjustment and academic achievement. While medication can be incorporated into other treatment strategies, parents and teachers should not use medication as the sole method of helping the child.

MYTH: The longer you wait to deal with ADD in students, the better the chances are that they will outgrow it.

FACT: ADD symptoms continue into adolescence for 50-80 percent of the children with ADD. Many of them, between 30-50 percent, still will have ADD as adults. These adolescents and adults frequently show poor academic performance, poor self-image, and problems with peer relationships.

MYTH: There is little parents and teachers can do to control the behavior of children with ADD.

FACT: Teachers and parents have successfully used positive reinforcement procedures to increase desirable behaviors. A behavioral modification plan can give the child more privileges and independence as the child's behavior improves. Parents or teachers can give "tokens or points" to a child exhibiting desired behavior — such as remaining seated or being quiet — and can further reward children for good school performance and for finishing homework. Mild, short, immediate reprimands can counter and decrease negative and undesirable behaviors. Students with ADD can learn to follow classroom rules when there are preestablished consequences for misbehavior, rules are enforced consistently and immediately, and encouragement is given at home and in school.

MYTH: Students with ADD cannot learn in the regular classroom.

FACT: More than half of the children with ADD succeed in the mainstream classroom when teachers make appropriate adjustments. Most others require just a part-time program that gives them additional help in a resource room. Teachers can help students learn by providing increased variety. Often, altering features of instructional activities or materials, such as paper color, presentation rate, and response activities, help teachers hold the attention of students with ADD. Active learning and motor activities also help. ADD students learn best when classroom organization is structured and predictable.

Teaching Strategies

Education of Children with

Attention Deficit Disorder

Credits

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Teaching Strategies

Education of Children with
Attention Deficit Disorder

Foreword

For many educators, teaching is an opportunity to "touch the next generation," to make a difference in the lives of children. Their daily efforts in the classroom are affirmed by the achievements that each student reaches for and attains. Often, however, the children who struggle most to achieve their potential are those for whom the skills and commitment of educators are most tested. This is the case for students with attention deficit disorder (ADD), whose efforts are often stymied by their outbursts or distractions. The strategies presented in this booklet have been developed to enable you to help a child with ADD

succeed.

From identification to intervention, the information you need is put forward in thoughtful plans tried and tested by other educators. These practices suggest ways to build on students' strengths and work around their weaknesses. There are helpful tips that you can use to adapt classrooms and teaching strategies to increase the odds of success for children with ADD and others who are distractible, or have difficulty concentrating or sitting still.

We were encouraged to find that many of the intervention

strategies are simply good education practices. This is especially important as 70% of children with disabilities are taught primarily in the regular classroom. The strategies highlighted in this publication, while based upon the best available research and practices about teaching children with ADD, have potential to benefit other students as well.

We hope that you are able to use this book to enhance your own classroom strategies so that all students and especially those with ADD can learn and flourish regardless of the obstacles they may face.

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Table of Contents

Understanding Attention Deficit Disorder	3
Getting Help for Students	6
Working with Students on Medication Programs	12
Teaching Students with Attention Deficit Disorder	16
Making It Work in the Classroom	24
Putting These Ideas to Work	30
Locating Additional Resources	36

Understanding Attention Deficit Disorder

Although Angel's teacher has in place a well-structured classroom management system and uses instructionally appropriate methods, Angel rarely finishes his work. At 8 years old, Angel has difficulty staying seated without sliding off his chair. He is constantly on the move, and his path is strewn with overturned objects and fallen materials. Quick to argue and slow to calm down once excited, Angel has yet to learn how to get along with his classmates. He solves problems by pushing and bumping or throwing things.

Jeffrey sits at his desk staring at the wall. It isn't that he refuses to do the work — in fact, he is a friendly and bright youth — it's just that he doesn't seem to notice that the class has moved on to another assignment or that he hasn't completed the previous one. When the teacher directs his attention back to the task, Jeffrey shuffles through his notebook, unsure of what he is looking for.

You can't say that Rebecca doesn't try. An able and hardworking child, she is constantly asking for help and encouragement from the teacher. The problem is, she has difficulty focusing on her work, which leads to excessive questions and requests for assistance. It seems as if every time the teacher turns around, Rebecca is standing there waiting for direction.

Understanding ADD

Although many students have characteristics that occasionally interfere with their learning, there are some students whose problems require a closer look. Some students like Angel, Jeffrey, and Rebecca might have attention deficit disorder (ADD), while others do not. This booklet is about students with attention deficit disorder and what you can do to support their classroom learning.

Students with attention deficit disorder — or characteristics that include attention difficulties, hyperactivity, and impulsivity — have always challenged even our best classroom practices. Their behaviors too often interfere with typical classroom instruction, resulting in lost learning opportunities and underachievement. In social situations, they tend not to fare much better, because their peers generally find it difficult to get along with them.

What can you do? Over the past few years, we have learned much about serving the educational needs of students with attention deficit disorder. Educators have taken the lead in modifying instructional practices, structuring classroom learning environments, and managing classroom behaviors in ways that lead to success for a wide

diversity of students. And, what's more, in doing so they have found that many of the practices that work with students with attention deficit disorder can be beneficial to other students as well. The purpose of this booklet is to share with you some of those practices teachers are using at the elementary and middle school levels.

Defining Attention Deficit Disorder

There are no known causes of attention deficit disorder; however, researchers are investigating the following:

- Heredity or genetic causes.
- Biological or physiological
- Complications or trauma during birth.
- Lead poisoning.
- Prenatal alcohol and drug exposure.

Children identified as having attention deficit disorder are a heterogeneous group of youngsters who have serious problems with inattention, distractibility, and impulse control. Developmentally inappropriate levels of overactivity frequently exist with this disorder. It is estimated that approximately 3%-5% of school-aged youngsters have an attention deficit disorder.

What appears to be an attention deficit disorder might actually be another problem, making diagnosis critical. Attention deficit disorder can coexist with other conditions such as specific learning disabilities and emotional/behavioral disorders.

Sometimes you will see the term **attention deficit hyperactivity disorder** used to identify this group. Professionals who do not use this longer form remind us that not all children with attention deficit disorder display hyperactivity. For the purpose of this booklet, both terms will be used interchangeably.

Keep in mind that labels do not define a child; they merely define a set of characteristics that describe the disorder. What you do instructionally with this knowledge of characteristics is key in helping the student succeed in your class.

Teachers Can Make an Important Contribution to the Student's Education Program

Typical characteristics exhibited by children with attention deficit behavior such as inattention, overactivity and impulsivity, if left unchecked, can lead to myriad problems in

the classroom. Teachers note that students with attention deficit disorder display difficulties completing their work, staying on task, and responding accurately to tasks. These behaviors tend to be persistent, occurring across settings and tasks. Behaviors associated with attention deficit disorder that interfere with academic tasks and thus need to be managed include:

- Leaving one's seat without permission.
- Making noises.
- Talking out during quiet time.
- Having difficulty staying on task.

A number of children with attention deficit disorder are also noncompliant and display behavioral or social problems in the school setting. You may find that some of these students behave aggressively toward peers and teachers.

Most districts have found that students with attention deficit disorder can be educated successfully in a regular program with the help of appropriate school-based interventions. Providing services to students with attention deficit disorder in the general education classroom reduces the stigma of special education and may even enhance the social status of these children. At the very least, it allows students to observe appropriate peer models.

Viewed from this perspective, classroom teachers can

significantly affect a student's education by how they identify and implement appropriate adaptations and interventions. As you read through this booklet, keep in mind that you are not alone in helping children with attention deficit disorder learn and achieve. Most likely, you will find yourself working with other professionals who can help you develop, implement, and evaluate effective practices.

When teachers ask how they can best contribute to the student's educational progress, one answer is through effective classroom practice. Effective practice with students with attention deficit disorder requires knowledge about how to match school requirements to the student's characteristics. It also requires an understanding of relevant medical issues such as whether the student is taking medication and what effects that might have on his or her classroom performance. Combine this knowledge with a solid grounding in instructional strategies, applied behavioral management techniques, and a commitment to building family relationships, and you have the basics for a strong educational program.

Next Steps

This booklet is designed to be a quick reference on practices that educators are currently

using to help students with attention deficit disorder succeed. The practices described here are drawn from a larger study completed in 1993 by the Federal Resource Center at the University of Kentucky under the auspices of the U.S. Department of Education, Office of Special Education Programs (OSEP). Information has also been gleaned from the work of four other OSEP centers (Arkansas Children's Hospital, University of Miami, Research Triangle Institute, and University of California-Irvine), which were charged with synthesizing current research knowledge on assessment and interventions for meeting the needs of children with attention deficit disorder.

The practices, which focus on matching the learning characteristics of students with attention deficit disorder with the school setting, are intended to be easily replicated. We hope that you will find them useful in fostering the educational progress of your students.

Getting Help for Students

You're concerned about a child in your class. What now? Sometimes parents will initiate discussion about their child. They will want to know if the behaviors they have noticed at home are also apparent at school. But much of the time, it will be teachers who identify student behaviors that suggest an attention deficit disorder. Typically you or one of your colleagues will be the first to notice the student's lack of success with school assignments or problems with peer relationships. You might notice such behaviors as:

- Failing to finish work.
- Seeming not to listen.
- Appearing easily distracted.
- Having difficulty organizing work.
- Speaking out frequently in class.
- Requiring close supervision.
- Having difficulty sitting.
- Fidgeting.

All youngsters will exhibit these behaviors to some degree in certain situations. For very young students, the behaviors are typical developmentally. But for students with attention deficit disorder you might find that the behaviors tend to be exhibited more frequently and with more intensity. When any combination of these behaviors persists over time, occurs across settings and tasks, and chronically interferes with the student's classroom success, it is a good idea to investigate further.

Classroom Teachers Play a Key Role in Identification

How can I tell if my student has an attention deficit disorder? Who is there to help me if I suspect that my student has an attention deficit disorder?

The first step in identification is being clear as to what attention deficit disorder is and what it is not. Although the case can be made that it is more important to know how to teach a child than it is to know his or her label, teaching can be enhanced with a greater understanding of the disorder.

Attention deficit disorder is a relatively new term. It has only been in recent years, specifically with the research syntheses funded by OSEP, that a unified body of knowledge about attention deficit disorder has emerged. Thus, it is no wonder that the disorder is fraught with misunderstanding and lack of public knowledge.

Knowing as much as possible about the characteristics of attention deficit disorder and its diagnosis will assist you in working with the child. If you do not feel well versed on the topic, then ask for help. School psychologists, the school nurse, your principal, and special education support staff can provide you with information or point you in the right direction (see also Chapter 7 in this booklet for further readings). Ask about

possible conferences and workshops you might attend.

Some districts have created manuals and booklets that serve as guideposts for understanding attention deficit disorder. Find out whether your district has produced such a guide — and if not, recommend that they do!

For example, school professionals in Raleigh, North Carolina, took seriously the charge to make information available when they authorized an ad hoc group to develop the *Attention Deficit Disorder Screening Procedures Manual*. The manual was eventually distributed to staff throughout the district. It included the following information:

- Recommended screening procedures for attention deficit disorder.
- General information on attention deficit disorder.
- Classroom intervention and strategies.
- Recommended home and school behavior rating scales.

Understand the Purpose of School-Based Referral

School teams of qualified professionals, on which medical professionals often serve, are usually responsible for identifying students with attention deficit disorder. Keep in mind that educators should not attempt to diagnose attention deficit disorder medically. Rather, the educational staff determines on the basis of the school-related data collected whether or not there is a significant problem that requires specific educational accommodations. This frame of reference should lead to a thorough investigation by a designated team into the reasons why a child might be exhibiting certain behaviors. In most cases, there will be numerous reasons, all of which need to be investigated formally and informally before referral to a physician.

As the student's teacher, you have critical information to assist in this process. Therefore, it is important that you focus your efforts on collecting information that will be useful in planning appropriate educational programs and approaches for the child.

Collect Information That Is Educationally Useful

Imagine that you are faced with collecting information on a child who is suspected of having an attention deficit

disorder. What information can you collect that will be most useful? The key is to generate sound information that can be used to design classroom interventions and support any medical treatment program that the child might be receiving. (For more information on what you can do if you have a student on medication, see Chapter 3.)

For example, in Sturgeon Bay, Wisconsin, if classroom observation reveals a possible attention deficit problem in a child, teachers begin assessment proceedings by following a process designed to gain information from all who are involved with the child — for example, teachers, parents, and the school psychologist. This process also serves the purpose of increasing everyone's understanding of the student. The process includes the following steps:

- **Review student files.** Look to see whether others have noticed similar problems. Check out any previous school testing, including screening for vision and hearing problems.
- **Share your observations with parents or family.** Discuss with the student's primary caretaker your observations and find out whether these behaviors occur across settings.
- **Follow through on suspected health problems.** If your research leads you

Try This

Help parents feel better prepared for meetings by providing them in advance with a brochure explaining attention deficit disorder.

Jefferson County Public Schools, Kentucky.

to suspect that a health problem might exist, talk to the family about getting the child a physical check-up. Or, you might need to consult with school health professionals should it become necessary to have the student referred to the public health department for screening.

- **Consult with other school personnel.** It is always a good idea to pool your information with that of other professionals. Think about tapping the expertise of the guidance counselor, school psychologist, or special education teacher. If your school has a teacher support team, seek out its advice as well. Invite specialists to observe the student in your classroom.
- **Plan for interventions.** No matter what the outcome of your findings, don't wait to start devising a classroom plan to accommodate the student's learning needs. Include the student's parents, your principal, and other school personnel as appropriate in helping you design success strategies. Keep detailed accounts of your efforts; they may prove useful in helping you sort out what works for the student and in making recommendations to other professionals.

From this process, teachers learn a great deal about the

student, not to mention how classroom practices might be enhanced. Using such a system can move you and your colleagues forward in suggesting well-formulated educational plans.

Formal Assessment

In some cases, formal assessment might be undertaken. What should you expect?

Most districts have their own system or set of procedures for assessment. Find out what referral and assessment procedures are in place in your district. Most often, these procedures will be in compliance with the *Individuals with Disabilities Education Act* (IDEA) or Section 504 of the *Rehabilitation Act of 1973* guidelines, so it is important that they be explicitly followed.

Typically, assessment will be multifaceted and include:

- Classroom observations.
- Results of all interventions that have been tried.
- Completion of checklists and questionnaires by teachers and parents.
- Psychological evaluation.
- Academic evaluation.

Getting Help

You might be called upon to complete some of these assessments. At the very least, you should plan on discussing the assessment results with other school professionals and the student's parents.

What do the results tell you in terms of setting up your instruction to better meet the student's needs? What insights about the child's characteristics were gleaned that you can put to use in adapting and modifying your instruction and organizing your classroom? While there might be further discussion at this time about next steps to take (e.g., referral for further diagnosis, referral to special education), you can use this new information in crafting lessons for the student.

A Team Effort

You are not alone; in fact, good practices show that identifying and designing classroom interventions for students who have or are suspected of having attention deficit disorder work best with a team effort. At the very least, you will want to seek out the advice of other professionals in your building. As part of a prereferral team or teacher assistance team, you will be part of a group decision-making body charged with the task of evaluating the

assessment data. Some of you will eventually become part of (or work with) child study teams — formal groups who design and monitor intervention programs for students identified as having attention deficit disorder.

As you work with these other professionals, don't hesitate to ask their opinions about how best to help a child with attention deficit disorder. One of their ideas just might be what you need to make a significant difference in your student's progress.

Ideas for Working on a Team

A well-designed process or protocol can help groups stay on track and make collective decisions that follow a logical progression. Using such an approach, data are collected and organized according to key decision points, such as those used by the Anchorage Public Schools. In that district, the child's educational history and cumulative file is screened first, followed by a discussion of the interventions that have been tried and a review of the teacher's rating scale. If there is a history of poor performance, and reasonable accommodations have been tried with unsuccessful results, and informal measures suggest that more formal

Try This

Streamlining multi-disciplinary team evaluations can be a challenge, especially when several people are being asked to collect data or complete different forms. Avoid delays and duplication of effort with prepared packets, complete with cover letters and forms that only need the originator's signature.

Norwich Public Schools.
Norwich, CT

assessment might be warranted, only then does the group consider a formal evaluation. If these three elements are not consistent, then it is up to the group to ascertain other reasons that might explain the student's behaviors.

Moving Ahead

Your work will be guided by the identification and

evaluation phase. Now begins the ongoing process of identifying the student's characteristics and needs, matching them to effective classroom practice, and evaluating progress. Regardless of the outcome of the identification and screening process, use that information in designing quality lessons and in delivering effective instructional presentations.

Working with Students on Medication Programs

You will probably find that a fair number of your students roughly 60% to 90% – who have been diagnosed with attention deficit disorder will be on a medication treatment program. What does this mean for you and the success of your classroom?

First, the student's parents and physician will decide whether or not the child is to receive medical treatment. While it is not your role to advise either way, when working with a student who is taking medication, your role becomes one of providing information to the designated professional (e.g., school psychologist, school nurse) who monitors the medication program. Because of your close daily working relationship with the student, you are in a position to observe behavioral indicators of whether or not the student is responding to the medication program in the intended ways.

When working properly, medication has the effect of temporarily reducing the symptoms of attention deficit disorder (inattention, impulsivity, hyperactivity) while increasing concentration and goal-directed effort. Medication does not directly affect academic performance. In other words, medication does not teach the child!

It is your role to be aware of the issues in medicating children and to cooperate as appropriate. Teachers need to:

- Understand the role of medication in a child's treatment/intervention program.
- Be involved in close observation of the child's classroom behavior and performance.
- Be in communication with parents and physician when appropriate.
- Help monitor whether the child is receiving the medication as prescribed and on time.

Medication as a Treatment

A number of children with attention deficit disorder respond positively to stimulant medication. The purpose of this medication is to enable children with attention deficit disorder to focus their attention and behavior. When working properly, the medication controls certain behaviors that interfere with the child's academic learning and progress. It is important to note that other problems may exist that will not be affected by medication.

The choice of medication will depend on the student's symptoms and response to the treatment. For practical purposes, stimulant medication refers to a class of drugs that includes the brand names of Dexedrine, Ritalin, and Cylert. A secondary category of medication, antidepressants, might also be used with some students.

If the medication program is working, you should expect to see the child become less distractible; more able to concentrate; and more attentive. For those children who have associated behavioral difficulties such as aggression and inappropriate social interaction, you might also observe a decrease in disruptive behaviors.

Possible side effects are the major drawback of treatment with medication. These side effects might take the form of decreased appetite, insomnia, or motor and verbal tics. Mood swings or irritability can occur when the drug is wearing off. For the most part, physicians manage side effects by adjusting the child's medication dosage. If you observe any of these or what appear to be other side effects, it is important that you contact the school authorities assigned to the student. In fact, **whenever** you have any concerns about behavior changes, report them to the school principal or other district-designated professionals.

Monitoring Dosage

It is important that school professionals administer the medication on time and in the correct dosage and that teachers know the student's medication schedule. Why is this so important?

With Ritalin, the peak action of the drug usually occurs approximately 2 hours after the student takes it; its effects dissipate after 4 hours. Some children experience aggressive, emotional or impulsive behavior when the medication's effects wear off.

Therefore, if the drug is not given on time, there is a good possibility that the child will have difficulty. **Keep in mind** that if the drug is given late, it will take at least 30 minutes for the effects to take hold. In other words, the student will have lost at least 1 hour of valuable instructional time!

Most children with attention deficit disorder cannot remember to take their medication without reminders. Please respect confidentiality when reminding the student.

Students on Medication

Communicating with the Family

Be aware that there continue to be controversies about the use of stimulant medication. Chances are that parents have wrestled a long time with the decision to medicate their child. They have been apprised of the side effects and drawbacks and have used their best judgment in pursuing the treatment. They need to know whether the medication is having the intended effect on their child at school. Thus, it is important that you serve the critical role of *objectively* communicating to them the results of their decision on the child's behavior and whether improved behavior is resulting in better academic performance.

School personnel, including the school psychologist and school nurse, should observe and report to the family and physician changes in the student's behavior and academic performance associated with medication. Find out what procedures are in place in your district for monitoring medication treatment programs.

For example, some districts ask teachers to provide baseline data on the student's behavior or academic performance (or both) to

parents, the school psychologist and/or nurse, or directly to medical personnel *prior* to their making the decision about medication. This data might be used later as a baseline against which the effects of the medication on behavior are compared. If one of your students is being referred for medical diagnosis, help provide accurate data. Identify your student's most significant interfering behaviors and keep track of their occurrences over a week's time. For example, keep a folder with samples of the student's work for later comparison. Note the date and amount of time it took the student to complete the work. Anecdotal information such as time of day and any special occurrences (e.g., a fire drill prior to the assignment) can be included to help make the work samples more understandable.

After the decision has been made to start a student on medication, you might also be called upon to document its effects on the child's behavior and long-term academic performance. Find out whether your school district has a procedure in place for recording and collecting information on student progress, and whether there is a liaison between your district and medical profession. If your district has a procedure in place, find out how you can

Try This

Suggest that your school district form a collaborative team between school staff and physicians in the community who treat attention deficit disorder. In return for current and relevant student data provided by you and other staff, physicians agree to meet periodically to discuss best ways of meeting student needs.

Rowan-Salisbury
School System,
Salisbury, NC

contribute to making the process work. Ask your principal to review district procedures and communication networks with you.

For example, the Rowan-Salisbury School District, Salisbury, North Carolina, has a system for providing physicians with a packet of information containing an outline of the child's problems as perceived by the school and a summary of collected data as support. These packets also include the student's scores on attention deficit disorder checklists and rating scales, a brief school history, a release of information form, a medical report form, and a self-addressed stamped envelope so the physician can report to the school information regarding any medical treatment and follow-up. In this example alone, there are numerous opportunities for teachers to contribute valuable information. If nothing else, these packets should provide you with helpful information about the child that you can use to plan classroom instruction.

Once a student is placed on medication, it is up to you to help monitor the student. Is the student experiencing fewer behavioral problems and participating more productively in class lessons? For example, in Kenosha Unified School District No. 1, Kenosha, WI, teachers complete a medication follow-up report

and send it to the physician two weeks after medication is started or changed. A copy is also sent to the parents. On the form, the teacher checks off any side effects that he or she has noticed and notes any behavioral fluctuations in impulse control, attentiveness, or physical activity level that have been observed. Academic and social performance is also summarized.

Medication Is Only Part of the Answer

Regardless of whether a medical management plan is agreed upon between the parents and the physician, the child's learning and/or behavior problems still require school-based interventions. A medical diagnosis is not necessary to institute specific classroom accommodations.

Medication does not control the child. If properly administered it should filter out distractions, allowing the child to focus on the task at hand. Capitalize on this opportunity to help the student progress.

Try This

Ask your school district to develop a physician evaluation form containing the following information: the child's diagnosis; medication prescribed, if any; dosage time; need for further evaluation; and other diagnosis and treatment. Request that physicians fill out one of these forms for each student.

Wake County
Raleigh, NC

Teaching Students with Attention Deficit Disorder

No two children are alike. There are multiple approaches to working with children in the classroom, which is why the teacher's role is so important. Identifying what can be done to support and strengthen the student's learning ability is ultimately what makes the difference in whether the student progresses or not.

Effective classroom programming requires knowledge about attention deficit disorder, a solid grounding in behavioral management, skill in instructional design, and an awareness of the disorder's medical components. This understanding is enhanced when strong relationships are built between professionals and families.

When designing lessons that address the characteristics of students with attention deficit disorder, you will probably need to make some changes in how you plan, organize your instruction, manage the classroom, and arrange the physical layout of the room and materials. Students with attention deficit disorder do best in a structured classroom — one where expectations and rules are clearly communicated to them and where academic tasks are carefully designed. Interactive teaching strategies are needed to keep these students attending to tasks. Since these are basic principles of effective teaching, you will find that when applied, they will have a positive effect on the learning of *all* students.

Planning for Success

Children with attention deficit disorder have learning characteristics and needs as diverse as those of other children in your classroom. As such, no single educational setting, practice or plan can be uniformly prescribed for these children. Students with attention deficit disorder vary in their characteristics and needs, and schools vary in their access to resources. Plans should, at a minimum, identify students' characteristics and special learning needs and provide sound ideas for strengthening their academic and social performance.

In your planning, stress short- and long-term goals rather than "quick fix" ideas and "tear down the door" methods. Many districts have found that planning results in more effective practice when teaching strategies and interventions are linked to desired behavioral goals.

Planning can also be enhanced when it is done as a team effort. In Fort Lauderdale, Florida, parents, teachers, and support professionals prepare district **accommodation plans** for students who are being considered for Section 504 services. These plans contain specific modifications that need to be made, if any, in the physical arrangement of the classroom, lesson presentation, work assignments, test-taking methods, and classroom

management system. The plans specify who will make which accommodations, and in what time frame.

Modifying Instruction

You will probably find that most of your students with attention deficit disorder tend to benefit from some type of instructional modification, which is the cornerstone of helping students with attention deficit disorder succeed in the classroom. When modification is used, students are not penalized for not knowing how to learn.

There are many ways you can modify your lessons. Target those aspects of the learning setting that can be most troublesome for the student:

- Lesson presentation.
- Physical arrangement of the classroom.
- Work assignments.

Lesson Presentation

Use the principles of effective instruction when delivering lessons. Make sure that students are successful and challenged. Model cognitive strategies such as "think aloud" techniques which help students verbalize the thought processes they should engage in to complete the task. Cooperative groupings can also be used effectively. Finally, give praise and

feedback immediately and consistently.

Suggestions for maintaining student involvement in the lesson include the following:

- Keep lesson objectives clear.
- Deliver the lesson at a brisk pace.
- Encourage collaboration among students.
- Use meaningful materials and manipulatives.
- Prompt for student answers after allowing at least 5 seconds of wait time.
- Have the students recite in unison.
- Vary your tone of voice and model enthusiasm.

There are additional ways you can accommodate the student's learning characteristics and needs when designing your lessons. For example, if the student has a short attention span, you might accommodate this learning characteristic by modifying the **length** of the material. The following are examples of additional accommodations:

Teaching Students

Try This

Use dot-to-dot pictures for charting student progress. For added value, present students with a bonus when they reach designated points.

Sandy, Utah

- Break up long presentations by "chunking" content. At the end of each chunk, have the student respond in some way.
- Provide the student with additional time to finish an assignment or test.
- Break down assignments into "mini-assignments," and build in reinforcement as the child finishes each part. So as not to overwhelm the student, consider passing out longer assignments in segments.
- Reduce the number of practice items that the student must complete. For instance, allow the student to stop once he or she has demonstrated mastery.

Holding students' interest and attention is not always an easy task. Don't hesitate to experiment with a variety of approaches — and ask your colleagues for ideas.

Physical Arrangement of the Classroom

To help a student who is easily distracted focus on the task at hand, you may need to reduce competing stimuli in the environment or directly cue the student's attention. The goal here is not to create a dull environment, but rather

to find ways to focus the student's attention. The following are examples of things you can do:

- Seat the student away from high-traffic and noisy areas such as the pencil sharpener, window, hallway, and materials table. Make available a study carrel.
- Define the work space for the child. For example, when children are to sit on the floor, use carpet squares to help define each child's space.
- Reduce the amount of materials present during work time by having the student put away unnecessary items. Have a special place for tools, materials, and books.

Work Assignments

Because many students with attention deficit disorder are inefficient learners, it is a good idea to spend some time helping them develop learning strategies. Organizational strategies are a must for students with attention deficit disorder. Help them get into the habit of making reminders of what they need to do, using such strategies as assignment sheets, daily schedules, and "to do" lists.

A teacher in Suffield,

Connecticut, designed a daily checklist for students to keep track of assignments, grades, and targeted behaviors. Here's how it works. The first column lists all of the student's classes. Next to it is a column for the student's grades. The next column features criteria (e.g., is on time for class, came prepared with appropriate materials, participates in instruction and discussion, completes homework, etc.). A space is left for the student to write in homework assignments. At the end of the day, the student reviews the checklist and uses the data on it to determine what to take home for study purposes. Parents are expected to review and sign the checklist daily.

Daily checklists such as the one just described enable you to maintain an active record of student progress. These checklists also assist the student by clarifying expectations and highlighting successes.

Teach older students how to take notes from both oral presentations and textbooks. Help the student by listing the main ideas or concepts in advance. Some teachers have found it helpful to give their students a template graphic organizer to use when outlining and taking notes.

Other tactics that teachers have used to help students focus in on the task at hand include the following:

- Use color coding or highlighting to help focus attention on critical information contained in assignments.
- Give clear directions both orally and visually. Whenever possible, provide the student with a model of what he or she should be doing.
- Set up consistent routines for making the transition between lessons, getting and putting away materials, and requesting assistance. Teach these routines and reward students for following them.

expected of them.

Managing the Classroom

A strong classroom management system helps all students develop positive classroom behavior, study habits, and organizational skills. For students with attention deficit disorder, these behavioral management systems often provide the structure they need for managing their own behaviors on a daily basis.

At a minimum, you can provide the essential foundation for improving behaviors and promoting student success by maintaining an orderly classroom environment that is predictable. Establish clear rules and state them in positive terms so that students know what is

Try This

Take photographs of your students engaged in identified positive behaviors. Display with rules.

Des Moines, Iowa

Teaching Students

Helping the Student Manage Behavior

Explicit attention to reducing the incidence of problematic behaviors is essential for students with attention deficit disorder to reach their academic potential. For years, teachers have applied behavioral management techniques such as positive reinforcement, negative reinforcement, and response contingencies in their classrooms with positive results. The key is to be consistent in applying positive and negative consequences.

Positive Reinforcement. You will probably find that many students with attention deficit disorder benefit from a structured reinforcement system. Let the student know what behaviors will be rewarded. Select reinforcers that are of interest to the student. Rewards don't necessarily need to cost a lot of money; for example, an image made with an ink pad, a trophy or a stuffed animal that sits on the student's desk, or a visit with the principal, might have appeal to younger children. Older students tend to appreciate special privileges such as free time or time at the computer station. Remember, as students become proficient in displaying appropriate behaviors, you can begin to phase out reinforcement by decreasing

its frequency.

Negative Consequences.

When you must use negative consequences to reduce the frequency of a troublesome behavior — for instance, strategies such as planned ignoring, time out, loss of privileges, and reprimands — keep in mind that such practices should always be paired with reinforcement for an appropriate alternative behavior. Students need to know what they **should** be doing, as well as what will not be tolerated.

Response Contingencies.

Token economy systems are widely used classroom management systems that have promising results for students with attention deficit disorder. A token system is based on tokens that can be exchanged for reinforcers, contingencies that specify the conditions under which the tokens may be obtained or lost, and exchange rates for tokens. Many token systems use points.

For example, students in Irvine, California earn daily points for positive behaviors such as following quiet rules, following seat rules, maintaining appropriate peer relations, attending to class lessons, and completing work neatly. Points are subtracted for negative behaviors. As students become proficient at demonstrating positive

Try This

A designated notebook makes it convenient to record daily homework assignments. Teachers review the notebook before it is sent home for parent perusal.

Lake Villa, Illinois

behaviors, the intervals for receiving rewards increase. This school based reward system is administered by counselors during the last 20 minutes of the day.

Elementary-aged youngsters in Bradenton, Florida experience a five-level point system that assists teachers in monitoring and rewarding appropriate behavior such as following rules and participating in lessons. The system works this way:

- Each student starts at level 1. To move up to succeeding levels, the child must meet certain behavioral expectations every day for a month.
- At each succeeding level, privileges are increased.
- At the end of the day, students discuss their behavior. A daily report card is sent home, and a graph is used to chart students' progress.

Another variation of a point or token system focused on increasing student work completion is a tic-tac-toe game developed by a school psychologist in Sandy, Utah. The game consists of a specially made tic-tac-toe card (8 1/2- by 11-inch card with nine pockets for holding the tokens), tokens, reinforcements, and progress charts. Each square on the tic-tac-toe board has a number, that corresponds to a number on a token. The object of the game is to place three

tokens in their pockets across, down or diagonally on the playing card. Numbers representing units of work to be completed (e.g., number of questions to answer or pages to read) are also printed on the tokens. Here is how the game is played. The student draws a token and completes the amount of work indicated. Once the work is completed, the student matches the token to the square on the card. This process continues until the student has achieved a "win." To keep motivation high and to show the students' progress, charts are kept.

Charting progress can be not only reinforcing but also fun. In Sandy, Utah, "magic grids" add the element of surprise to reinforcement. The "Magic Grid" is a nine space grid with the numbers 1 through 5 listed at the top of each space. In each space a reinforcement has been written in invisible ink. Students randomly select a space and tally points in that space. When a student has earned all of the points for that square, the secret message is revealed. Another variation is the "Stairway to Success" chart. Students earn points toward each stair, receiving a reinforcement when they reach the top.

Learning New Behaviors

When helping students learn new behaviors such as positive social skills, teachers can use a combination of instructional strategies,

including:

- Modeling.
- Rehearsing appropriate behavior.
- Role playing.
- Continuous reinforcement.
- Prompting.

Try This

Have students draw cards with rewards printed on them to add an element of "chance" to your reinforcement system.

Omaha, Nebraska

Teaching Students

Try This

Give Good Slips to students when they demonstrate desired behavior. The slips can be turned in for rewards. Those students who earn more than the required number needed for a reward can enter a special drawing for a bonus prize.

Kenosha, Wisconsin

"Target Behavior of the Day" is a practice used in Jacksonville, Florida, that helps students think about good classroom behavior on a daily basis. At the elementary level, teachers introduce this practice by asking students to make a list of specific behaviors that are desirable in the classroom such as raising your hand, listening when others talk, waiting your turn, speaking with an inside voice (i.e., using a low tone of voice inside, even though louder voices can be used outside on the playground), and cleaning up your area. These behaviors are then written on large strips of posterboard and displayed — one each day — on the "Target Behavior of the Day" bulletin board. During the day, the teacher records a mark on a tally card each time a student displays the behavior. At day's end, the teacher recognizes students who have modeled the behavior. For older students who need more challenge, this technique can be adapted by listing all of the desired behaviors and keeping the targeted behavior a secret from the group until the end of the day.

Providing constructive feedback to the student is important. Middle school teachers in Lake Villa, Illinois, have come up with an approach to helping students demonstrate positive academic

and social behaviors. Each Friday, teachers write a brief progress report on the students, describing the students' behavior, effort, classroom performance, homework completion, and present grade point average. Before leaving school, the students collect the reports and meet with a designated adult to discuss the comments. During this meeting, the students and adults work together to problem solve and suggest alternatives where needed.

Verbal prompting has also been found to help students better understand the requirements of their environment. In Des Moines, Iowa, teachers help ease transition — generally a very difficult time for many students with attention deficit disorder — by telling the student when there are "2 minutes to go before..." Even with young students who might not comprehend time, the cue helps to orient the child to the approaching change.

Enlisting Colleagues' Support

Some students will demand more attention and understanding. At these times, consider enlisting the help of your colleagues — either

individually or on teams — in supporting the student's behavioral growth.

In Irvine, California, teachers find it helpful to come prepared to team meetings with the following information about the student's behavior:

- Statement of problem behaviors.
- Desired alternative behaviors.
- Previous attempts at modification in the classroom: what works and what doesn't work.
- Special health considerations.
- Previously used reinforcement mechanisms: levels of success.

Using this information as a guide, a decision might be made for a colleague to serve as another set of eyes in the classroom to gather more insight into how the student might be helped to develop more positive behaviors. Ultimately, this information forms the basis for a classroom intervention plan.

Working Together with Families

Attention deficit disorder affects children in all life situations. Communication with the child's family is one of the most important components of any school

program.

Invite parents to meet with you and help you plan the child's educational program. Be sensitive to the parents' frustration and fears. Reaffirm your commitment to helping the child be a success.

Some parents are excellent candidates for classroom service. In addition to serving as classroom aides, parents can also be enlisted to provide special assistance. For example, teachers in Fort Lauderdale call upon parents to serve as guest lecturers on unit topics such as woodworking, cooking, or chess.

Families Help Shape Behaviors

The success of a classroom behavioral management program can be enhanced by the family.

Educators at Westside Community Schools have developed a classroom-home strategy for involving families in reinforcing targeted positive student behaviors. Students receive points each hour for demonstrating positive classroom survival skills such as completing tasks and assignments, following instructions, and remaining in one's seat. Points are recorded on a form, which is reviewed at home. Families agree to reward or withhold privileges in the home depending on their child's

performance. A special procedure allows students to earn back points at home if they have had an unsuccessful day at school.

To enable students to become better organized about their homework assignments, an assignment sheet was developed by a teacher at St. Charles School in Boardman, Ohio. The assignment sheet lists each subject and provides a space where the student indicates whether or not the homework was completed. Throughout the day, the sheets are periodically reviewed to ensure that students are recording assignments. As students demonstrate independence in completing assignments, the number of reviews is decreased. Parents are expected to review and sign off on the sheets. Moreover, parents agree that uncompleted homework will be completed at school, even if it means that they have to furnish transportation home after school hours.

These Students Are Worth the Effort

The bottom line is not to give up on any student. Although students with attention deficit disorder might challenge your patience and cause momentary despair, helping them succeed can be especially rewarding. The modifications, alterations, and accommodations you make today may have a lasting

effect on the lives of these students in the future.

Making It Work in the Classroom

Across the country, teachers are helping students with attention deficit disorder succeed in their classrooms. They are helping students organize their work, supporting their attempts at positive classroom behavior, and building relationships with their families.

We'll meet two classroom teachers who are making a difference in the lives of their students. What makes these teachers so outstanding is their commitment to teaching all children. They acknowledge and respect learning differences and see to it that every child has every opportunity to learn.

Your Notebook Should Look Like This...

Robert King marked his 25th year working with middle-school-aged students in 1993. Over the years, he has come to accept the fact that many students — especially those with attention deficit disorder — will have difficulty keeping assignments organized in his geography and social studies classes. To make sure that all students are successful, he has developed an effective approach to structuring class assignments and work at Drexel Hill Middle School in Pennsylvania.

Acknowledging students' short attention spans, the first thing Mr. King did was reduce his reliance on the textbook, making use of handouts for the majority of assignments instead. While this approach addresses attention span difficulties, it requires that students have the ability to organize and keep track of these handouts. Mr. King's greatest challenge was figuring out how he could assist students with organization while at the same time helping them to become independent. His solution: an organization procedure that is routinized for each unit of study.

Students are expected to keep three-ring note books. At the beginning of each unit, Mr. King has students create a table of contents that will become the first page in their notebook. He prepares a model table of contents with them, eventually displaying his sheet on the bulletin board under the prominent heading, "Your Notebook Should Look Like This...."

As each succeeding assignment is given, Mr. King:

- Writes the assignment on the blackboard.
- Places a copy of the assignment on the bulletin board and numbers it.
- Lists the assignment on the table of contents.
- Instructs students to number their assignment, add it to their table of contents, and add it to their notebooks.

This strategy allows students to see what the current notebook should look like, and it also helps students who were absent quickly see what they have missed.

At the end of each unit, notebooks are handed in and graded. Mr. King notes in the table of contents next to each item whether or not the work was completed. A copy of the table of contents is then sent home to parents, who must review it and return it with a signature. In advance of a unit, Mr. King makes the table

of contents available to parents, who use it at home to help their child complete homework and stay on top of the work.

Structuring Class Presentations: No Surprises

Students arrive in class with their notebooks. On the blackboard, Mr. King has written their assignment for the day. Class periods are "chunked" or broken down into thirds to accommodate short attention spans.

As a matter of routine, Mr. King begins the first 15-minute segment with current events. Each week, students are expected to bring in a current event and share it with the group. During this sharing, students take notes which they will be allowed to use on their weekly quiz. Some students have found that when they circle important points in their notes, their quiz scores increase.

After 15 minutes of current events, the class shifts to reviewing their work from the previous day. As students retrieve their worksheets from their notebook, Mr. King walks through the aisles and marks their worksheets with a stamp pad. During group review, Mr. King draws on a number of instructional techniques that keep students engaged and focused on the important content. He

- Summarizes key words in

answers.

Try This

Reward students who come prepared for test reviews with tokens that they can cash in for extra points on their exam.

Making It Work in the Classroom

- Repeats key concepts.
- Writes key concepts on the board, as well as stating them. When appropriate, he uses maps, globes, or colored drawings to demonstrate concepts.
- Has students as a group recite difficult concepts.
- Directs questions to students who begin to drift off task.
- Moves pace along quickly.

Try This

Use movies as a reward for classroom achievement. Allow students to earn tickets that they can use to buy popcorn and juice during the movies.

The final 15 minute segment is devoted to student planning. Mr. King repeats the directions, which are also written on the blackboard, and directs the students to the first step in completing the task. From a sheet containing terms and definitions of land formations (e.g., glaciers, ponds, mountains, etc.), students are to choose one that they will research and illustrate. As students read over the sheets and decide, Mr. King walks through the room giving individual students the "go ahead" with their choice.

At the end of the class, Mr. King goes to the bulletin board and reviews what the students' notebooks should look like. He reminds them about their homework, repeating directions several times.

The key to Mr. King's success with this age group is structure — structure that is accompanied with repetition, routine, and organization. Students are constantly reminded of to what is expected of them, and, as Mr. King will tell you, "there are no surprises."

It's OK to Make Mistakes When You're Learning

Walk into Mrs. Mann's second grade classroom in San Diego, California, and you are immediately struck by an atmosphere of caring and learning. At this young age, students are still discovering how to learn, how to participate in class, and how to navigate through the day. It is a particular challenge for students with attention deficit disorder, but Mrs. Mann recognizes their struggle and builds a classroom atmosphere that respects their difficulties in learning and builds on their strengths.

It's time for language arts. Students are on the carpet, clustered around their teacher. A tic-tac-toe game keeps track of students' correct answers—

"Ocean has a long or short O?" "Clock has a long or short O?"

A girl with characteristics

typical of attention deficit disorder becomes overexcited at the thought of adding an "X" for her team and makes an "O" on the game board instead. As students start to protest, Mrs. Mann asks, "Some of us are still learning how to play the game. How do we teach someone how to play the game?" Hands go up as students proudly tell how they would be a good friend and help their classmate learn. Mrs. Mann continues, "Is it OK to make a mistake?" Students respond in the affirmative. Mrs. Mann continues, "Even teachers make mistakes. Remember yesterday when I..." Before the lesson is over today, Mrs. Mann will actually "make another mistake," during which she will have the students model appropriate supportive behaviors.

Once she has made use of this "teachable moment" to reaffirm class rules and norms, she returns the focus to the game. "How many boys and girls see the possibility for three Xs in a row?" Students excitedly start to talk out and squirm with excitement. "What signal do you make when you're excited?" Thumbs go up as students visibly settle down.

After this large-group orientation, during which time students also practice their seatwork assignment, heterogeneous small groups begin their 30-minute rotations. One group will stay with Mrs. Mann, another group will go outside with the

classroom aide, and the third group will go to their seats and complete their assignment with the help of two parent helpers. Every 30 minutes, groups rotate. This schedule allows Mrs. Mann to vary the time frame for students, providing them with a variety of tasks that keep them motivated and interested.

To make smooth transitions between lessons, Mrs. Mann uses what she calls a "passport to leave" system. Before they can leave, students must give her the correct answer to a question that is directly related to their seatwork assignment. This technique serves a dual purpose in pinpointing individual students who will need a little more assistance at the same time structuring how the students will move to their next learning station.

Success Breeds Success

During lessons, Mrs. Mann pays attention both to **what** the students are learning and to **how** they are learning. At the beginning of the year, she spends considerable time directly teaching classroom rules and codes of behavior. Among the techniques she uses to support students to behave appropriately are:

- Cueing the children with statements such as "Look at me" and "One, two, three, eyes on me."
- Eliminating materials from the learning environment

that are not presently in use. Even during a lesson

Try This

Give out "Caught Doing Something Good" awards to students who have done something extraordinarily positive.

Making It Work in the Classroom

when materials are used periodically, she will explicitly direct students to put their workbooks behind them when they are discussing an answer or to put pencils down.

- Reminding students to use "inside voices" or "inside walking," which helps them understand that depending on the setting — in this case the classroom rather than the playground — they should behave in different ways.
- Praising students who are demonstrating appropriate behavior.
- Providing seating options for students. They may sit at their desks or in a designated quiet space. Some students choose to sit outdoors to work, where they are free to talk with one another. All students have access to cardboard carrels they can put up at their desk for more privacy.
- Allowing students to wear headphones to cut down on noise distractions.
- Dimming lights to signal an activity change.

These techniques help students with attention deficit disorder participate at high levels of engagement. Potentially problematic

behaviors are controlled before they can escalate.

Second Grade Super Citizens

"I like the way students are listening." "I like the way Kevin is raising his hand." "I like the way Ashanti is sitting up straight." Mrs. Mann regularly draws attention to students who are modeling good classroom behavior.

To support her approach, she has developed a "Super Citizen Award" system. Students who have not deviated from the rules all day are eligible for a special reinforcement. Students can increase their chances for reinforcement by collecting additional Super Citizen cards throughout the day. With this feature, Mrs. Mann randomly selects students at varying intervals who are demonstrating good classroom behavior and gives them a card. Students write their names on the cards and place them in the container — this month, a jack-o-lantern — for a special drawing. At the end of the day, or several days, depending on the particular stage of skill development, Mrs. Mann draws a name or names. These students might receive a special treat or privilege such as having the stuffed panda sit on their

Try This

Enlist the help of another student — or buddy — to accompany the student to different locations.

desk, extra activity time, or special attention from someone such as the principal.

Underlying this technique is an overall classroom management system. A classroom chart containing a library card pocket for each child hangs in the front of the room. In each pocket are four cards with the following meanings attributed to them:

- Pink: Demonstrating appropriate behavior/following rules.
- Yellow: Behavior requires a warning.
- Red: Behavior requires time in the quiet chair.
- Blue: Behavior requires time away from fun activities (e.g., recess) and/or a telephone call or note to parents.

All students start out "pink" each day. Each morning, Mrs. Mann reviews the rules, paying special attention to those with which students seem to be having difficulty.

Teachers Make a Difference

Both teachers make it a daily practice to find flexible instructional solutions to student learning needs. They communicate openly to students a willingness and commitment to work with them on a personal level to achieve high academic

outcomes. Showing concern for the whole child while accommodating special needs goes a long way in helping all students feel secure in their classes.

Try This

To set a quiet mood, play soft music in the classroom.

Putting These Ideas to Work

Your professional role extends beyond the classroom. All over the country, teachers are taking a leadership role in advancing their schools' progress in meeting the needs of all students, including those with attention deficit disorder.

As with any change to a system, you will probably find that there are certain obstacles to overcome in fully implementing new ideas. There are multiple approaches to supporting implementation of a strong instructional program for students with attention deficit disorder. Many school districts are finding that at the very least they need to support:

- Professional development.
- Development of collaborative teams.
- Administrative assistance at the building level.

Professional Development Makes a Difference

Everyone has a stake in making sure that students with attention deficit disorder receive the best education possible. Parents, community members, the medical profession, teachers, administrators, and support staff — including bus drivers and lunch monitors — all can benefit from a better understanding of students with attention deficit disorder.

School districts are finding that professional development can have a positive impact on the education of students. Under the staff development umbrella are successful information sharing techniques such as inservice workshops, collaborative meetings among all who come in contact with students with attention deficit disorder, and print materials. As a classroom teacher, you can play an important role in shaping workshop agendas, serving on collaborative teams, and making recommendations for print materials.

Teachers Can Help Shape Workshop Agendas

The first task focuses on topic selection. School districts, such as Colorado Springs, Colorado, Reno, Nevada, and Raleigh, North Carolina, each of which has a track record in designing inservice presentations, suggest getting started with the following topics:

- Overview and characteristics of attention deficit disorder.
- Medical interventions.
- Identification and screening procedures.
- Classroom interventions.
- Parent and family involvement.
- Community resources.
- Legal issues.

Parent workshops, which may or may not be combined with those of school district staff, often include a session on working with the child in the home. Engage parents in helping you plan and run such workshops.

The next question usually addresses who should deliver the inservice training. You can take an active role by suggesting speakers. ***Where Do I Turn? A Resource Directory of Materials About Attention Deficit Disorder*** (see "Other Useful Resources" at

the end of this booklet) provides you with an excellent beginning road map of where to turn for ideas and assistance.

At a basic level, it is critical that the workshop leader have training directly related to students with attention deficit disorder, as well as direct experience that is relevant to the participants. Because attention deficit disorder is a relatively new area, there may not be an abundance of qualified trainers. If this is the case, suggest to your district that they consider, as was done in Billings, Montana, identifying someone in the district who is willing to become trained in return for delivering district-wide sessions.

Putting Ideas to Work

In the spirit of collaboration, which is at the core of so many successful programs for students with attention deficit disorder, team-led workshops are growing in popularity. Here are some starting points suggested by other districts:

- In Colorado Springs, the social worker and school psychologist co-lead training sessions in which they invite guest speakers from the community to comment on topics such as legal and medical issues.
- Panel discussions are a good way to bring together diverse views on the topic, while at the same time acknowledging the contributions that different professionals make. In Jacksonville, Florida, educators model the team approach on their panels by including the school psychologist, medical doctor, special and general education teachers, a parent, and a student.
- In Ohio, a parent group makes videotapes that can be used in subsequent years for training.

Through Collaboration, New Ideas Are Realized

Learning from colleagues and other knowledgeable people is one of the best ways to

discover new ideas and approaches. Strategies for addressing the needs and strengths of students with attention deficit disorder can be identified through school-based assistance teams, special-general education teacher partnerships, and community action committees.

Teachers often report satisfaction with collaborative models, primarily citing the opportunity they provide to share knowledge, expand skills, and develop creative solutions to problems.

- The Student Services Division in San Diego, California, put together a core team of consultants from nursing, psychology, and counseling whose role it was to increase the knowledge and skills of school personnel while at the same time coordinating services. Mentor teachers in the district also took on a leadership role in assisting classroom teachers to meet special challenges in their schools.
- The Orange County Public Schools supports general education classroom teachers with a cooperative consultation model that teams them with special educators and other school support personnel. The six-step

Try This

Busy schedules and lack of transportation can limit workshop attendance. Ask your local cable network to broadcast sessions.

Sturgeon Bay, Wisconsin

process works this way:

Step 1. Student needs are identified.

Step 2. Classroom expectations are described.

Step 3. A comparison is made between the student's skills and course expectations. Special attention is given to other students in the classroom who have similar needs.

Step 4. Instructional strategies are suggested and a plan made for implementing them in the classroom.

Step 5. The plan is implemented, with support from the collaborators.

Step 6. Implementation is monitored. When necessary, the plan is modified.

- Parents, educators, and community leaders in North Canton, Ohio, formed the **ADD Partnership**, a parent-directed organization, to increase awareness and foster information exchange about attention deficit disorder. The ADD Partnership offers training and materials to parents and educators.

Other Ideas That Get the Message Out

In addition to training events and collaborative teams, school districts are finding

other innovative techniques that help them communicate with the community and district staff about attention deficit disorder.

In some cases, districts have formed working groups charged with identifying and communicating information about attention deficit disorder. A Task Force on Attention Deficit Disorder was established in Baltimore, Maryland, to spearhead information dissemination. Comprised of parents, educators, and community members, the task force developed brochures describing characteristics and instructional tips that were sent to all district teachers and parents. This task force also assisted in conducting inservice workshops.

Brochures can be particularly useful in helping individuals understand attention deficit disorder. Try and target these brochures and flyers to the interests and awareness needs of specific groups.

Manuals that document district procedures, especially as they relate to screening, add an element of consistency and comfort. If your district does not already have a procedures handbook on identifying, screening and working with students with attention deficit disorder, encourage it to do so. District educators in Raleigh, North Carolina, found that their screening manual facilitated more consistent and systematic practices. The

Putting Ideas to Work

manual included a recommended screening procedure, general information on attention deficit disorder, suggested classroom interventions, and recommended home and school behavior rating scales.

Finally, it is important to link up with other community-based organizations that are providing services related to attention deficit disorder. In some states, local support groups and organizations for parents have been identified.

Encourage Administrator Support

Whenever new innovations and approaches are introduced in schools, administrators are usually called upon to facilitate smooth and effective implementation. It is important to work with your building principal when planning instructional supports for students with attention deficit disorder.

Help your administrator determine what will best support you and your colleagues. Administrators need to know from you what they can do to support better outcomes for your students. Often, you are in the best

position to identify specific barriers to success and solutions for overcoming them. Administrators can be supportive of the process by providing teachers with time to meet and plan, establishing opportunities for them to form partnerships with other professionals and parents, and identifying resources. Share with your administrator ideas from other districts that have helped their staffs move forward. For example:

- Many social skills approaches that shape new behaviors require giving frequent positive feedback to the student during the initial training phase. To assist classroom teachers, educators in the Irvine Unified School District, in California, entered into a partnership with the local university. Behavioral specialists from the university complete their practicum requirement in the schools where they provide social skills training to identified students.
- Scheduling a workshop for a diverse group of professionals and community members can be challenging. Meetings might be held over lunch or on Saturdays — whenever all participants are free. Besides taking up

well-deserved leisure time, often these atypical times require financial outputs, such as fees for baby sitters. You might follow the lead of a Kentucky district and encourage your own district to provide child care during these times. Or consider, as Billings, Montana, did, rewarding the extra efforts of those who attend workshops by awarding graduate credit hours.

- Assign a professional staff position responsible for coordinating efforts on behalf of students with attention deficit disorder to help get programs in place and off to a good start. The school board of Broward County, Florida, found that having a designated person design guidelines for serving students with attention deficit disorder was a key to the success of its program. Both the Rowen-Salisbury, North Carolina, and the Kenosha, Wisconsin, school districts employ a full-time support teacher, who is charged with creating procedures, assisting schools in implementing them, and acting as a liaison to the medical community.
- Establish a building contact person for referrals and questions. In Louisville, Kentucky, and Salisbury, North Carolina, the school counselor serves this role.

Making It Work

There are rarely any easy answers when first putting a program into place. As with any new approach, the extended efforts that you expend in laying the foundation will serve you well in the long term. While we can all envision major changes that would facilitate this undertaking, as you might have noticed in the examples, it is often the little things that move your work forward on a daily basis.

Our children and youth are our greatest resource for the future. We cannot afford to waste one life. The more we can do today to help all students succeed, the closer we will be to reaching our goal of educating citizens to their highest potential.

Try This

Ask your librarian to add resources on attention deficit disorder to the school's professional collection. Encourage community groups to raise money for these purchases.

Washoe County School District, Reno, Nevada

Locating Additional Resources

What can we learn from nationally funded centers? As was stated in the introduction, the information in this booklet was drawn in part from the work completed at the five OSEP-funded centers on attention deficit disorder. A special issue of *Exceptional Children* (Volume 60, Number 2) focused on the work of these centers and is highly recommended for those readers who want a more research-oriented discussion of the issues.

Full-length syntheses and executive summaries of the centers' work are available through the ERIC Document Reproduction Service (1-800-443-ERIC). If you have a computer and modem, you can also access the documents through two national on-line information services:

- SpecialNet (1-800-927-3000), available on the PROGRAM.EVAL bulletin board.
- CompuServe (1-800-524-3388), available by asking Representative #464 about the "A.D.D. Forum."

Assessment and Characteristics of Children with Attention Deficit Disorder. R. A. Dykman, P. T. Ackerman, & T. J. Raney, Department of Pediatrics, Arkansas Children's Hospital, Little Rock, Arkansas.

The synthesis provides an overview of the knowledge base to date along with a history of the field, definitions, epidemiology, etiology, biological theories, experimental approaches, and information about assessment. The work contains a review of the assessment instruments used to assess attention deficit disorder.

The Effects of Stimulant Medication on Children with Attention Deficit Disorder: A Review of Reviews. J. M. Swanson, University of California-Irvine ADD Center, Irvine, California.

The report represents a review and synthesis of the literature addressing the use of stimulant medication to treat children with attention deficit disorder.

Promising Practices in Identifying and Educating Children with Attention Deficit Disorder. B. Burcham & L. Carlson, Federal Resource Center, University of Kentucky, Lexington, Kentucky.

The report describes 28 practices for identifying and instructing students with attention deficit disorder. The descriptions are based on field

observations, interviews, and written documentation.

Research Synthesis on Education Interventions for Students with Attention Deficit Disorders. (March 1993). T. A. Fiore, E. A. Becker, & R. C. Nero, ADD Intervention Center, Center for Research in Education, Research Triangle Park, North Carolina.

The synthesis discusses research conducted in the following areas: positive reinforcement of token reinforcement, behavior reduction, response cost, self-instruction or cognitive-behavioral training, parent or family training, task or environmental stimulation, and biofeedback.

A Synthesis of Research Literature on the Assessment and Identification of Attention Deficit Disorder. J. D. McKinney, M. Montague, & A. M. Hocutt, Miami Center for Synthesis of Research on Attention Deficit Disorder, University of Miami, Coral Gables, Florida.

The synthesis is organized around the following topics: review of instruments for assessing attention deficit disorder, educational characteristics and coexisting disorders, assessment and identification in preschool, family characteristics, ethnicity, and socioeconomic status related to assessment and identification.

Locating Additional Resources

Other Useful Resources

There are a number of books, pamphlets, and manuals available that take a practical look at educating students with attention deficit disorder. Probably one of the best resources to get you started is **Where Do I Turn? A Resource Directory of Materials About Attention Deficit Disorder**, which is available from the following groups:

- American Federation of Teachers (AFT)
- Association for Supervision and Curriculum Development (ASCD)
- Attention Deficit Disorder Association (ADDA)
- Children and Adults with Attention Deficit Disorder (CHADD)
- Council for Exceptional Children (CEC)
- Learning Disabilities Association (LDA)
- National Association of Elementary School Principals (NAESP)
- National Association of School Psychologists (NASP)

- National Association of State Boards of Education (NASBE)
- National Education Association (NEA)
- National Information Center for Children and Youth with Disabilities (NICHY)
- National Parent Teacher Association (NPTA)

Among its many sections, the directory lists the following:

- National Organizations
- State Resources
- General Sources of Information
- Resources for Parents
- Resources for Children with Attention Deficit Disorder
- Resources for Adults with Attention Deficit Disorder
- Resources for Educators

Media products, publishers, and other publications such as newsletters are also included.

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United States Senate
WASHINGTON, DC 20510

March 3, 2000.

Jane B. Henney, M.D.
Commissioner, Food and Drug Administration
5600 Fishers Lane, Room 14-71
Rockville, MD 20857

Dear Dr. Henney:

We were troubled to learn of a study recently published in the *Journal of the American Medical Association (JAMA)* which found a rapidly increasing use of stimulants and anti-depressants by preschoolers, despite a lack of information about the safety of these products for young children. As you know, the dangerous shortage of medicines labeled for children has been a long-standing concern of ours. That is why we authored the Better Pharmaceuticals for Children Act, which was enacted into law as part of the Food and Drug Administration Modernization Act (FDAMA) of 1997.

The Better Pharmaceuticals for Children Act provides a market incentive for drug companies to make the extra effort needed to test their products for children. By all accounts, this incentive approach is beginning to close the dangerous gap in knowledge about how drugs work in children. In just the 18 months since the initiation of the incentive program, research has been completed on 19 drugs that were previously used for children without adequate information about safety. These studies have already resulted in new safety information being added to six drugs, with labeling changes expected for the other 13 in the near future. In addition, pediatric studies of more than 125 additional drugs are currently underway. In contrast, in the five years prior to enactment of the legislation, only 11 studies to gather additional safety information about drugs already on the market were conducted.

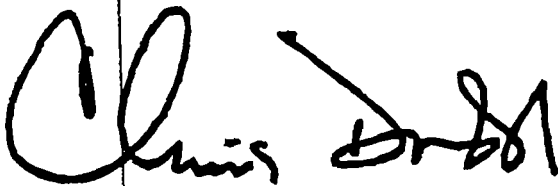
But, while progress has been made, we still have a long way to go to make sure that children are not an afterthought when it comes to drug research — as the *JAMA* article so clearly highlights. As reported in *JAMA*, doctors are prescribing powerful psychiatric drugs like Ritalin and Prozac for preschoolers at rates that have doubled or even tripled from 1991 to 1995. Given all that we know about the astonishing pace of brain development in young children, it is extremely troubling that the effect of the drugs on children's long-term cognitive, social, and emotional development are largely unknown.

We are pleased with the progress you have made in implementing the Better Pharmaceuticals for Children legislation. However, major work remains to be done, particularly with regard to psychiatric drugs. We understand that Clonidine, an adult blood pressure medication that is being used for attention deficit disorder in children, is on the list of products that your agency has identified as needing better pediatric information, but that no request for studies has yet been made of the manufacturer. We also understand that Prozac is now being

studied under our incentive program for children aged seven and older, but even when these studies are completed, we will still lack information about its safety in pre-school age children.

Therefore, we urge you to make the pediatric testing of psychiatric drugs a high priority for your agency. We strongly encourage you to work with pharmaceutical manufacturers to complete the pediatric research they have begun and to initiate research for those products not yet being studied. We also urge you to work with the National Institute of Child Health and Human Development to facilitate research on off-patent drugs such as Ritalin, for which the market exclusivity incentive is not appropriate.

Thank you again for your continued support of our efforts to secure better information about the safety and effectiveness of prescription drugs for children. In the absence of this much-needed information, the continuation of current prescribing practices holds too dear a price: the safety of our children.

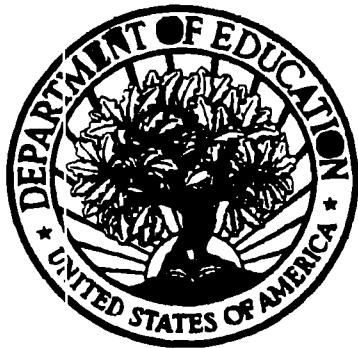
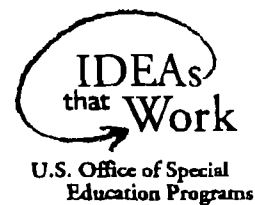


CHRISTOPHER J. DODD
United States Senator

Sincerely,



MIKE DEWINE
United States Senator

TO: *Dennis Adler*From: *Ann O'Leary**6-5557***FAX**

**U.S. DEPARTMENT OF EDUCATION
OFFICE OF SPECIAL EDUCATION AND REHABILITATIVE SERVICES
OFFICE OF SPECIAL EDUCATION PROGRAMS
OFFICE OF THE DIRECTOR**

TELEPHONE NO : (202) 205-5507

Switzer Building - Room 3086

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DATE: 3/15/00

TO	
Ann O'Leary	
202-456-6275	202-456-2878-Fax

FROM	
Patty Guard	

OFFICE OF SPECIAL EDUCATION PROGRAMS
TALKING POINTS, 3/15/00
USE of RITALIN OR OTHER STIMULANTS

FIVE MAIN POINTS:

- **SYSTEMIC ISSUES PREVENT PARENTS OF CHILDREN WITH BEHAVIOR PROBLEMS FROM RECEIVING THE KIND OF COMPREHENSIVE INTERVENTIONS THAT WE KNOW WORK.** Across communities (education, medicine, social services), professionals struggle to develop and widely implement the types of long-term, effective behavioral and social interventions that research bears out for young children who exhibit serious challenging behavior. Parents and educators of children with ADHD-type symptoms are often limited by a lack of available intervention programs and supports, and turn to stimulants for the “quick fix” that may not meaningfully help the child and his or her family develop better social and self-management skills.
- **PRESCRIPTION OF ANY MEDICATION IS A MEDICAL AND PARENTAL DECISION, BEST MADE IN CONJUNCTION WITH EDUCATORS.** It is important to reinforce that the decision to prescribe any medication is the responsibility of medical, not educational, professionals, after consultation with the family and agreement on the most appropriate treatment plan. Educators can and should be involved in the assessment and day-to-day monitoring of any stimulant medication prescribed.
- **WE DON'T KNOW THE LONG-TERM IMPACT OF RITALIN ON CHILDREN.** Very little research has been conducted to determine long-term effects of psychostimulants on all children, particularly young children and adolescents (e.g., the MTA study sample was ages 7-9.9 years).

- **WE DO KNOW THAT EARLY INTERVENTION WORKS FOR MANY YOUNG CHILDREN WHO PRESENT EARLY BEHAVIORAL PROBLEMS.** Quality, long-term cognitive-behavioral interventions that are well-designed and implemented have been shown to reduce problem behaviors.
- **WE ALSO KNOW THAT WHILE MEDICATION ALONE CAN BE EFFECTIVE IN REDUCING SOME ADHD SYMPTOMS IN SCHOOL-AGE CHILDREN IN THE SHORT TERM, COMBINED BEHAVIORAL AND MEDICAL TREATMENTS ARE OFTEN MORE EFFECTIVE THAN MEDICATION ALONE.** Some efforts at managing the behavioral manifestations of ADHD have shown some promise- clinical behavioral therapy, parent training, and contingency management. Some research indicates that the combination of medication and behavioral management result in the best outcomes. For example, some studies have shown that medication has only limited short-term benefits on social adjustment and academic achievement. While medication can be incorporated into other treatment strategies, parents and teachers should not use medication as the sole method of helping children.

Other background:

NIH Consensus Conference and Statement:

NIH convened a consensus development conference on the Diagnosis and Treatment of ADHD in November 1998. Presentations were made on assessment, treatment, and services for children and adults with ADHD. OSEP sponsored the conference, and Lou Danielson presented a paper. A 13-member panel developed a consensus statement.

As an outgrowth of the conference and statement, NIMH has announced a Request for research Applications (RFA) to study preventive, behavioral or other innovative interventions for children at risk for or diagnosed with ADHD. Applications are due 4/27/00. OSEP is providing recommendations of reviewers for the RFA.

OSEP Materials:

The use of stimulant medication and other proven diagnostic and treatment practices were the topic of technical assistance products developed several years ago by the U.S. Office

of Special Education Programs. These materials, designed for school personnel, have been widely distributed and are currently available from the ERIC Clearinghouse on Disabilities and Gifted Education, 1-800-328-0272. These materials will be updated and re-released this year.

OSEP is also collecting its first nationally representative data on the prevalence of, and special education services to, students with ADHD through its new study of State and Local Implementation of IDEA.

Abstract of Multimodal Treatment Study of Children with ADHD (MTA) study findings:

A 14-Month Randomized Clinical Trial of Treatment Strategies for Attention-Deficit/Hyperactivity Disorder

Authored by: *The MTA Cooperative Group*

Background Previous studies have demonstrated the short-term efficacy of pharmacotherapy and behavior therapy for attention-deficit/hyperactivity disorder (ADHD), but no longer-term (ie. >4 months) investigations have compared these 2 treatments or their combination.

Methods A group of 579 children with ADHD Combined Type, aged 7 to 9.9 years, were assigned to 14 months of medication management (titration followed by monthly visits); intensive behavioral treatment (parent, school, and child components, with therapist involvement gradually reduced over time); the two combined; or standard community care (treatments by community providers). Outcomes were assessed in multiple domains before and during treatment and at treatment end point (with the combined treatment and medication management groups continuing medication at all assessment points). Data were analyzed through intent-to-treat random-effects regression procedures.

Results All 4 groups showed sizable reductions in symptoms over time, with significant differences among them in degrees of change. For most ADHD symptoms, children in the combined treatment and medication management groups showed significantly greater improvement than those given intensive behavioral treatment and community care. Combined and medication management treatments did not differ significantly on any direct comparisons, but in several instances (oppositional/aggressive symptoms, internalizing symptoms, teacher-rated social skills, parent-child relations, and reading achievement) combined treatment proved superior to intensive behavioral treatment and/or community care while medication management did not. Study medication strategies were superior to community care treatments, despite the fact that two thirds of community-treated subjects received medication during the study period.

Conclusions For ADHD symptoms, our carefully crafted medication management was superior to behavioral treatment and to routine community care that included medication. Our combined treatment did not yield significantly greater benefits than medication management for core ADHD symptoms, but may have provided modest advantages for non-ADHD symptom and positive functioning outcomes.

Arch Gen Psychiatry. 1999;56:1073-1086



American Psychiatric Association
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FAX COVER

TO: Ruby

FAX: 2/456-2878

FR: Jay Cutler

Please contact me at (202) 682-6060 if there are any questions.

Number of pages transmitted including cover: 9 Date: 3/15/00

Message:

Ruby —

How the diagnosis comes into being
by the medical profession.

— Jay

Important Notice:

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DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS

FOURTH EDITION

DSM-IVTM



PUBLISHED BY THE
AMERICAN PSYCHIATRIC ASSOCIATION
WASHINGTON, DC

Attention-Deficit/Hyperactivity Disorder

Diagnostic Features

The essential feature of Attention-Deficit/Hyperactivity Disorder is a persistent pattern of inattention and/or hyperactivity-impulsivity that is more frequent and severe than is typically observed in individuals at a comparable level of development (Criterion A). Some hyperactive-impulsive or inattentive symptoms that cause impairment must have been present before age 7 years, although many individuals are diagnosed after the symptoms have been present for a number of years (Criterion B). Some impairment from the symptoms must be present in at least two settings (e.g., at home and at school or work) (Criterion C). There must be clear evidence of interference with developmentally appropriate social, academic, or occupational functioning (Criterion D). The disturbance does not occur exclusively during the course of a Pervasive Developmental Disorder, Schizophrenia, or other Psychotic Disorder and is not better accounted for by another mental disorder (e.g., a Mood Disorder, Anxiety Disorder, Dissociative Disorder, or Personality Disorder) (Criterion E).

Inattention may be manifest in academic, occupational, or social situations. Individuals with this disorder may fail to give close attention to details or may make careless mistakes in schoolwork or other tasks (Criterion A1a). Work is often messy and performed carelessly and without considered thought. Individuals often have difficulty sustaining attention in tasks or play activities and find it hard to persist with tasks until completion (Criterion A1b). They often appear as if their mind is elsewhere or as if they are not listening or did not hear what has just been said (Criterion A1c). There may be frequent shifts from one uncompleted activity to another. Individuals diagnosed with this disorder may begin a task, move on to another, then turn to yet something else, prior to completing any one task. They often do not follow through on requests or instructions and fail to complete schoolwork, chores, or other duties (Criterion A1d). Failure to complete tasks should be considered in making this diagnosis only if it is due to inattention as opposed to other possible reasons (e.g., a failure to understand instructions). These individuals often have difficulties organizing tasks and activities (Criterion A1e). Tasks that require sustained mental effort are experienced as unpleasant and markedly aversive. As a result, these individuals typically avoid or have a strong dislike for activities that demand sustained self-application and mental effort or that require organizational demands or close concentration (e.g., homework or paperwork) (Criterion A1f). This avoidance must be due to the person's difficulties with attention and not due to a primary oppositional attitude, although secondary oppositionalism may also occur. Work habits are often disorganized and the materials necessary for doing

the task are often scattered, lost, or carelessly handled and damaged (Criterion A1g). Individuals with this disorder are easily distracted by irrelevant stimuli and frequently interrupt ongoing tasks to attend to trivial noises or events that are usually and easily ignored by others (e.g., a car honking, a background conversation) (Criterion A1h). They are often forgetful in daily activities (e.g., missing appointments, forgetting to bring lunch) (Criterion A1i). In social situations, inattention may be expressed as frequent shifts in conversation, not listening to others, not keeping one's mind on conversations, and not following details or rules of games or activities.

Hyperactivity may be manifested by fidgetiness or squirming in one's seat (Criterion A2a), by not remaining seated when expected to do so (Criterion A2b), by excessive running or climbing in situations where it is inappropriate (Criterion A2c), by having difficulty playing or engaging quietly in leisure activities (Criterion A2d), by appearing to be often "on the go" or as if "driven by a motor" (Criterion A2e), or by talking excessively (Criterion A2f). Hyperactivity may vary with the individual's age and developmental level, and the diagnosis should be made cautiously in young children. Toddlers and preschoolers with this disorder differ from normally active young children by being constantly on the go and into everything; they dart back and forth, are "out of the door before their coat is on," jump or climb on furniture, run through the house, and have difficulty participating in sedentary group activities in preschool classes (e.g., listening to a story). School-age children display similar behaviors but usually with less frequency or intensity than toddlers and preschoolers. They have difficulty remaining seated, get up frequently, and squirm in, or hang on to the edge of, their seat. They fidget with objects, tap their hands, and shake their feet or legs excessively. They often get up from the table during meals, while watching television, or while doing homework; they talk excessively; and they make excessive noise during quiet activities. In adolescents and adults, symptoms of hyperactivity take the form of feelings of restlessness and difficulty engaging in quiet sedentary activities.

Impulsivity manifests itself as impatience, difficulty in delaying responses, blurting out answers before questions have been completed (Criterion A2g), difficulty awaiting one's turn (Criterion A2h), and frequently interrupting or intruding on others to the point of causing difficulties in social, academic, or occupational settings (Criterion A2i). Others may complain that they cannot get a word in edgewise. Individuals with this disorder typically make comments out of turn, fail to listen to directions, initiate conversations at inappropriate times, interrupt others excessively, intrude on others, grab objects from others, touch things they are not supposed to touch, and clown around. Impulsivity may lead to accidents (e.g., knocking over objects, banging into people, grabbing a hot pan) and to engagement in potentially dangerous activities without consideration of possible consequences (e.g., riding a skateboard over extremely rough terrain).

Behavioral manifestations usually appear in multiple contexts, including home, school, work, and social situations. To make the diagnosis, some impairment must be present in at least two settings (Criterion C). It is very unusual for an individual to display the same level of dysfunction in all settings or within the same setting at all times. Symptoms typically worsen in situations that require sustained attention or mental effort or that lack intrinsic appeal or novelty (e.g., listening to classroom teachers, doing class assignments, listening to or reading lengthy materials, or working on monotonous, repetitive tasks). Signs of the disorder may be minimal or absent when the person is under very strict control, is in a novel setting, is engaged in especially interesting activities, is in a one-to-one situation (e.g., the clinician's office), or while the person experiences frequent rewards for appropriate behavior. The symptoms are more likely

to occur in group situations (e.g., in playgroups, classrooms, or work environments). The clinician should therefore inquire about the individual's behavior in a variety of situations within each setting.

Subtypes

Although most individuals have symptoms of both inattention and hyperactivity-impulsivity, there are some individuals in whom one or the other pattern is predominant. The appropriate subtype (for a current diagnosis) should be indicated based on the predominant symptom pattern for the past 6 months.

314.01 Attention-Deficit/Hyperactivity Disorder, Combined Type. This subtype should be used if six (or more) symptoms of inattention and six (or more) symptoms of hyperactivity-impulsivity have persisted for at least 6 months. Most children and adolescents with the disorder have the Combined Type. It is not known whether the same is true of adults with the disorder.

314.00 Attention Deficit/Hyperactivity Disorder, Predominantly Inattentive Type. This subtype should be used if six (or more) symptoms of inattention (but fewer than six symptoms of hyperactivity-impulsivity) have persisted for at least 6 months.

314.01 Attention-Deficit/Hyperactivity Disorder, Predominantly Hyperactive-Impulsive Type. This subtype should be used if six (or more) symptoms of hyperactivity-impulsivity (but fewer than six symptoms of inattention) have persisted for at least 6 months. Inattention may often still be a significant clinical feature in such cases.

Recording Procedures

Individuals who at an earlier stage of the disorder had the Predominantly Inattentive Type or the Predominantly Hyperactive-Impulsive Type may go on to develop the Combined Type and vice versa. The appropriate subtype (for a current diagnosis) should be indicated based on the predominant symptom pattern for the past 6 months. If clinically significant symptoms remain but criteria are no longer met for any of the subtypes, the appropriate diagnosis is Attention-Deficit/Hyperactivity Disorder, In Partial Remission. When an individual's symptoms do not currently meet full criteria for the disorder and it is unclear whether criteria for the disorder have previously been met, Attention-Deficit/Hyperactivity Disorder Not Otherwise Specified should be diagnosed.

Associated Features and Disorders

Associated descriptive features and mental disorders. Associated features vary depending on age and developmental stage and may include low frustration tolerance, temper outbursts, bossiness, stubbornness, excessive and frequent insistence that requests be met, mood lability, demoralization, dysphoria, rejection by peers, and poor self-esteem. Academic achievement is often impaired and devalued, typically leading to conflict with the family and school authorities. Inadequate self-application to tasks that require sustained effort is often interpreted by others as indicating laziness, a poor sense of responsibility, and oppositional behavior. Family relationships are often characterized by resentment and antagonism, especially because variability in the individual's symp-

tomatic status often leads parents to believe that all the troublesome behavior is willful. Individuals with Attention-Deficit/Hyperactivity Disorder may obtain less schooling than their peers and have poorer vocational achievement. Intellectual development, as assessed by individual IQ tests, appears to be somewhat lower in children with this disorder. In its severe form, the disorder is very impairing, affecting social, familial, and scholastic adjustment. A substantial proportion of children referred to clinics with Attention-Deficit/Hyperactivity Disorder also have Oppositional Defiant Disorder or Conduct Disorder. There may be a higher prevalence of Mood Disorders, Anxiety Disorders, Learning Disorders, and Communication Disorders in children with Attention-Deficit/Hyperactivity Disorder. This disorder is not infrequent among individuals with Tourette's Disorder; when the two disorders coexist, the onset of Attention-Deficit/Hyperactivity Disorder often precedes the onset of the Tourette's Disorder. There may be a history of child abuse or neglect, multiple foster placements, neurotoxin exposure (e.g., lead poisoning), infections (e.g., encephalitis), drug exposure in utero, low birth weight, and Mental Retardation.

Associated laboratory findings. There are no laboratory tests that have been established as diagnostic in the clinical assessment of Attention-Deficit/Hyperactivity Disorder. Tests that require effortful mental processing have been noted to be abnormal in groups of individuals with Attention-Deficit/Hyperactivity Disorder compared with control subjects, but it is not yet entirely clear what fundamental cognitive deficit is responsible for this.

Associated physical examination findings and general medical conditions. There are no specific physical features associated with Attention-Deficit/Hyperactivity Disorder, although minor physical anomalies (e.g., hypertelorism, highly arched palate, low-set ears) may occur at a higher rate than in the general population. There may also be a higher rate of physical injury.

Specific Culture, Age, and Gender Features

Attention-Deficit/Hyperactivity Disorder is known to occur in various cultures, with variations in reported prevalence among Western countries probably arising more from different diagnostic practices than from differences in clinical presentation.

It is especially difficult to establish this diagnosis in children younger than age 4 or 5 years, because their characteristic behavior is much more variable than that of older children and may include features that are similar to symptoms of Attention-Deficit/Hyperactivity Disorder. Furthermore, symptoms of inattention in toddlers or preschool children are often not readily observed because young children typically experience few demands for sustained attention. However, even the attention of toddlers can be held in a variety of situations (e.g., the average 2- or 3-year-old child can typically sit with an adult looking through picture books). In contrast, young children with Attention-Deficit/Hyperactivity Disorder move excessively and typically are difficult to contain. Inquiring about a wide variety of behaviors in a young child may be helpful in ensuring that a full clinical picture has been obtained. As children mature, symptoms usually become less conspicuous. By late childhood and early adolescence, signs of excessive gross motor activity (e.g., excessive running and climbing, not remaining seated) are less common, and hyperactivity symptoms may be confined to fidgetiness or an inner

feeling of jitteriness or restlessness. In school-age children, symptoms of inattention affect classroom work and academic performance. Impulsive symptoms may also lead to the breaking of familial, interpersonal, and educational rules, especially in adolescence. In adulthood, restlessness may lead to difficulty in participating in sedentary activities and to avoiding pastimes or occupations that provide limited opportunity for spontaneous movement (e.g., desk jobs).

The disorder is much more frequent in males than in females, with male-to-female ratios ranging from 4:1 to 9:1, depending on the setting (i.e., general population or clinics).

Prevalence

The prevalence of Attention-Deficit/Hyperactivity Disorder is estimated at 3%-5% in school-age children. Data on prevalence in adolescence and adulthood are limited.

Course

Most parents first observe excessive motor activity when the children are toddlers, frequently coinciding with the development of independent locomotion. However, because many overactive toddlers will not go on to develop Attention-Deficit/Hyperactivity Disorder, caution should be exercised in making this diagnosis in early years. Usually, the disorder is first diagnosed during elementary school years, when school adjustment is compromised. In the majority of cases seen in clinical settings, the disorder is relatively stable through early adolescence. In most individuals, symptoms attenuate during late adolescence and adulthood, although a minority experience the full complement of symptoms of Attention-Deficit/Hyperactivity Disorder into mid-adulthood. Other adults may retain only some of the symptoms, in which case the diagnosis of Attention-Deficit/Hyperactivity Disorder, In Partial Remission, should be used. This diagnosis applies to individuals who no longer have the full disorder but still retain some symptoms that cause functional impairment.

Familial Pattern

Attention-Deficit/Hyperactivity Disorder has been found to be more common in the first-degree biological relatives of children with Attention-Deficit/Hyperactivity Disorder. Studies also suggest that there is a higher prevalence of Mood and Anxiety Disorders, Learning Disorders, Substance-Related Disorders, and Antisocial Personality Disorder in family members of individuals with Attention-Deficit/Hyperactivity Disorder.

Differential Diagnosis

In early childhood, it may be difficult to distinguish symptoms of Attention-Deficit/Hyperactivity Disorder from **age-appropriate behaviors in active children** (e.g., running around or being noisy).

Symptoms of inattention are common among children with low IQ who are placed in academic settings that are inappropriate to their intellectual ability. These behaviors must be distinguished from similar signs in children with Attention-Deficit/Hyperactivity Disorder. In children with **Mental Retardation**, an additional diagnosis of Attention-

Deficit/Hyperactivity Disorder should be made only if the symptoms of inattention or hyperactivity are excessive for the child's mental age. Inattention in the classroom may also occur when children with high intelligence are placed in academically **understimulating environments**. Attention-Deficit/Hyperactivity Disorder must also be distinguished from difficulty in goal-directed behavior in children from inadequate, disorganized, or chaotic environments. Reports from multiple informants (e.g., babysitters, grandparents, or parents of playmates) are helpful in providing a confluence of observations concerning the child's inattention, hyperactivity, and capacity for developmentally appropriate self-regulation in various settings.

Individuals with **oppositional behavior** may resist work or school tasks that require self-application because of an unwillingness to conform to others' demands. These symptoms must be differentiated from the avoidance of school tasks seen in individuals with Attention-Deficit/Hyperactivity Disorder. Complicating the differential diagnosis is the fact that some individuals with Attention-Deficit/Hyperactivity Disorder develop secondary oppositional attitudes toward such tasks and devalue their importance, often as a rationalization for their failure.

Attention-Deficit/Hyperactivity Disorder is not diagnosed if the symptoms are better accounted for by **another mental disorder** (e.g., Mood Disorder, Anxiety Disorder, Dissociative Disorder, Personality Disorder, Personality Change Due to a General Medical Condition, or a Substance-Related Disorder). In all these disorders, the symptoms of inattention typically have an onset after age 7 years, and the childhood history of school adjustment generally is not characterized by disruptive behavior or teacher complaints concerning inattentive, hyperactive, or impulsive behavior. When a Mood Disorder or Anxiety Disorder co-occurs with Attention-Deficit/Hyperactivity Disorder, each should be diagnosed. Attention-Deficit/Hyperactivity Disorder is not diagnosed if the symptoms of inattention and hyperactivity occur exclusively during the course of a **Pervasive Developmental Disorder** or a **Psychotic Disorder**. Symptoms of inattention, hyperactivity, or impulsivity related to the use of medication (e.g., bronchodilators, isoniazid, akathisia from neuroleptics) in children before age 7 years are not diagnosed as Attention-Deficit/Hyperactivity Disorder but instead are diagnosed as **Other Substance-Related Disorder Not Otherwise Specified**.

■ Diagnostic criteria for Attention-Deficit/Hyperactivity Disorder

A. Either (1) or (2):

- (1) six (or more) of the following symptoms of **inattention** have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

Inattention

- (a) often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities
- (b) often has difficulty sustaining attention in tasks or play activities

(continued)

☐ **Diagnostic criteria for Attention-Deficit/Hyperactivity Disorder** (*continued*)

- (c) often does not seem to listen when spoken to directly
 - (d) often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (not due to oppositional behavior or failure to understand instructions)
 - (e) often has difficulty organizing tasks and activities
 - (f) often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework)
 - (g) often loses things necessary for tasks or activities (e.g., toys, school assignments, pencils, books, or tools)
 - (h) is often easily distracted by extraneous stimuli
 - (i) is often forgetful in daily activities
- (2) six (or more) of the following symptoms of **hyperactivity-impulsivity** have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

Hyperactivity

- (a) often fidgets with hands or feet or squirms in seat
- (b) often leaves seat in classroom or in other situations in which remaining seated is expected
- (c) often runs about or climbs excessively in situations in which it is inappropriate (in adolescents or adults, may be limited to subjective feelings of restlessness)
- (d) often has difficulty playing or engaging in leisure activities quietly
- (e) is often "on the go" or often acts as if "driven by a motor"
- (f) often talks excessively

Impulsivity

- (g) often blurts out answers before questions have been completed
- (h) often has difficulty awaiting turn
- (i) often interrupts or intrudes on others (e.g., butts into conversations or games)

- B. Some hyperactive-impulsive or inattentive symptoms that caused impairment were present before age 7 years.
- C. Some impairment from the symptoms is present in two or more settings (e.g., at school [or work] and at home).
- D. There must be clear evidence of clinically significant impairment in social, academic, or occupational functioning.

(*continued*)

☐ **Diagnostic criteria for Attention-Deficit/Hyperactivity Disorder** (*continued*)

- E. The symptoms do not occur exclusively during the course of a Pervasive Developmental Disorder, Schizophrenia, or other Psychotic Disorder and are not better accounted for by another mental disorder (e.g., Mood Disorder, Anxiety Disorder, Dissociative Disorder, or a Personality Disorder).

Code based on type:

314.01 Attention-Deficit/Hyperactivity Disorder, Combined Type: if both Criteria A1 and A2 are met for the past 6 months

314.00 Attention-Deficit/Hyperactivity Disorder, Predominantly Inattentive Type: if Criterion A1 is met but Criterion A2 is not met for the past 6 months

314.01 Attention-Deficit/Hyperactivity Disorder, Predominantly Hyperactive-Impulsive Type: if Criterion A2 is met but Criterion A1 is not met for the past 6 months

Coding note: For individuals (especially adolescents and adults) who currently have symptoms that no longer meet full criteria, "In Partial Remission" should be specified.

314.9 Attention-Deficit/Hyperactivity Disorder Not Otherwise Specified

This category is for disorders with prominent symptoms of inattention or hyperactivity-impulsivity that do not meet criteria for Attention-Deficit/Hyperactivity Disorder.