



## Evidence-based Psychosocial Treatment for ADHD Children and Adolescents

Comprehensive Treatment for ADHD should always include a strong psychosocial (that is, *not medical*) component. Most professionals believe that effective psychosocial treatment is the backbone of good treatment for ADHD. Medication is a very useful addition to psychosocial treatment in many cases, yielding a combination approach that may be even more effective than psychosocial treatments alone (see “ADHD Medication Information Sheet for Parents and Teachers”). Indeed, the scientific literature on treatment for ADHD, the National Institute of Mental Health, and many professional organizations say that there are two treatments that have a solid base of scientific evidence for short-term effectiveness: behavioral psychosocial treatments—also called behavior therapy or behavior modification—and stimulant medication. Behavior modification is the *only* nonmedical treatment for ADHD with a large scientific evidence base.

### Why Use Psychosocial Treatments?

Why do professionals believe that behavioral treatment for ADHD is so important? There are several reasons. First, the problems faced by children with ADHD go well beyond their symptoms of inattentiveness, hyperactivity, and impulsivity. Most children with ADHD have problems in daily life functioning in many areas including academic performance and behavior at school, relationships with peers and siblings, noncompliance with adult requests, and relationships with their parents. These problems are extremely important because they predict long-term outcome of children with ADHD. How a child with ADHD will do in adulthood is best predicted by three things—(1) whether his or her parents use effective parenting skills, (2) how he or she gets along with other children, and (3) his or her success in school. Psychosocial treatments focus on these problems rather than the core symptoms of the disorder, so they are effective in treating these important domains. Second, in contrast to medication, behavioral treatments teach skills to parents, teachers, and children with ADHD, and these skills help overcome their impairments and are useful for a child’s lifetime. Because ADHD is a chronic condition, teaching skills that will be valuable across the lifetime is especially important. Finally, when medication is the only form of treatment, it has not been shown to improve long-term outcomes for children with ADHD. Many professionals believe that when medication is combined with behavioral approaches, both the core symptoms of ADHD and the associated problems in daily life functioning are best treated, and long-term positive outcomes will be greatest. Others believe that treatment should begin with psychosocial treatments, and medication should be added if and when it is necessary. Both are effective ways of treating ADHD and parents must decide, in consultation with their treating professionals, what is best for their child.

Behavioral treatments for ADHD should be started when the child is as young as possible. There are behavioral interventions that work well for preschoolers, elementary-students, and adolescents with ADHD, but there is consensus that starting early is better than starting later. Parents, schools, and practitioners should not put off beginning effective behavioral treatments for children with ADHD.

### What exactly is behavior modification?

Behavior modification is a form of therapy in which parents, teachers, and children are taught skills by a therapist. Parents and teachers then employ those skills in their daily interactions with their children with ADHD to improve

the children's functioning in the key areas noted above. In addition, the children with ADHD employ the skills they learn in their interactions with other children. Many parents think of behavior modification in terms of the ABCs—**A**ntecedents (things that happen before behaviors that influence them), **B**ehaviors (things the child does that parents and teachers want to change), and **C**onsequences (things that happen after behaviors that influence them). In behavioral programs, adults are taught to modify antecedents (e.g., how they give commands to children) and consequences (e.g., how they follow-up if a child obeys or disobeys a command) to change the child's behavior (that is, the child's response to the command). By consistently changing the ways that they respond to children's behaviors, adults teach the children to learn new ways of behaving.

### **What is *not* behavior modification?**

It is important to note that many psychotherapeutic treatments are *not* behavior modification. Thus, traditional individual therapy, in which a child spends time weekly with a therapist or school counselor talking about his or her problems or playing with dolls or toys, is not behavior modification. Similarly, family therapy in which a family talks with a therapist about the dynamics of the interactions among the family is also not behavior modification. Such "talk" or "play" therapies do not have teaching skills as their primary goals, and they have not been shown to work for children with ADHD. Parents who want an evidence-based psychosocial approach to working with their children with ADHD need to become informed about the characteristics of behavior modification that we discuss below so they can recognize effective behavioral treatment and be confident that what the therapist is offering will result in improved functioning for their child.

### **What are typical forms of behavior modification?**

There are three parts of effective behavioral interventions for ADHD children—parenting training, school interventions, and child-focused treatments. Although working with teachers and the children themselves are critical in the vast majority of ADHD cases, *teaching parents more effective ways of dealing with their children is the most important aspect of psychosocial treatment for ADHD*. Ideally, parent, teacher, and child interventions must be integrated to yield the best outcome. Four points apply to all three parts: (1) always start with goals that the child can achieve and improve in small steps (e.g., "baby steps"); (2) always be consistent—across different times of the day, different settings, and different people; (3) ADHD is a chronic problem for the individual and treatments need to be implemented over the long haul—not just for a few months; and (4) teaching and learning new skills take time, and children's improvement will be gradual with behavior modification. Characteristics of parent, teacher, and child interventions are listed below.

#### **(1) Parent Training**

- Behavioral approach
- Focus on parenting skills, child behavior in the home and neighborhood, and family relationships (e.g., getting along with siblings, complying with parent requests)
- Parents are taught skills by therapists and implement them at home
- Typically group-based, weekly sessions with therapist initially (8 to 12 sessions); then faded to booster sessions (monthly, quarterly)
- Continually evaluate and modify what is being done to identify what works best and continue it as long as necessary
- Plan for what will be done if parents or child backslides
- Reestablish contact with therapist for major developmental transitions (e.g., entry to middle school)

#### **(2) School Intervention**

- Behavioral approach
- Focus on classroom behavior, academic performance, and peer relationships

- Teachers are taught classroom management skills by a consultant (e.g., therapist, school psychologist or counselor) and implement them with the ADHD child during school hours
- Two to 10 hours of training are necessary depending on the teacher's prior knowledge and skills, as well as the child's severity and responsiveness
- Continually evaluate and modify what is being done to identify what works best and continue it as long as necessary
- Plan for backsliding and spread; involve all relevant school staff; integrate with parenting classes so parent learns to back up what the school is doing
- Integrate with school-wide plans, and required, school-based programs (i.e., IEPs, 504 plans)
- Reestablish contact with consultant for major developmental transitions (e.g., entry to middle school)

### (3) Child Intervention

- Behavioral and developmental approach
- Focus on teaching academic, recreational, and social/behavioral competencies, decreasing aggression, developing close friendships, and building self-efficacy
- Paraprofessional implemented, supervised by professionals
- Settings such as clinic-based weekly group sessions, after-school or Saturday sessions, and summer camps
- Typically more intensive rather than less intensive treatment is necessary (e.g., weekly clinic social skills groups are typically not effective)
- Monitor and modify as needed based on what works best; provide as long as necessary (e.g., multiple years or when deterioration occurs)
- Plan for what to do if backsliding occurs
- Integrate with school and parent treatments
- Reestablish contact with consultant for major developmental transitions (e.g., middle school entry)

### How does a behavior modification program begin?

The first step in starting a behavior modification program is a complete evaluation of the child's functional impairment in all relevant domains, including home, school (both behavioral and academic), and peer settings. Most of this information comes from parents and teachers, and that means that a professional will spend most of his or her time during the information gathering process with parents and teachers. Interaction with the child him or herself is needed for the therapist to get a sense of what the child is like. That assessment process should yield a list of target areas for treatment. Target areas—often called target behaviors—should be behaviors that differentiate the child being treated from other, nonproblematic children. *They should be behaviors that, if changed, will contribute to an improvement in the child's functioning/impairment and a positive long-term outcome.* Target behaviors can be either negative behaviors that need to be eliminated or adaptive skills that need to be developed. That means that the areas targeted for treatment will typically not be the symptoms of ADHD—overactivity, inattention, and impulsivity—but instead the specific problems that those symptoms may cause in daily life. Thus, common classroom target behaviors would be “completes assigned work at 80% accuracy” and “followed classroom rules.” At home, “played well with siblings (that is, no fights)” and “complies with parent requests or commands” are common target behaviors (lists of common target behaviors in school, home, and peer settings that parents and teachers might find useful can be downloaded in Daily Report Card school and home packets at <http://ccf.buffalo.edu>). Target behaviors are things that can be easily observed and measured so that response to treatment can be monitored and treatment can be modified as necessary.

After target behaviors are identified, behavioral interventions at home and at school follow similar formats. Parents and teachers identify the environmental conditions (the **A**'s) and consequences (the **C**'s) that are controlling those target behaviors (the **B**'s). Then behavioral treatment takes the form of parents and teachers learning and establishing programs in which the environmental antecedents and consequences are modified to change the child's target behaviors. Treatment response is constantly monitored, and the interventions are modified when they fail to have a sufficient impact or are no longer needed.

## Parent Training

Behavioral parent training programs have been around for a long time. Nearly 40 years ago the psychologists who developed behavioral parent training wrote the first books teaching others how to do what they had developed. Parenting sessions usually use a book and/or videotape that has been specially developed to teach parents how to use behavioral management procedures with their children; there are many good programs available (see list in appendix). The first session is often devoted to an overview of the diagnosis, causes, nature, and prognosis of ADHD. Thereafter, in group or individual sessions, parents learn a variety of techniques, some of which they may be already using at home but not as consistently or correctly as needed. Parents go home and implement what they learn in sessions during the week, and return to the parenting session the following week to discuss progress, problem solve, and learn a new technique.

Although many of the ideas and techniques taught in behavioral parent training are common-sense parenting techniques (everyone knows to praise their children when they are doing something good!), most parents need careful teaching and support to learn and implement the parenting skills consistently. It is very difficult for parents to buy a book, learn behavior modification, and implement an effective program with their child on their own. Help from a professional who knows how to develop and implement behavioral programs is often essential. The topics covered in a typical series of parent training sessions include the following topics in sequence.

1. Establishing house rules and structure
  - Posted chore lists
  - Posted morning and evening routines
  - Posted House Rules
  - Review until child has learned them
2. Learning to praise appropriate behaviors (praise good behavior at least five times as often as bad behavior is criticized) and ignore mild inappropriate behaviors (choose your battles)
3. Using appropriate commands
  - Obtain the child's attention: say the child's name first
  - Use command not question language ("Don't you want to be good" is a bad command!)
  - Be specific, describing exactly what the child is supposed to do (at the grocery checkout line "be good" is not a good command! "stand next to me and do not touch anything" is more specific!)
  - Be brief and appropriate to the child's age
  - State consequences and *always* follow through (praise compliance and provide consequences for noncompliance)
  - Have a firm but neutral (not angry) tone of voice
4. Using when...then contingencies
  - Give access to desired activities when the child has completed a less desired activity (e.g., ride bike when finished homework; watch TV when finished evening chores, going out with friends after completed yard work)
  - For younger children, important to have rewarding activity occur immediately

5. Planning ahead and working with children in public places
  - Explain situation to child *before* activity occurs
  - Establish ground rules, rewards, and consequences
6. Time out from positive reinforcement
  - Assign short times away from preferred activities when the child has violated expectations or rules
  - Give time off for appropriate behavior during time out and lengthen time for noncompliance with time out
  - Base times on children's ages—shorter for younger children—e.g., one minute for each year of age
7. Daily Charts—Point/token systems with rewards and consequences
  - Make charts with home rules/goals and post prominently in house
  - Establish system for rewards for following home rules and consequences for violations
  - Nickel jar for noncompliance or talking back (e.g., put a nickel in for each compliance, remove two for noncompliance)
  - Home Daily Report Card (see target list and creating a Daily Report Card for the home at <http://ccf.buffalo.edu>)
8. School-home note system for rewarding behavior at school and tracking homework (see description below in School Interventions)

There are many other techniques that are part of a good behavioral parenting program. Those listed above are included in almost all of the good programs. Some families can learn these skills quickly in the course of 8 or 10 meetings, while other families—often those with the most severely impaired children—require more time and energy.

The techniques listed above are those typically used in teaching parents of *children* with ADHD. When the presenting child is a *teenager*, parent training is modified somewhat. Parents are still taught behavioral techniques, but they are modified to be age-appropriate for adolescents. For example, time out is a consequence that is not effective with adolescents; instead loss of privileges (e.g., can't take family car on date) or assignment of work chores would be more appropriate. After parents have been taught these techniques, the parents are typically involved in sessions that include the adolescent, with the therapist helping parents and adolescents in structured discussions in which they negotiate mutually agreeable solutions to their disagreements. Parents negotiate for improvements in the adolescents' target behaviors (e.g., better grades in school) in exchange for rewards over which they have control (e.g., the teen's being able to go out with friends). The give and take between parents and teen in these sessions is necessary to motivate the teenager to work with the parents to make changes in his or her behavior.

Applying these skills with children and adolescents with ADHD takes a lot of hard work on the part of parents. However, the hard work pays off. Parents who master and consistently apply these skills will be rewarded with a child who behaves better and has a better relationship with his parents and siblings.

### **School Interventions**

As is the case with parent training, the techniques used in classroom-based interventions for ADHD have been around for some time. Many teachers who have had training in classroom management are quite expert in developing and implementing classroom-based programs for their ADHD children. Others, however, are not intimately familiar with behavioral principles and need assistance to learn and implement the necessary programs. There are many widely-available handbooks, texts, and training programs that have been developed to teach classroom behavior management skills to teachers (see list in appendix). Most of these programs are designed to

be implemented by regular or special education classroom teachers with training and guidance from school support staff or outside consultants. One of the most important things that the parent of an ADHD child can do is to work closely with the teacher to support his or her efforts implementing classroom programs for their ADHD child.

The following list includes typical classroom behavioral management procedures. They are arranged in order from mildest and least restrictive to more intensive and most restrictive procedures. Some of these programs may be included in 504 plans or Individualized Educational Programs that may apply to ADHD children (see <http://www.ed.gov/parents/needs/speced/edpicks.jhtml?src=ln>) or may need to be integrated with such plans. Typically an intervention is individualized and consists of several components based on the child's needs, the classroom resources, and the teacher's skills and preferences.

1. Classroom rules and structure
  - Typical classroom rules:
    - o Be respectful of others
    - o Obey adults
    - o Work quietly
    - o Stay in assigned seat/area
    - o Use materials appropriately
    - o Raise hand to speak or ask for help
    - o Stay on task/complete assignments
  - Post rules and review before each class until learned
  - Make rules objective and measurable
  - Number of rules depends on developmental level
  - Establish a predictable environment
  - Enhance children's organization (folders/charts for work)
  - Evaluate rule-following and give feedback/consequences *consistently*
  - Tailor frequency of feedback to child's developmental level
2. Praise appropriate behaviors and ignore mild inappropriate behaviors that are not reinforced by peer attention
  - Use at least five times as many praises as negative comments.
  - Use commands/reprimands to cue positive comments for children who are behaving appropriately—that is, find children who can be praised each time a reprimand or command is given to a child who is misbehaving
3. Appropriate commands (clear, specific, manageable) and private reprimands (at child's desk as much as possible)—same characteristics as for good commands for parents described above
4. Accommodations and structure for individual child (e.g., desk placement, task sheet)
  - Structure the classroom to maximize the child's success
  - Sit by teacher to facilitate monitoring
  - Pair with peer to help copy assignments from board
  - Break assignments into small chunks
  - Give frequent and immediate feedback
  - Require corrections before new work
5. Increase academic performance
  - Focus on increasing completion and accuracy on work
  - Provide task choices

- Peer tutoring
- Computer-assisted instruction

Such interventions have the advantage of being proactive (i.e., could prevent problematic behavior from occurring) and can be implemented by individuals other than the classroom teachers (e.g., peers, classroom aide). When disruptive behavior is not the primary difficulty, academic interventions sometimes lead to improvements in behavior that are equivalent to gains associated with more intensive classroom behavioral strategies.

6. When...then contingencies (e.g., recess time contingent upon completing work, staying after school to complete work before dismissal, assigning less desirable work prior to more desirable assignments, require assignment completion in study hall before allowing free time) (same guidelines as for parents described above)
7. Daily School-Home Report Card (instruction packet available at <http://ccf.buffalo.edu>)
  - Means of identifying, monitoring, and changing classroom problems
  - Tool for parents and teacher to communicate regularly
  - Individualized target behaviors determined by teacher
  - Teachers evaluate targets at school and send DRC home with the child
  - Parents provide home-based rewards; more rewards for better performance and fewer for lesser performance
  - Continually monitor and make adjustments to targets and criteria as behavior improves or new problems develop
  - Always used in the context of other behavioral components (commands, praise, rules, academic programs)
  - Cost little and take minimal teacher time
8. Behavior chart/reward and consequence program (point or token system) for the target child
  - Establish target behaviors and ensure child knows behaviors and goals (e.g., list on index card taped to desk)
  - Establish rewards for meeting target behaviors
  - Monitor child and give feedback
  - Reward immediately for young children
  - Use points, tokens, stars that can later be exchanged for rewards
9. Class-wide interventions and group contingencies
  - Establish goals for the class as well as the individual
  - Establish rewards for appropriate behavior that anyone in class can earn (e.g., class lottery, jelly bean jar, wacky bucks)
  - Establish reward system in which whole class (or subset of class) earns rewards based on entire class functioning (e.g. Good Behavior Game) or ADHD child's functioning (e.g., class earns reward if ADHD child makes goals)
  - Encourages children to help one another because everyone can be rewarded
  - Easier for teacher than individual programs because improves whole class
  - Tailor frequency of rewards/consequences to children's developmental level

### Sample Daily Report Card

Child's Name: _____											Date: _____
	<u>Special</u>		<u>Language</u>		<u>Math</u>		<u>Reading</u>		<u>SS/Science</u>		
			<u>Arts</u>								
Follows class rules with no more than 3 rule violations per period.	Y	N	Y	N	Y	N	Y	N	Y	N	
Completes assignments within the designated time.	Y	N	Y	N	Y	N	Y	N	Y	N	
Completes assignments at 80% accuracy.	Y	N	Y	N	Y	N	Y	N	Y	N	
Complies with teacher requests. (no more than 3 instances of noncompliance per period)	Y	N	Y	N	Y	N	Y	N	Y	N	
No more than 3 instances of teasing per period.	Y	N	Y	N	Y	N	Y	N	Y	N	
<b>OTHER</b>											
Follows lunch rules (No more than 3 violations).	Y	N									
Follows recess rules (No more than 3 violations).	Y	N									
Total Number of Yeses _____											
Teacher's Initials: _____											
Comments: _____											

10. Time out (classroom, office); a program in which a child is removed from the ongoing activity for a few minutes (less for younger children and more for older) when he or she misbehaves (same guidelines as for parents described above)
11. School-wide programs—e.g., discipline plans that are school-wide can be structured to minimize the problems experienced by ADHD children at the same time as they help manage the behavior of all children in a school.

Beyond a listing of the techniques and procedures to be used, there are several important points to keep in mind when setting up behavioral interventions in school settings. Although the techniques taught to parents and teachers are similar, there may be different levels of motivation on the part of parents and teachers to help a child with ADHD. Because the majority of children with ADHD are not enrolled in special education services, their teachers will most often be regular education teachers who may know little about ADHD and little about behavior modification. They may not view treatment of the child with ADHD as their responsibility and behavioral treatments as too time consuming. However, as with parents, the effort that teachers put into implementing behavioral interventions in the classroom will involve less time and energy than they are currently spending in unsuccessful attempts to deal with the child.

When working with adolescents with ADHD, modifications similar to those noted above for parents need to be done in school settings. Adolescents need to be more involved in goal planning and treatment implementation than do children. For example, teachers expect adolescents to be more responsible for belongings and assignments (e.g., have the student write assignments in weekly planners rather than the teacher's sending home a daily report card), so organizational strategies and study skills need to be taught to the adolescent with ADHD. However, parent involvement with the school is as important in middle and high schools as it is in elementary

school. Parents will often work with guidance counselors rather than individual teachers, so that the guidance counselor can coordinate intervention among the teachers.

## **Child Interventions**

Nonspecific talk or play therapy in a therapist's office is not a form of treatment with scientific support for children with ADHD. Instead, child-based treatments for ADHD with a scientific basis are those that focus on peer relationships and that typically occur in group settings outside of the therapist's office. Very often, children with ADHD have serious disturbances in peer relationships, and those problems are very strong predictors of long-term outcomes. Children whose difficulties with peers are overcome will have considerably better long-term outcomes than those whose peer relationships remain problematic. Thus, intervention for peer relationships is a critical component of treatment for children with ADHD and it is the focus of child-based treatments. There are five forms of intervention for peer relationships, listed below.

1. Systematic teaching of social skills
  - Cooperation
  - Communication
  - Being positive and friendly
  - Participation
  - Helping/sharing
  - Giving compliments
  - Coping with teasing
2. Social problem solving
  - Identifying problem
  - Brainstorming solutions
  - Choosing best solution
  - Planning implementation
  - Evaluating outcome
3. Teaching other behavioral competencies that other children consider important
  - Sports skills
  - Rules of sports
  - Board game rules
  - Good sportsmanship and good team membership
4. Decreasing undesirable and antisocial behaviors
  - Target bossy, intrusive, aggressive, and other disruptive behaviors that children with ADHD exhibit with peers
  - Establish reward/consequence program to reduce these behaviors and to replace with prosocial behaviors taught in social skills training
5. Developing a close friendship
  - Develop program to help child with ADHD develop a close friendship with another child
  - Work with family and teacher to facilitate the relationship
  - May serve an important role in improving long-term outcomes

There are several ways of delivering these interventions to children, ranging from groups in clinic offices to summer camps. All of the programs utilize a core of procedures, including coaching, use of examples, modeling, role-playing, feedback, rewards and consequences, and practice. Programs differ in their location, format, and

intensity. As noted earlier in this fact sheet, these child-directed treatments cannot be used alone—they are called for when a parent is participating in parent training and school personnel are conducting an appropriate school intervention. The child-based treatment needs to be integrated with the parent and school programs.

Social skills training groups are the most common form of intervention, and they typically focus on the systematic teaching of social skills. They are typically conducted at a clinic or in school in a counselor's office for an hour or two on a weekly basis for six to 12 weeks. Unfortunately, the scientific literature shows that social skills groups are not particularly effective with children with ADHD—especially if they are used in isolation of parent and school interventions and without rewards and consequences to reduce disruptive and negative behaviors. Some studies have shown that social skills groups employed with concurrent parent training are helpful. The same conclusion applies to social problem solving interventions. When used alone, the evidence is not strong, but with concurrent parent training and/or concurrent school interventions as described above, social problem solving programs are incrementally helpful. When parent and school interventions are integrated with child-focused treatments, the behaviors in the peer domain that are being targeted in the child treatments (e.g., being bossy, taking turns, sharing) are also included as target behaviors in the home and school programs (e.g., on the Home and School Daily Report Cards) so that the same behaviors are being monitored, prompted, and rewarded across intervention components.

There are several models for working on peer relationships in school settings that integrate several forms of the interventions listed above. They combine skills training with a major focus on decreasing negative and disruptive behavior and are typically conducted by school staff. Some of these programs are used with individual children (e.g., token programs employed in the classroom or at recess) and some are employed school-wide (e.g., peer mediation programs).

Generally, the more intensive the intervention in the peer domain, the more effective the intervention. Programs that are based in settings in which children with ADHD can work on their peer problems in child-relevant contexts (e.g., classroom or recreational settings) provide the most effective intervention. One model has involved establishing summer camps for children with ADHD in which child-based treatment of peer problems and academic difficulties are integrated with parent training. In these programs, all of the five forms of intervention noted above are incorporated in a 6 to 8 week program that runs for 6 to 9 hours on weekdays. Treatment is conducted in groups, with recreational activities (e.g., baseball, soccer) for the majority of the day, along with two hours of academics. One major focus is teaching competencies in and knowledge of sports to the children. This is integrated with intensive practice in social and problem-solving skills, good team membership, decreasing negative behaviors, and developing close friendships.

Some approaches to child-based treatment for peer problems shoot for a compromise between clinic-based programs and intensive summer camps by conducting versions of the two that occur on Saturdays during the school year or in after-school settings. These involve two- or three-hour sessions in which children engage in recreational activities like those of summer camps in which many of the forms of social skills interventions are integrated. There have not yet been systematic studies of such approaches, but there are several programs that appear promising.

Finally, psychologists have suggested that having a best friend may serve a protective effect on children with difficulties in peer relations as they develop through childhood and into adolescence. A few researchers are examining this approach and have developed programs to try to build at least one close friendship for a child with ADHD. These programs always begin with the other forms of intervention described above and then add having the families of the children with ADHD schedule monitored play-dates and other activities with their own child and with the child with whom they are attempting to foster a friendship (e.g., taking the friend along on a Saturday family outing). There has only been preliminary research in this approach.

It is important to emphasize that simply inserting a child with ADHD in settings in which he or she may interact with other children—e.g., scouts, little league or soccer league, day care, or playing around the neighborhood without supervision—is not effective treatment for peer problems. As we have indicated, treatment for peer problems is quite complex and involves combining careful instruction in social and problem-solving skills with supervised practice in peer settings in which children receive rewards and consequences for appropriate peer interactions. It is very difficult to intervene in the peer domain; scout leaders, little league coaches, and day-care personnel are typically not trained in how to implement the peer interventions that are effective.

### **What About Combining Psychosocial Approaches with Medication?**

The question arises of whether behavior modification should be used alone as an intervention for ADHD or whether it should be combined with medication. Both treatments have short-term effectiveness, but there are differences between the two. Medication is less expensive and works more quickly, and arguably with larger immediate effects, but it is more invasive in the sense that it involves a drug that affects the child's brain and it can produce side effects—both short and long-term.

Behavior modification teaches skills to parents, teachers, and children, has no side effects, and is much preferred by families.

A substantial portion of children with ADHD can avoid using medication if good behavioral treatments are employed. However, for children for whom behavioral interventions are not sufficient, the combination of the two modalities is generally more effective than either alone in the short-term, and enables the intensity (and therefore the expense) of behavioral treatments to be reduced and the dose of medication (and therefore side effects) to be reduced. These reductions in “dose” of the two treatments can be quite large for many children.

Parents must decide the sequence in which they elect to try the two treatments. A parent who is concerned about medication and hopes to avoid it might consider starting with behavioral treatments and moving to medication only if behavioral treatments are insufficient. For example, after parents have attended a behavioral parent training class, after the teacher has worked for several months on classroom interventions, and after a good child-focused treatment, if there is still considerable room for improvement, parents might consider adding medication. Alternatively, parents whose child with ADHD is quite severe and needs more immediately effective treatment might elect for the more potent combined treatment from the very start. Parents should discuss these alternatives with their family physician (see “ADHD Medication Information Sheet for Parents and Teachers,” downloadable at <http://ccf.buffalo.edu>). An algorithm for this approach to treating ADHD is shown at the end of this document.

### **What if there are Other Problems in Addition to ADHD?**

It has been often stated that even though individual therapy and play therapy are not effective in treating ADHD, they are called for when a child has a concurrent problem, called a comorbid problem, such as depression or anxiety or a “family” problem. It is important for parents and teachers to understand that this is not accurate. These forms of individual therapy do not have a scientific evidence base for any form of childhood mental health problem, including all of those that co-occur with ADHD. Each of those problems does have a form of behavioral treatment that *does* have evidence behind it, and it is those treatments—not generic talk or play therapy—that are indicated when there is a comorbid problem with ADHD. Several of these evidence-based treatments (e.g., for anxiety in children, depression, and substance use in adolescents) are listed in the list of evidence based manuals at the end of this sheet. In short, there are evidence-based approaches to every type of disorder that may occur at the same time as ADHD, and nonspecific talk therapies are not indicated for any of them.

### **Summary**

- Behavioral interventions as described herein are the *only* evidence-based nonmedical treatment for ADHD

- Behavioral treatments focus on problems in daily life functioning in family relationships, peer relationships, classroom functioning, and academic achievement
- Behavioral treatments teach skills to parents, teachers, and children with ADHD to cope and improve in these important areas of functioning
- Because ADHD is a chronic disorder, behavioral treatments (just like medication) need to be maintained by parents and teachers for as long as necessary for long term change
- Behavioral and combined treatments are preferred by parents to medication alone.
- Based on their own preferences about treatments, the child's severity, parent and teacher resources and skill development, and the child's response to behavioral treatments, parents must decide whether (1) to start with behavioral treatments first and add medication if necessary or (2) to start with behavioral/pharmacological treatments simultaneously
- If good behavioral treatments are started first and continued, many ADHD children will not require medication
- For children who need them, combined behavioral and medication interventions often produce better short-term effects with lower doses than either treatment alone
- Families, schools, and service providers should stay in regular contact monitor and adjust interventions over the long • Start behavioral treatments early

## Manuals for Evidence-Based Psychosocial Treatments for ADHD and Comorbid Disorders

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