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Treatment

The American Academy of Child and Adolescent Psychiatry (AACAP) published "practice parameters" (i.e., guidelines for clinical practice) on the diagnosis and treatment of ADHD... These practice parameters evolved out of research relating to two major types of treatment: pharmacological treatment and psychosocial treatment, particularly behavioral modification, as well as multimodal treatment, the combination of psychosocial and pharmacological treatments.

Pharmacological Treatment

Psychostimulants

Pharmacological treatment with psychostimulants is the most widely studied treatment for ADHD... Psychostimulants are highly effective for 75 to 90 percent of children with ADHD... These medications have their greatest effects on symptoms of hyperactivity, impulsivity, and inattention and the associated features of defiance, aggression, and oppositionality. They also improve classroom performance and behavior and promote increased interaction with teachers, parents, and peers....

Psychosocial Treatment

Important options for the management of ADHD are psychosocial treatments, particularly in the form of training in behavioral techniques for parents and teachers. Behavioral techniques, typically employ "time-out," point systems and contingent attention (adults reinforcing appropriate behavior by paying attention to it). Psychosocial treatments are useful for the child who does not respond to medication at all or for whom the therapeutic benefits of the medication have worn off and for the child who responds only partially to medication or cannot tolerate medication.

Behavioral Approaches

The main psychosocial treatments for ADHD are behavioral training for parent and teacher, as well as systematic programs of contingency management...

A number of studies have compared parent training (Gittelman et al., 1980; Firestone et al., 1986; Horn et al., 1987, 1990, 1991; Pelham et al., 1988) or schoolbased behavioral modification (Gittelman et al., 1980; Pelham et al., 1988) with the use of stimulants. Most of the studies are of outpatient behavioral therapy programs in which parents meet in groups and are taught behavioral techniques such as time out, point systems, and contingent attention. Teachers are taught similar classroom strategies, as well as the use of a daily report card for parents that evaluates the child's in-school behavior. The improvements in the symptoms of ADHD achieved with psychosocial treatments are not as large as those found with psychostimulants (Pelham et al., 1998). Behavioral interventions tend to improve targeted behaviors or skills but are not as helpful in reducing the core symptoms of inattention, hyperactivity, or impulsivity...

Cognitive-Behavioral Therapy

Cognitive-behavioral therapy (CBT), primarily training in problem solving and social skills, has not been shown to provide clinically important changes in behavior and academic performance of children with ADHD (Pelham et al., 1998). However, CBT might be helpful in treating symptoms of accompanying disorders such as oppositional defiant disorder, depression, or anxiety disorders (Abikoff, 1985; Hinshaw & Ehardt, 1991; Lochman, 1992).

Psychoeducation

Although there are no studies evaluating the efficacy of psychoeducation as a treatment modality for ADHD, providing information to parents, children, and teachers about ADHD and treatment options is considered critical in the development of a comprehensive treatment plan (AACAP, 1991)...

Multimodal Treatments

Many researchers and families have long suspected that multimodal treatment-medication used together with multiple psychosocial interventions in multiple settings-should be more effective than medication alone. Multimodal treatment has thus been used in the absence of empirical support (Hechtman, 1993). To determine whether multimodal treatment is indeed effective, the recent NIMH Multimodal Treatment Study of ADHD (called the MTA Study) examined three experimental conditions: medication management alone, behavioral treatment alone, or a combination of medication and behavioral treatments. The study compared the effectiveness of these three treatment modes with each other and with standard care provided in the community (the control group). The behavioral treatment condition consisted of parent training, a school intervention, and a summer treatment program. The MTA Study was also designed to determine the relative benefits of these treatments over time (Richters et al., 1995). All subjects were treated for 14 months and then followed for an additional 22 months.

Results of the MTA Study comparing the 14-month outcomes of 579 children randomly assigned to one of the four treatment conditions were presented in the fall of 1998 (MTA Cooperative Group, 1998). At 14 months, medication and the combination treatment were generally more effective than the behavioral treatment alone or the control treatment. Notably, the combined treatment resulted in significant improvement over the control condition in six outcome areas-social skills, parent child relations, internalizing (e.g., anxiety) symptoms, reading achievement, oppositional and/or aggressive symptoms, and parent and/or consumer satisfaction-whereas the single forms of treatment (medication or behavior therapy) were each superior to the control condition in only one to two of these domains. The conclusions from this major study are that carefully managed and monitored stimulant medication, alone or combined with behavioral treatment, is effective for ADHD over a period of 14 months. Addition of behavioral treatment yields no additional benefits for core ADHD symptoms but appears to provide some additional benefits for non-ADHD symptom outcomes.

References:

- Abikoff, H. (1985). Efficacy of cognitive training interventions in hyperactive children: A critical review. *Clinical Psychology Review, 5*, 479—512.
- Firestone, P., Crowe, D., Goodman, J. T., & McGrath, P. (1986). Vicissitudes of follow-up studies: Differential effects of parent training and stimulant medication with hyperactives. *American Journal of Orthopsychiatry, 56*, 184—194.
- Gittelman, R., Abikoff, H., Pollack, E., Klein, D. F., Katz, S., & Mattes, J. (1980). A controlled trial of behavior modification and methylphenidate in hyperactive children. In C. K. Walen & B. Henker (Eds.), *Hyperactive children: The social ecology of identification and treatment* (pp. 221—243). New York: Academic Press.
- Hechtman, L. (1993). Aims and methodological problems in multimodal treatment studies. *Canadian Journal of Psychiatry, 38*, 458—464.
- Hinshaw, S. P., & Erhardt, D. (1991). Attention-deficit hyperactivity disorder. In P. Kendall (Ed.), *Child and adolescent therapy: Cognitive-behavioral procedures* (pp. 98—128). New York: Guilford Press.
- Horn, W. F., Ialongo, N., Greenberg, G., Packard, T., & Smith-Winberry, C. (1990). Additive effects of behavioral parent training and self-control therapy with ADHD children. *Journal of Clinical Child Psychology, 19*, 98—110.
- Horn, W. F., Ialongo, N. S., Pascoe, J. M., Greenberg, G., Packard, T., Lopez, M., Wagner, A., & Puttler, L. (1991). Additive effects of psychostimulants, parent training, and self-control therapy with ADHD children. *Journal of the American Academy of Child and Adolescent Psychiatry, 30*, 233—240.
- Horn, W. F., Ialongo, N., Popovich S., & Peradotto, D. (1987). Behavioral parent training and cognitive behavioral self-control therapy with ADD-H children: Comparative and combined effects. *Journal of Clinical Child Psychology, 16*, 57—68.
- Lochman, J. E. (1992). Cognitive-behavioral intervention with aggressive boys: Three-year follow-up and preventive effects. *Journal of Consulting and Clinical Psychology, 60*, 426—432.
- Pelham, W. E., Schnedler, R. W., Bender, M.E., Miller, J., Nilsson, D., Budrow, M., Ronnei, M., Paluchowski, C., & Marks, D. (1988). The combination of behavior therapy and methylphenidate in the treatment of hyperactivity: A therapy outcome study. In L. Bloomingdale, *Attention deficit disorders* (pp. 29—48). London: Pergamon
- Richters, J. E., Arnold, L. E., Jensen, P. S., Abikoff, H., Conners, C. K., Greenhill, L. L., Hechtman, L., Hinshaw, S. P., Pelham, W. E., & Swanson, J. M. (1995). NIMH collaborative multisite multimodal treatment study of children with ADHD: I. Background and rationale. *Journal of the American Academy of Child and Adolescent Psychiatry, 34*, 987—1000.