

Source: Zametkin, A. J., & Ernst, M. (1999). Problems in the management of Attention-Deficit-Hyperactivity Disorder. *The New England Journal of Medicine*, 340(1), 40-46.

This recently published article provides an excellent review of the management of ADHD, particularly for medical practitioners. The presence of this article in *The New England Journal of Medicine*, through the journal's prestige as well as its targeted audience of general medical practitioners and medical researchers, provides evidence that issues in children's mental health treatment are of increasing interest and priority. Zametkin and Ernst provide a concise review of diagnostic, treatment, and clinical issues characterizing Attention-Deficit-Hyperactivity Disorder (ADHD).

With regard to diagnostic issues, the authors note that a diagnosis of ADHD can be made as early as age 3, but the validity is questionable. Because the parent of a child with ADHD has an increased risk of also having the disorder, the importance of obtaining a family history is emphasized. Such a circumstance, the authors point out, may have implications for treatment compliance, as a parent who is inattentive or impulsive "may be highly inconsistent in following treatment recommendations." A complete medical history and physical examination as well as hearing and vision assessments are critical to the diagnostic process. Other evaluation procedures, such as neuropsychological testing and brain imaging, are quite costly and often inappropriate for routine evaluation. Psychometric testing is highly recommended when evidence of learning difficulties exists as the two conditions aggravate each other.

The authors continue with a discussion of the benefits and limitations of the various components of multimodal treatment for ADHD (please see figure). Non-medical interventions are given brief attention, and it is apparent that the medical model prevails in this article. This emphasis is exemplified by their review of data on the efficacy of stimulants. While the data indicate that on-task behavior, completion of academic tasks, and social competence increase with the use of stimulants, long-term academic achievement has not been documented. Thus, "stimulants have not been proved to remedy all conditions associated with ADHD."

The authors advise physicians on a number of clinical issues, including effective dosing regimes, the persistence of symptoms in adolescence and adulthood, attending to parental concerns related to increased risk of substance abuse, and unproven treatments such as dietary restrictions, biofeedback, and megavitamin therapy. To the authors' credit, poor treatment implementation is cited as a primary reason for treatment failure in both medical and non-medical interventions.

Multimodal Treatment in the Management of ADHD:

- Education, support, and empowerment of parents and youth
- Behavior-modification techniques (i.e., positive reinforcement)
- Educational interventions for those with learning problems
- Social skills training in naturalistic group settings
- Individual counseling to alleviate secondary symptoms (e.g., low self esteem)
- Medical intervention

Much debate surrounds the use of stimulants in the treatment of ADHD, particularly given the eightfold increase in their use in the United States over the past decade. While the authors state that "overdiagnosis remains a matter of concern," they indicate that the rise may be due to increased public awareness resulting in evaluation referrals, the continuation of treatment from childhood into adolescence, and the treatment of adults. Despite the reluctance of many parents of school-age children to use medication as a treatment option, the authors assert that physicians have the responsibility to inform parents of the potential benefits of treatment and possible negative consequences of nontreatment.

Given its apparent increasing incidence, Zametkin and Ernst's recommendations for further genetic and pharmacologic studies and continuation of evaluations of multimodal interventions are quite justified.