

# ADHD Update: Management of New Complexities and Ongoing Challenges

## *Childhood ADHD and Risk for Adolescent Substance Abuse*

There is strong support in scientific literature for a relationship between attention deficit hyperactivity disorder (ADHD) and substance use disorder (SUD), and it has become clear that the presence of ADHD, and in particular ADHD with comorbid conduct disorder (CD), confers a significant risk of adolescent substance use/abuse. Barkley and colleagues analyzed self-reported antisocial activities and illegal drug use among 220 young adults (mean age 20 to 21 years; 147 ADHD, 73 normal controls). They found that childhood, adolescent, and adult ADHD, as well as childhood conduct problems, predicted higher drug-related activities. Substance use was greater in young adults with both ADHD and CD versus those with ADHD or CD alone [Barkley RA et al. *J Child Psychol Psychiatry* 2004]. The co-occurrence of ADHD and other psychiatric disorders also has been documented. Recent (unpublished) results from a longitudinal study that was conducted in ADHD children aged 7 to 11 years who were followed for approximately 5 years found significantly more mood and anxiety disorders, CD, oppositional defiant disorder (ODD), and alcohol and substance abuse (primarily cannabis) among children with ADHD versus controls [Halperin J et al. unpublished data].

Although it has been hypothesized that the use of stimulants to treat ADHD contributes to the risk for SUD, several studies have failed to show such a relationship [Barkley RA et al. *Pediatrics* 2003; Katusic SK et al. *J Child Adolesc Psychopharmacol* 2005; Poulton A. *J Child Adolesc Psychopharmacol* 2006]. In addition, results of a meta-analysis of 6 long-term studies in which pharmacologically treated and untreated youths with ADHD were examined for later SUD suggest that stimulant therapy in childhood is associated with a reduction in the risk for subsequent drug and alcohol use disorders [Wilens T et al. *Pediatrics* 2003].

According to Iliyan Ivanov, MD, Mount Sinai School of Medicine, New York, NY, the available data suggest that stimulant treatment for ADHD probably has a neutral effect on the development of adolescent SUD. It is possible that in some cases such treatments may reduce the risk for adolescent addiction, which may be accounted for by optimal control of particular symptom cluster(s) - eg, impulsivity in ADHD youth. The exception may be a subgroup of patients with comorbid ADHD + CD and familial addiction who are considered to be at elevated risk for SUD. In such cases, alternative treatments, including bupropion, atomoxetine, and lisdexamphetamine, should be entertained. In respect to adolescents with comorbid ADHD + SUD, pharmacological treatments for ADHD have been shown to be most effective when they are combined with concurrent treatment for SUD, such as cognitive behavioral therapy.

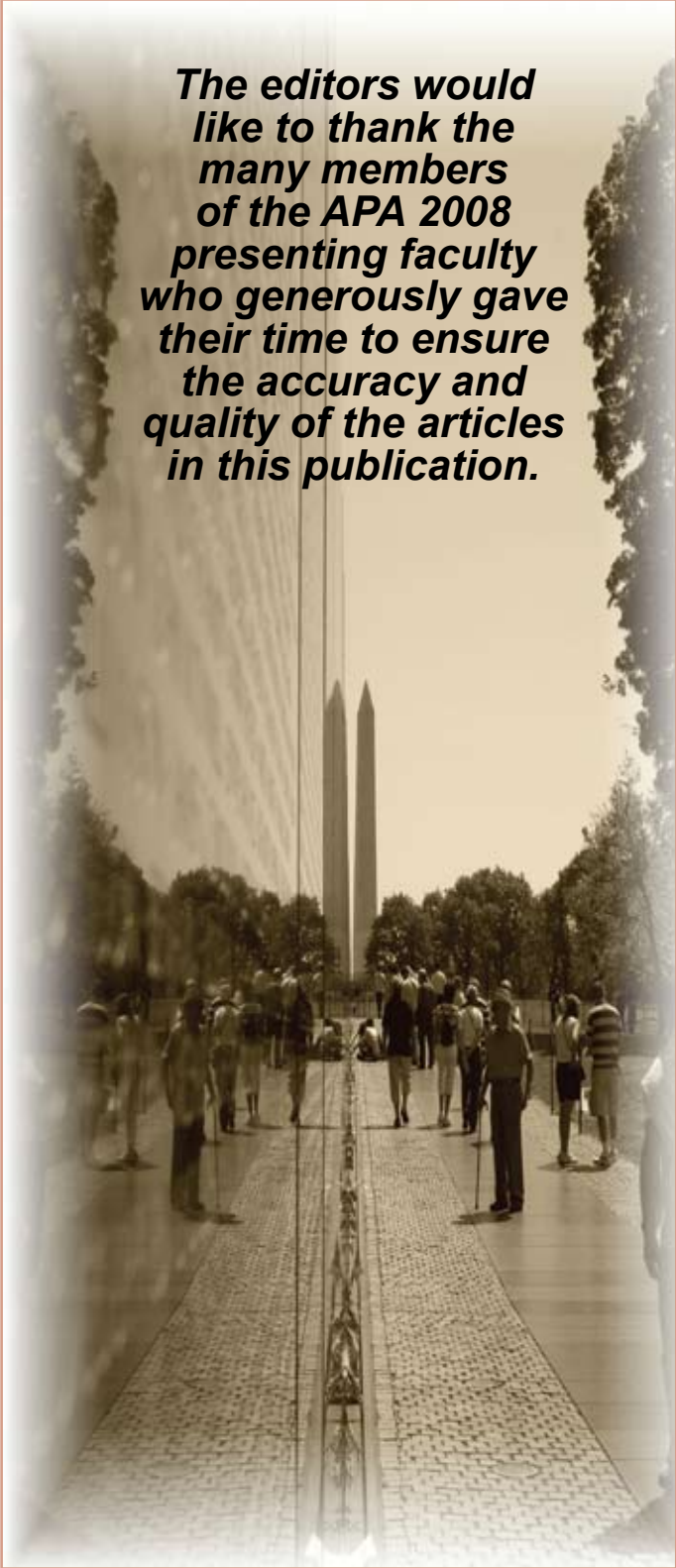
*Highlights from the*  
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*Diagnosis and Treatment of ADHD and Bipolar Spectrum Disorder*

Bipolar disorder (BPD) and attention ADHD co-occur more frequently than expected by chance. Studies in adolescents with ADHD have found rates of comorbid BPD that are twice that of the general population (6% to 10% in ADHD patients versus 3% to 4% in the general population), and it is estimated that 15% of adults with ADHD also have comorbid BPD. ADHD comorbid with BPD is seen more often in males, more frequently with bipolar 1, and more commonly in early versus late onset BPD [Nierenberg AA et al. *Biol Psychiatry* 2005].

In order to evaluate potential explanations for the high rate of this common co-occurrence, Singh and colleagues reviewed results of studies in children and adolescents with comorbid BPD and ADHD. The hypothesis that they evaluated included: BPD symptom expression leads to overdiagnosis of ADHD in BPD youth; ADHD is a prodromal or early manifestation of pediatric-onset BPD; ADHD in combination with other factors such as the use of psychostimulants leads to the onset of pediatric BPD; and ADHD and BPD share an underlying biological etiology. They concluded that the literature most strongly suggests that ADHD symptoms represent a prodromal or early manifestation of pediatric-onset BPD in certain at-risk individuals [Singh et al. *Bipolar Disord* 2006].

According to Jeffrey H. Newcorn, MD, Mount Sinai School of Medicine, New York, NY, the coexistence of ADHD and BPD should impact treatment decisions because it often will require staged treatment (treating the condition with the greatest degree of impairment first) and psychopharmacologic treatment that is independent of and in addition to ADHD therapy (eg, antipsychotics and mood stabilizers). He also noted that psychosocial treatments can have an important role in behavioral management in addition to medication.



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