

ADHD Has Lasting Effect on School Performance

BY DAMIAN McNAMARA
Miami Bureau

Attention-deficit/hyperactivity disorder significantly impairs long-term school outcomes, according to a large, retrospective, population-based study. In addition, stimulant treatment makes a difference and significantly improves some school performance measures, a second study from the same researchers shows.

Previous studies of ADHD have demonstrated a detrimental effect on school performance, but most reports focused on short-term or assessed referred patients. To get a longer perspective in a more naturalistic population, researchers at the Mayo Clinic in Rochester, Minn., compared the health and school records of 370 children who developed ADHD and 740 matched controls without ADHD.

They reported differences in reading achievement scores, absenteeism, grade retention, and school dropout rates (*J. Dev. Behav. Pediatr.* 2007;28:265-73). All participants were identified from a cohort born in the area between 1976 and 1982. Mean follow-up was 18 years. Boys comprised about 75% of the ADHD group.

Median reading score on the California Achievement Test was 45 for the ADHD group, compared with 75 for controls, a statistically significant difference.

Based on an estimated school year of 175 days, those in the ADHD group had a median of 1 more day absent, compared with the control group in sixth grade. Although this absolute difference was small, a cumulative increased incidence of absenteeism and grade retention was observed as participants progressed through their school years. By 9th and 12th grades, for example, the median difference in absenteeism was 2.4 days greater among those with ADHD.

Children with ADHD were three times more likely to be retained at least one grade. By age 12 years, cumulative incidence of grade retention was 9% in the ADHD group, versus 2% in the control group.

“These findings are consistent with the notion that early academic problems may be magnified by the increased demands associated with middle school and high school, including cognitive demands, decreased adult supervision, increased volume and complexity of assignments, and instruction from multiple teachers,” the authors wrote.

It is, therefore, not surprising to find that the burden imposed by academic underachievement, absenteeism, and grade retention is ultimately manifested in significantly higher rates of high school dropout among ADHD cases, compared with non-ADHD controls, the authors said.

The majority of children (70%) graduated from high school. Another 17% moved from the area prior to graduation. Among the remaining 301 in the ADHD group, 23% dropped out, compared with 10% of the remaining 609 in the control group. Therefore, children with ADHD were 2.7 times more likely to drop out of high school. The difference was statistical-

ly significant between boys but not girls.

Because the potential of stimulant treatment to modify these long-term outcomes is unclear, researchers performed a second study with the same birth cohorts. Stimulant treatment during childhood was associated with more favorable long-term school outcomes, with some statistically significant differences, they reported (*J. Dev. Behav. Pediatr.* 2007;28:274-87).

Average reading achievement scores at last assessment were similar between

ADHD groups treated and not treated with stimulants. Their reading scores were significantly lower than non-ADHD controls.

In terms of absenteeism, any treatment with stimulants, level of maternal education at birth, presence of comorbid learning disability and psychiatric disorder, and receipt of an educational intervention were associated with a significantly higher percentage of days absent.

Stimulants had a positive effect on grade retention. Treated children were 1.8 times

less likely to be retained a grade, compared with non-stimulant-treated children. Dropout rates, however, were not significantly different. The proportions were similar between those treated (22%) and not treated (26%) with stimulants.

“Our findings should serve as a reminder to clinicians that both boys and girls with ADHD are at risk of poor school outcomes and should be provided with appropriate long-term treatment with stimulant medications,” the authors wrote. ■

Can You Spot the Patient with Narcolepsy?¹⁻⁵

References: 1. Dauvilliers Y, Arnulf I, Mignot E. Narcolepsy with cataplexy. *Lancet.* 2007;369:499-511. 2. Thorpy M. Current concepts in the etiology, diagnosis and treatment of narcolepsy. *Sleep Med.* 2001;2:5-17. 3. Thorpy M. Therapeutic advances in narcolepsy. *Sleep Med.* 2007;8:427-440. 4. American Academy of Sleep Medicine. *The International Classification of Sleep Disorders: Diagnostic and Coding Manual.* 2nd ed. Westchester, Ill: American Academy of Sleep Medicine; 2005. 5. Green PM, Stillman MJ. Narcolepsy: signs, symptoms, differential diagnosis, and management. *Arch Fam Med.* 1998;7:472-478.

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There's no question that narcolepsy is hard to identify. For thousands of patients, every day undiagnosed is a day compromised.^{2,3}

The ICSD-2 Guidelines state that a definitive narcolepsy diagnosis requires not only an assessment of symptoms—excessive daytime sleepiness, cataplexy, disturbed nocturnal sleep, hypnagogic and hypnopompic hallucinations, sleep paralysis—but confirmation by the Multiple Sleep Latency Test and polysomnography.²⁻⁴

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