



## Attention-deficit disorder

Stimulants such as methylphenidate are commonly prescribed for attention-deficit disorder (ADD) with or without hyperactivity. To summarize the efficacy and safety of short-acting methylphenidate for the treatment of ADD, Howard Schachter and colleagues performed a meta-analysis involving 2897 participants in 62 randomized controlled trials. The median age of participants was 8.7 years, and 88.1% were male. Overall, the studies were judged to be of limited quality. A significant benefit of methylphenidate was reported (effect size reported by teacher 0.78, 95% confidence interval [CI] 0.64–0.91; effect size reported by parent 0.54, 95% CI 0.40–0.67). The authors note that

children receiving the drug were more likely to have side effects of decreased appetite (30.3%, 95% CI 18.0–42.6), insomnia (17.0%, 95% CI 8.3–25.8) and stomach ache (9.0%, 95% CI 1.2–16.9). They conclude that despite the apparent short-term clinical benefit of the treatment, the safety and efficacy of long-term treatment requires further investigation.

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To study trends in methylphenidate prescription to children and youth, Anton Miller and colleagues examined British Columbia's provincial prescription and health care databases for 1990–1996. The authors note that prescription rates for methylphenidate for children and youth in British Columbia increased more rapidly than in the United States, but they still did not approach the US levels for the same time period. Miller and colleagues also identified a trend for the drug to be prescribed more often for children and youth in the 2 least privileged socioeconomic quintiles than for those in the 3 highest socioeconomic quintiles (21.6 v. 18.4 per 1000 children and youth). The authors call for further research into how behavioural disturbances are managed in different socioeconomic groups.

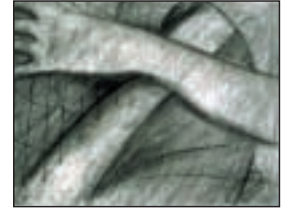
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In a commentary on the above studies, Benedetto Vitiello emphasizes the efficacy of methylphenidate and its often rapid treatment of the core symptoms of attention-deficit hyperactivity disorder (ADHD), which include hyperactivity, impulsiveness and inattentiveness. He briefly discusses the results of a double-blind controlled crossover trial of 289 children with ADHD published recently and not included in the meta-analysis by Schachter and colleagues, which showed benefits of methylphenidate treatment without intolerable adverse effects after 13 months of follow-up. He acknowledges, however, that it remains to be seen whether a reduction in ADHD symptoms will result in long-term improvements in academic prognosis and occupational achievement.

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## Vaccines and Alzheimer's disease

The cause of Alzheimer's disease (AD) is unknown, but immune processes have been speculated to play an etiological role.



As part of the Canadian Study of Health and Aging, René Verreault and colleagues prospectively studied the possible relationship between exposure to vaccines and the risk of AD. Of 4392 community-living subjects who were cognitively unimpaired at baseline, 183 developed AD in the next 5 years. Multivariate logistic regressions were used to compare those who were and were not vaccinated, adjusting for age, sex and education. Past vaccinations were associated with a lower risk of developing AD (odds ratio [OR] 0.41, 95% confidence interval [CI] 0.27–0.62 for tetanus and diphtheria; OR 0.60, 95% CI 0.37–0.9 for poliomyelitis; OR 0.75, 95% CI 0.54–1.04 for influenza).

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## Nutrition for osteoporosis

Osteoporosis is a debilitating disease, and many patients seek ways to help themselves minimize and treat this condition. In the second article in the nutrition series,



Stephanie Atkinson and Wendy Ward discuss the role of a healthy diet in developing strong bones. While addressing the well-known and important roles of calcium and vitamin D in preserving bone mass, they also

discuss briefly the possible modulatory roles of dietary protein, sodium, caffeine and phytoestrogens.

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