

# Abstract

**Case-Control Study of Attention-Deficit Hyperactivity Disorder and Maternal Smoking, Alcohol Use, and Drug Use During Pregnancy** Eric Mick, Joseph Biederman, Stephen V Faraone, Julie Sayer, Seth Kleinman  
*Journal of the American Academy of Child & Adolescent Psychiatry.* (2002) 41: 378–85.

The objective of this study was to address the putative association between attention-deficit-hyperactivity disorder (ADHD) and prenatal exposure to maternal cigarette smoking, drugs of abuse, and alcohol, taking into account potential confounding by familial ADHD, maternal depression, conduct disorder, and indicators of social adversity in the environment. A retrospective, hospital-based, case-control study was conducted with 280 participants with ADHD and 242 non-ADHD controls of both sexes. Participants with ADHD were identified from the paediatric psychopharmacology clinic at the Massachusetts General Hospital and from lists of children having evidence of ADHD in the computerized medical records of a health maintenance organization. Non-ADHD control participants were selected from lists of outpatients at paediatric medical clinics at each institution. The case or control children and their relatives were systematically assessed with structured diagnostic interviews by assessors who were blind to the children's diagnoses and ascertainment sites. Direct interviews of mothers about their own psychopathology was conducted by a different interviewer who was also blind to case-control status. Logistic regression analysis was used to determine the adjusted effect of prenatal exposure to substance use and ADHD. Because this was a study that relied on self-report the measurement of exposure was susceptible to error. To improve the precision of the estimates of relative risk, two measures of prenatal exposure to alcohol and drugs were used. Mothers were directly questioned regarding the pregnancy, delivery, and infancy complications they experienced with the index child in the interview pertaining to the child psychiatric history. Among these questions, there were direct questions regarding exposure to cigarettes, alcohol, or drugs. The second measure of exposure was derived from the mother's self-reported psychiatric diagnostic interview which included an assessment of alcohol and drug abuse or dependence. The most prevalent type of drug of abuse in mothers was marijuana. Mean age of the ADHD participants was 10.9 years and non-ADHD controls 11.9 years (age difference  $p < 0.001$ ). ADHD participants were 2.1 times more likely to have been exposed to cigarettes (95% CI = 1.1–4.1;  $p = 0.02$ ) and 2.5 times more likely to have been exposed to alcohol in utero (95% CI = 1.1–1.5;  $p = 0.03$ ) than were the

non-ADHD control participants. There was no statistically significant association between ADHD and prenatal exposure to drugs. Adjustment by familial psychopathology, Rutter's indicators of social adversity, and comorbid conduct disorder did not account for the effect of prenatal exposure to alcohol or the products of cigarettes. The study concluded that ADHD may be an additional deleterious outcome associated with prenatal exposure to alcohol independently of the association between prenatal exposure to nicotine and smoke products and other familial risk factors for the disorder.

*Dr Hilary Hart*

## Notices

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Palais des Congrès, Paris, France, December 1–4, 2002

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September 2002 (TBC)  
Organized by Richard Morton

## Child Head Injury, Recovery, Development and Outcome (Closed meeting)

Edinburgh, UK. 19-20 September 2002  
Organized by David Johnson

## Scope 50 (Open meeting)

Royal Society of Medicine, London, UK. Date changed to  
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Speakers include Martin Bax, Lesley Carroll-Few, Gregory  
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Speakers include Jean Aicardi, Stephen Brown, John  
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Wilkins  
Organized by Michael Prendergast

## Head Injury: Long-term Outcomes (Open meeting)

Royal Society of Medicine, London, UK.  
16 December 2002  
Organized by David Johnson, Gregory O'Brien

## Dentistry and Disability (Open meeting)

Royal Society of Medicine, London, UK.  
24 February 2003  
Organized by Michael Prendergast

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Royal Society of Medicine, London, UK. 30 May 2003  
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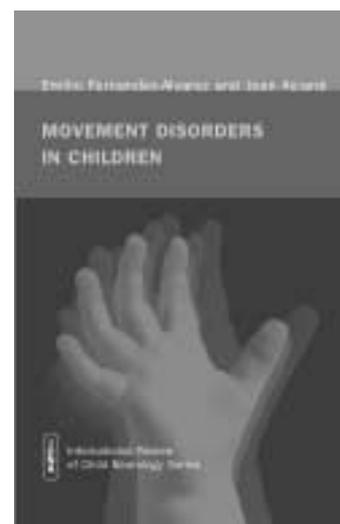
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