

## STUDY SHOWS THAT YOUNG ADULTS DIAGNOSED WITH SEVERE ATTENTION DEFICIT HYPERACTIVITY DISORDER AS CHILDREN HAVE MORE DRIVING RISKS

Children who show symptoms of Attention Deficit Hyperactivity Disorder (ADHD) experience difficulties at home and at school. They typically have problems with inattention, hyperactivity, and impulsivity and these translate into behavioral and academic problems. The National Highway Traffic Safety Administration (NHTSA) sponsored a study to assess whether ADHD diagnosed during childhood would be a risk factor for poorer driving performance during early adulthood.

Dr. Nadine Lambert at the University of California in Berkeley conducted the study using a longitudinal database she started in 1974 to explore the identification, treatment, and life histories of hyperactive children. The database contains extensive information on 492 ADHD and comparably aged children selected in 1974 from over 5,000 children in the school age population of Alameda and Contra Costa counties in California.

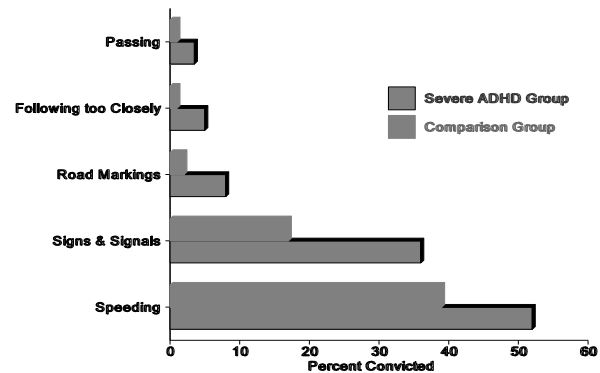
The study continues to follow these 492 children into young adulthood. In the database, 175 were diagnosed in childhood as hyperactive, 107 showed behavioral characteristics comparable to diagnosed ADHD subjects but had different medical interventions and treatment histories, and 51 had behavior problems in childhood but without showing the symptoms of ADHD. The remaining 159 formed a comparison group who attended the same schools and classrooms as the ADHD subjects.

As with other disorders, ADHD symptoms span a continuum of severity. Those who were classified for these analyses as having severe ADHD met scoring criteria on either the *Inattention* or the *Hyperactivity-Impulsivity* scales, or on both. They also demonstrated pervasive symptoms based on both parent and teacher ratings. Those who had more moderate and situational symptoms as children, along with those not classified as ADHD, composed the comparison group for the

purposes of this study. Comparing severe ADHDs to all others was deemed the most stringent test of the impact of ADHD on driving history.

Over the course of the ongoing study, information for each child included measures of behavior and temperament; problem solving styles; achievement in school; perceptual, social, and intellectual development; and details about what was happening at both home and school. In the early 1990s, driving records obtained from the California Division of Motor Vehicles were added to the database for most of the now young adults.

Complete, updated, driving records were available for 113 severe ADHD young adults from the time they obtained their first license through age 25. These records were compared with the driving records for 335 comparison young adults.



Percentage of Severe ADHD Young Adults Convicted of Moving Violations

Young adults who had been diagnosed as severe ADHD as children were more likely than the comparison group to have been convicted of certain moving violations. The chart shows the percentages of both groups for the violations that were statistically significant.

While not statistically significant, as a group, the severe ADHD young adults had more convictions for violations on every other category of moving violation than the comparison group. These included reckless driving, drunk driving, and lane placement, among other violations.

For non-moving violations, the severe ADHDs also had more convictions in almost all categories. The nature of some of these offenses suggest that ADHD youth compound problems when they are charged with moving violations because they are less likely to follow through the required process. Statistically significant differences were found between the groups for 5 of the 6 non-moving violations -- equipment, licensing, failure to appear in court, failure to pay fines, and ignoring police authority. There were no examples of not obeying restrictions for the ADHD group.

The severe ADHDs also had slightly higher percentages of crash involvement, but these

differences were not statistically significant. Among both groups, there were only two recorded crashes that involved fatalities. Both of these crashes occurred among the severe ADHDs.

Punishments and sanctions were not particularly different between the two groups. Severe ADHD young adults, however, were more likely to have had their license suspended (45 vs 27 percent) and were more likely to have been fined (54 vs. 40 percent). Both of these differences were statistically significant.

The report summarizes additional analyses on years of driving experience, sanctions received, and stimulant treatment histories. The study shows that attention deficit hyperactivity disorder (ADHD) is a risk factor for poorer driving performance during early adulthood. Youth who displayed severe symptoms of ADHD as children were more likely than a comparison group to have been convicted of assorted moving and non-moving violations.

Limited copies of the report, prepared by Dr. Lambert, are available. To obtain a copy of *Analysis of Driving Histories of ADHD Subjects*, (11 pages plus appendices), write to the Office of Program Development and Evaluation, NHTSA, NTS-30, 400 Seventh Street, S.W., Washington, DC 20590, or send a fax to (202) 366-7096. Alan Block was the technical manager of this project

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