
Impact of Distraction on the Driving Performance of Adolescents With and Without Attention-Deficit/Hyperactivity Disorder.

Narad M, Garner AA, Brassell AA, Saxby D, Antonini TN, O'Brien KM, Tamm L, Matthews G, Epstein JN.

Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio²University of Cincinnati, Cincinnati, Ohio.

JAMA Pediatr. 2013 Aug 12. doi: 10.1001/jamapediatrics.2013.322. [Epub ahead of print]

IMPORTANCE This study extends the literature regarding attention-deficit/hyperactivity disorder (ADHD)-related driving impairments to a newly licensed, adolescent population.

OBJECTIVE To investigate the combined risks of adolescence, ADHD, and distracted driving (cell phone conversation and text messaging) on driving performance.

DESIGN, SETTING, AND PARTICIPANTS Adolescents aged 16 to 17 years with (n = 28) and without (n = 33) ADHD engaged in a simulated drive under 3 conditions (no distraction, cell phone conversation, and texting). During each condition, one unexpected event (eg, another car suddenly merging into driver's lane) was introduced. **INTERVENTIONS** Cell phone conversation, texting, and no distraction while driving.

MAIN OUTCOMES AND MEASURES Self-report of driving history, average speed, standard deviation of speed, standard deviation of lateral position, and braking reaction time during driving simulation.

RESULTS Adolescents with ADHD reported fewer months of driving experience and a higher proportion of driving violations than control subjects. After controlling for months of driving history, adolescents with ADHD demonstrated more variability in speed and lane position than control subjects. There were no group differences for braking reaction time. Furthermore, texting negatively impacted the driving performance of all participants as evidenced by increased variability in speed and lane position.

CONCLUSIONS To our knowledge, this study is one of the first to investigate distracted driving in adolescents with ADHD and adds to a growing body of literature documenting that individuals with ADHD are at increased risk for negative driving outcomes. Furthermore, texting significantly impairs the driving performance of all adolescents and increases existing driving-related impairment in adolescents with ADHD, highlighting the need for education and enforcement of regulations against texting for this age group.