

ADHD medication saves lives on the road

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New research from Karolinska Institutet in Sweden shows that medication used to treat ADHD in adult men can save lives on the road. According to a large registry study, which is now being published in the scientific journal *JAMA Psychiatry*, up to half of the transport accidents involving men with ADHD could be avoided if the men were taking medication for their condition.

The researchers have studied 17,000 individuals with ADHD over a period of four years (2006-2009) using various population health' registers. They were then able to analyse the risk of transport accidents for individuals diagnosed with ADHD and how ADHD medication influence this risk. In line with previous research in this area, the results from the current study demonstrate that individuals with ADHD have an approximately 45 per cent increased risk of being involved in serious transport accidents, such as car or motorcycle accidents, compared to individuals without ADHD.

"Even though many people with ADHD are doing well, our results indicate that the disorder may have very serious consequences", says Henrik Larsson, associate professor at the Department of Medical Epidemiology and Biostatistics. Our study also demonstrates in several different ways that the risk of transport accidents in <u>adult men</u> with ADHD decreases markedly if their condition is treated with medication."

To begin with, the incidence of transport accidents was lower among men with ADHD who received medication than among men with ADHD



who did not. When the men were compared to themselves, i.e. during periods with and without ADHD medication, the researchers were able to establish that pharmaceutical treatment involved a significantly lower risk of transport accidents; during the periods of ADHD medication the risk was 58 per cent lower. Comparing the individuals to themselves is one of the study's strengths as it demonstrates that the connection between medication and decreased accident risk is probably not due to differences between individuals.

Further statistical calculations showed that 41 per cent of the transport accidents involving men with ADHD could have been avoided if they had received medication for the entire follow-up period. This study, which has now been published, does not explain the specific mechanisms behind the effect of ADHD medication on accident risk. However, the researchers believe that the results may be explained by ADHD medication having an effect on the core symptoms of ADHD such as impulsiveness and distractibility, which in turn reduces the risk of getting into trouble on the road.

"Despite having shown that medication for ADHD very likely reduces men's risk of transport accidents, we could not establish a similar reduction in women's accident risk", says Henrik Larsson. "We need further data to be able to comment about the effect on women with statistical certainty. It is also important to point out that most pharmaceutical treatments carry a risk of side effects. The risks must be weighed against the benefits for every individual prescription, taking into account the individual patient's situation."

About five per cent of all school children and half as many adults suffer from ADHD, which is characterised by lack of attention, concentration difficulties and impulsiveness. Research has shown that ADHD is a relatively stable disorder and many of those who have been diagnosed with ADHD as children also meet the diagnostic criteria as adults.



People with ADHD can be treated with medications such as central nervous system stimulants that affects the brain and thereby improve attention and impulse control.

More information: "Serious transport accidents in adults with Attention-Deficit/Hyperactivity disorders and the effect of medication: A Population-Based Study", Zheng Chang Z, Paul Lichtenstein, Brian M. D'Onofrio, Arvid Sjölander and Henrik Larsson, *JAMA Psychiatry*, online 29 January 2014.

Provided by Karolinska Institutet

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