

# Study suggests acetaminophen in pregnancy linked to higher risk of ADHD, autism

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Exposure to acetaminophen in the womb may increase a child's risk for attention deficit/hyperactivity disorder and autism spectrum disorder, suggests a study funded by the National Institutes of Health and the Agency for Health Care Research and Quality. The study was conducted by Xiaobing Wang, M.D., of the Johns Hopkins University Bloomberg School of Public Health, Baltimore, and colleagues. It appears in *JAMA Psychiatry*.

Attention deficit/[hyperactivity disorder](#) (ADHD) is marked by a pattern of hyperactivity and impulsive behavior. Autism spectrum disorder (ASD) is a complex developmental disorder that affects how a person behaves, interacts with others and learns.

Researchers analyzed data from the Boston Birth Cohort, a long-term study of factors influencing pregnancy and [child development](#). They collected [umbilical cord blood](#) from 996 births and measured the amount of acetaminophen and two of its byproducts in each sample. By the time the children were an average of 8.9 years, 25.8% had

been diagnosed with ADHD only, 6.6% with ASD only and 4.2% with ADHD and ASD. The researchers classified the amount of acetaminophen and its byproducts in the samples into thirds, from lowest to highest. Compared to the lowest third, the middle third of exposure was associated with about 2.26 times the risk for ADHD. The highest third of exposure was associated with 2.86 times the risk. Similarly, ASD risk was higher for those in the middle third (2.14 times) and highest third (3.62 times).

The authors conclude that their results support earlier studies linking acetaminophen exposure in the womb with ADHD and ASD and underscore the need for additional research. The U.S. Food and Drug Administration urges careful consideration before using any pain-relieving medication during pregnancy.

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**More information:** Ji, Y, et al. Association of cord plasma biomarkers of in utero acetaminophen exposure with risk of attention deficit/hyperactivity disorder and autism spectrum disorder in childhood. *JAMA Psychiatry*.2019.

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