

## Press Release

# Mount Sinai Study Supports Evidence That Prenatal Acetaminophen Use May Be Linked to Increased Risk of Autism and ADHD



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**New York, NY (August 13, 2025)** – Researchers at the Icahn School of Medicine at Mount Sinai have found that prenatal exposure to acetaminophen may increase the risk of neurodevelopmental disorders, including autism spectrum disorder and attention-deficit/hyperactivity disorder (ADHD), in children. The study, published today in *BMC Environmental Health*, is the first to apply the rigorous Navigation Guide methodology to systematically evaluate the rigor and quality of the scientific literature.

Acetaminophen (often sold under the brand name Tylenol®, and known as paracetamol outside the United States and Canada) is the most commonly used over-the-counter pain and fever medication during pregnancy and is used by more than half of pregnant women worldwide. Until now, acetaminophen has been considered the safest option for managing headache, fever, and other pain.



Analysis by the Mount Sinai-led team of 46 studies incorporating data from more than 100,000 participants across multiple countries challenges this perception and underscores the need for both caution and further study.

The Navigation Guide Systematic Review methodology is a gold-standard framework for synthesizing and evaluating environmental health data. This approach allows researchers to assess and rate each study's risk of bias, such as selective reporting of the outcomes or incomplete data, as well as the strength of the evidence and the quality of the studies individually and collectively.

“Our findings show that higher-quality studies are more likely to show a link between prenatal acetaminophen exposure and increased risks of autism and ADHD,” said Didier Prada, MD, PhD, Assistant Professor of Population Health Science and Policy, and Environmental Medicine and Climate Science, at the Icahn School of Medicine at Mount Sinai. “Given the widespread use of this medication, even a small increase in risk could have major public health implications.”

The paper also explores biological mechanisms that could explain the association between acetaminophen use and these disorders. Acetaminophen is known to cross the placental barrier and may trigger oxidative stress, disrupt hormones, and cause epigenetic changes that interfere with fetal brain development.

While the study does not show that acetaminophen directly causes neurodevelopmental disorders, the research team's findings strengthen the evidence for a connection and raise concerns about current clinical practices.

The researchers call for cautious, time-limited use of acetaminophen during pregnancy under medical supervision; updated clinical guidelines to better balance the benefits and risks; and further research to confirm these findings and identify safer alternatives for managing pain and fever in expectant mothers.

“Pregnant women should not stop taking medication without consulting their doctors,” Dr. Prada emphasized. “Untreated pain or fever can also harm the baby. Our study highlights the importance of discussing the safest approach with health care providers and considering non-drug options whenever possible.”

With diagnoses of autism and ADHD increasing worldwide, these findings have significant implications for public health policy, clinical guidelines, and patient education. The study also highlights the urgent need for pharmaceutical innovation to provide safer alternatives for pregnant women.



The study was conducted in collaboration with the University of California, Los Angeles; University of Massachusetts Lowell; and Harvard T.H. Chan School of Public Health.

Read the full story (<https://ehjournal.biomedcentral.com/articles/10.1186/s12940-025-01208-0>)

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### **About the Icahn School of Medicine at Mount Sinai**

The Icahn School of Medicine at Mount Sinai is internationally renowned for its outstanding research, educational, and clinical care programs. It is the sole academic partner for the seven member hospitals\* of the Mount Sinai Health System, one of the largest academic health systems in the United States, providing care to New York City's large and diverse patient population.

The Icahn School of Medicine at Mount Sinai offers highly competitive MD, PhD, MD-PhD, and master's degree programs, with enrollment of more than 1,200 students. It has the largest graduate medical education program in the country, with more than 2,600 clinical residents and fellows training throughout the Health System. Its Graduate School of Biomedical Sciences offers 13 degree-granting programs, conducts innovative basic and translational research, and trains more than 560 postdoctoral research fellows.

Ranked 11th nationwide in National Institutes of Health (NIH) funding, the Icahn School of Medicine at Mount Sinai is among the 99th percentile in research dollars per investigator according to the Association of American Medical Colleges. More than 4,500 scientists, educators, and clinicians work within and across dozens of academic departments and multidisciplinary institutes with an emphasis on translational research and therapeutics. Through Mount Sinai Innovation Partners (MSIP), the Health System facilitates the real-world application and commercialization of medical breakthroughs made at Mount Sinai.

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## About the Mount Sinai Health System

Mount Sinai Health System is one of the largest academic medical systems in the New York metro area, with 48,000 employees working across seven hospitals, more than 400 outpatient practices, more than 600 research and clinical labs, a school of nursing, and a leading school of medicine and graduate education. Mount Sinai advances health for all people, everywhere, by taking on the most complex health care challenges of our time—discovering and applying new scientific learning and knowledge; developing safer, more effective treatments; educating the next generation of medical leaders and innovators; and supporting local communities by delivering high-quality care to all who need it.

Through the integration of its hospitals, labs, and schools, Mount Sinai offers comprehensive health care solutions from birth through geriatrics, leveraging innovative approaches such as artificial intelligence and informatics while keeping patients' medical and emotional needs at the center of all treatment. The Health System includes approximately 9,000 primary and specialty care physicians and 10 free-standing joint-venture centers throughout the five boroughs of New York City, Westchester, Long Island, and Florida. Hospitals within the System are consistently ranked by *Newsweek's*<sup>®</sup> “The World’s Best Smart Hospitals, Best in State Hospitals, World Best Hospitals and Best Specialty Hospitals” and by *U.S. News & World Report's*<sup>®</sup> “Best Hospitals” and “Best Children’s Hospitals.” The Mount Sinai Hospital is on the *U.S. News & World Report*<sup>®</sup> “Best Hospitals” Honor Roll for 2025-2026.

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Didier Prada, MD (</profiles/diddier-prada>)

Population Health Science and Policy

Environmental Medicine

## For Media Inquiries



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