Tylenol could be risky for pregnant women—Acetaminophen may contribute to developmental disorders in children

October 4 2021, by Ann Z. Bauer

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A mounting body of evidence shows that the use of acetaminophen—widely known by its brand name Tylenol—during

pregnancy may pose risks to the fetus and to early childhood development. That was the conclusion of a new review study on which I was a lead author.

Acetaminophen, which has the chemical name paracetamol, is a go-to over-the-counter medication that is widely recommended by doctors to relieve pain and reduce fever.

Our study, based on an assessment of 25 years of research in the areas of human epidemiology, animal and in-vitro studies, concludes that prenatal acetaminophen exposure may increase the risks of reproductive organs developing improperly. We identified a heightened risk of neurodevelopmental disorders, primarily attention deficit hyperactivity disorder and related behaviors, but also autism spectrum disorder, as well as language delays and decreased IQ.

In our consensus statement—a broad agreement by our multidisciplinary international panel of experts—published in *Nature Reviews Endocrinology* in September 2021, 91 clinicians and researchers are calling for caution and additional research.

Acetaminophen is an active ingredient in over 600 prescription and over-the-counter medications. It is used by more than 50% of pregnant women worldwide and at least 65% of pregnant women in the U.S. Research suggests that acetaminophen is an endocrine disruptor and may interfere with the hormones essential for healthy neurological and reproductive development.

Current guidance recommends acetaminophen as the pain reliever of choice during pregnancy, as other pain relievers such as ibuprofen and aspirin are not considered safe after midpregnancy.

Rates of reproductive disorders and neurodevelopmental disorders, such

as ADHD and autism spectrum disorder, have been increasing over the last 40 years.

Over the same time period, the use of acetaminophen during pregnancy has gone up. We conclude that because acetaminophen is so commonly taken during pregnancy, if its use is responsible for even a small increase in individual risk, it could contribute substantially to these disorders in the overall population.

It's unethical to do experiments that could harm a human life, so to gain a better understanding of the direct effects of acetaminophen during pregnancy, we must rely on human observational and experimental studies to assess the possibility of causal connections. But to really get at these questions, we need human cohort studies that can precisely capture when and why acetaminophen is taken during pregnancy. Additionally, we would like to see research that gives us a better understanding of the biologic pathways.

Notably, acetaminophen is also the medication most commonly given to infants. More research is needed to determine whether this practice is safe for the developing brain.

The current near-ubiquitous use of acetaminophen during pregnancy is due in part to the widespread perception—even among doctors—that it has limited side effects and negligible risk. But a growing body of research suggests that the indiscriminate use of acetaminophen during pregnancy—especially for conditions such as chronic pain, low back pain and headaches—may be unwarranted and unsafe.

In our consensus statement, we urge education of health professionals and pregnant women about the risks and benefits of acetaminophen use during pregnancy.

Based on our extensive review of the evidence—and the recognition that there are limited alternatives for the necessary treatment of high fever and severe pain—we recommend that pregnant women refrain from using acetaminophen unless it is medically recommended by a doctor. Women should also minimize risk to the fetus by using the lowest effective dose for the shortest possible time.

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