

# Study associates higher acetaminophen use during pregnancy with language delays in early childhood

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Is acetaminophen safe to use during pregnancy? The debate rages.

Now, researchers at Northeastern University are contributing to the discussion, finding a relationship between increased [acetaminophen](#) use during pregnancy and [language delays](#) in early childhood.

"We saw that with individuals who took more acetaminophen during pregnancy, their children tended to have more delayed [language development](#) in [early childhood](#), particularly in male children, and especially true with acetaminophen use in the third trimester," says Megan Woodbury, a postdoctoral research associate at Northeastern.

Woodbury cautions, however, that the researchers could not determine that acetaminophen use was directly causing the delayed language development.

"We're not entirely sure it's acetaminophen driving this effect," Woodbury says. "Is it truly due to acetaminophen use, or is it something to do with experiencing fever during pregnancy or illness during pregnancy, or other variables?"

Acetaminophen—most commonly known by the brand name Tylenol—is one of the most commonly used drugs worldwide, and the American College of Obstetricians and Gynecologists considers it safe for use during pregnancy to treat fever and pain. However, research has suggested associations between acetaminophen use and attention and behavior problems in children, possibly due to the drug affecting prenatal neurodevelopment.

But Woodbury says researchers have not examined whether higher acetaminophen use may affect language development. Moreover, previous studies have collected data on acetaminophen use only at a couple of points during a pregnancy, or even only after the baby was born.

This study, however, uses data collected from 532 newborns participating in the Illinois Kids Development Study at University of Illinois Urbana-Champaign between December 2013 and March 2020. The data measured acetaminophen use at six times during a pregnancy (roughly every four to six weeks). This enabled researchers to break down the data by trimester. The children were evaluated for [language skills](#) at a little over two years old and at age 3, and that data was then compared to [data](#) from peers.

The results were [published](#) this month in the journal *Pediatric Research*.

Woodbury and collaborators at University of Illinois found no association between increased acetaminophen use in the first trimester and delayed language development skills.

Increased use of acetaminophen during the [second trimester](#), however, was related to lower language scores for offspring compared to their peers at age 3, as well as a smaller vocabulary size and shorter sentence length at age 2 compared to peers.

And increased use of acetaminophen during the third trimester, meanwhile, was related to smaller vocabularies at age 2 in the combined group of children and lower language scores at age 3 for the combined group of [children](#). When separated by sex, boys, but not girls, demonstrated lower language scores than peers.

So what does this mean?

"We estimate that if a pregnant person took acetaminophen 13 times—or once a week during the [third trimester](#)—a child's vocabulary size could be 26 words smaller than their peers at age 2 and they would have a 91% higher chance of having less complex [language](#) skills at age 2," Woodbury says.

So, does this mean acetaminophen is dangerous to use during pregnancy? Well, Woodbury noted she is in her second trimester of [pregnancy](#) and took acetaminophen the night before.

"Basically what I've said when discussing this with my obstetrician and other researchers is that if you absolutely need to take acetaminophen—the pain is too much, nothing else is working or will work, you have a fever to bring down—then take it: it's not going to ruin your child's life," Woodbury says. "Just try not to take it constantly."

**More information:** Megan L. Woodbury et al, Examining the relationship of acetaminophen use during pregnancy with early language development in children, *Pediatric Research* (2023). [DOI: 10.1038/s41390-023-02924-4](#)

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