# Moms Were Right: Acetaminophen During Pregnancy Can Cause ADHD, Autism

*There are major lawsuits against the manufacturers of acetaminophen for compensation for the cost of neurodevelopmental disorders that follow due to its use during pregnancy.*

**By James Lyons-Weiler, Ph.D.**



In 2017, I sent (with help from SuperGrandpa Tony DiBiase) copies of my book "The Environmental and Genetic Causes of Autism" to 100 Deans of Schools of Medicine around the U.S. I also sent them studies on the link between the use of acetaminophen following fever induced by the MMR vaccine.

It is well established that vaccination leads to fever. Fever leads to acetaminophen use. The Moms told us years ago that they knew that acetaminophen depletes glutathione, impairing whole-body detoxification. Neurodevelopmental disorders follow.

Now, there are major lawsuits against the manufacturers of acetaminophen for compensation for the cost of neurodevelopmental disorders that follow due to its use during pregnancy.

Here, I compile and share some of the most recent studies on this issue — with their key points highlighted. It is remarkable that none of these studies bothered to look at why the moms took acetaminophen during pregnancy.

It is also remarkable that acetaminophen was used in humans during pregnancy with zero data on its effects on neurodevelopment.

1. "The drug was never shown to be safe for neurodevelopment." — Cendejas-Hernandez et al., 2022

> "Increasing evidence indicates that early life exposure to paracetamol (acetaminophen) may cause long-term neurodevelopmental problems.
>
> "Furthermore, recent studies in animal models demonstrate that cognitive development is exquisitely sensitive to paracetamol exposure during early development. …
>
> "This study finds hundreds of published reports in the medical literature asserting that paracetamol is safe when used as directed, providing a foundation for the widespread belief that the drug is safe.
>
> "This study shows that paracetamol was proven to be safe by approximately 50 short-term studies demonstrating the drug's safety for the pediatric liver, but the drug was never shown to be safe for neurodevelopment."

2. "All studies showed an association between acetaminophen use and listed neurodevelopmental outcomes." — Khan et al., 2022

> "[Study outcomes] included autism spectrum disorders, intelligent quotient (IQ), attention-deficit/hyperactivity disorder (ADHD), isolated language, attention and executive function, communication, behavior, and psychomotor development.

"All studies showed an association between acetaminophen use and listed neurodevelopmental outcomes."

3. "The (acetaminophen) metabolite N-acetyl-p-benzo-quinone-imine, which is pivotal for liver damage after overdosing, exerts oxidative stress and depletes glutathione in the brain already at dosages below the hepatic toxicity threshold." — Bührer et al., 2021

   "Paracetamol has diverse pharmacologic actions. It reduces prostaglandin formation via competitive inhibition of the peroxidase moiety of prostaglandin H2 synthase, while its metabolite N-arachidonoyl-phenolamine activates transient vanilloid-subtype 1 receptors and interferes with cannabinoid receptor signaling.

   "The (acetaminophen) metabolite N-acetyl-p-benzo-quinone-imine, which is pivotal for liver damage after overdosing, exerts oxidative stress and depletes glutathione in the brain already at dosages below the hepatic toxicity threshold."

4. "Children with cord acetaminophen levels >50th percentile appeared to have higher risk of ADHD" — Avella-Garcia et al., 2016

   "Cord unmetabolized acetaminophen was positively correlated with methionine ($R = 0.33$, $p < 0.001$), serine ($R = 0.30$, $p < 0.001$), glycine ($R = 0.34$, $p < 0.001$), and glutamate ($R = 0.16$, $p < 0.001$).

   "Children with cord acetaminophen levels >50th percentile appeared to have higher risk of ADHD for each increase in cord 8-hydroxy-deoxyguanosine level.

   "Adjusting for covariates, increasing cord methionine, glycine, serine, and 8-hydroxy-deoxyguanosine were associated with significantly higher odds for childhood ADHD.

   "Cord methionine statistically mediated 22.1% (natural indirect effect logOR = 0.167, SE = 0.071, $p = 0.019$) and glycine mediated 22.0% (natural indirect effect logOR = 0.166, SE = 0.078, $p = 0.032$) of the association between cord acetaminophen >50th percentile with ADHD."

5. "Children prenatally exposed to acetaminophen were 19% and 21% more likely to subsequently have borderline or clinical ASC compared to non-exposed children." — Alemany et al., 2021

   "Results indicated that children prenatally exposed to acetaminophen were 19% and 21% more likely to subsequently have borderline or clinical ASC (OR = 1.19, 95% CI 1.07–1.33) and ADHD symptoms (OR = 1.21, 95% CI 1.07–1.36) compared to non-exposed children.

   "Boys and girls showed higher odds for ASC and ADHD symptoms after prenatal exposure, though these associations were slightly stronger among boys. Postnatal exposure to acetaminophen was not associated with ASC or ADHD symptoms."

6. Ji et al., 2020

   "[We] found consistent associations between acetaminophen buden [sic] and ADHD and acetaminophen burden and ASD across strata of potential confounders, including maternal indication, substance use, preterm birth, and child age and sex, for which point estimates for the ORs vary from 2.3 to 3.5 for ADHD and 1.6 to 4.1 for ASD. ...

"Cord biomarkers of fetal exposure to acetaminophen were associated with significantly increased risk of childhood ADHD and ASD in a dose-response fashion.

"Our findings support previous studies regarding the association between prenatal and perinatal acetaminophen exposure and childhood neurodevelopmental risk."



7. "Together, these nine studies suggest an increased risk of adverse neurodevelopmental outcomes following prenatal (acetaminophen) exposure." — Bauer et al., 2018

"All included studies suggested an association between prenatal APAP exposure and the neurodevelopmental outcomes; ADHD, ASD, or lower IQ. Longer duration of APAP use was associated with increased risk. Associations were strongest for hyperactivity and attention-related outcomes. …

"Together, these nine studies suggest an increased risk of adverse neurodevelopmental outcomes following prenatal APAP exposure. Further studies are urgently needed with; precise indication of use and exposure assessment of use both in utero and in early life.

"Given the current findings, pregnant women should be cautioned against indiscriminate use of APAP. These results have substantial public health implications."

8. Sznajder et al., 2022

"These findings corroborate previous studies reporting associations between prenatal exposure to acetaminophen and attention problems in offspring and also show an association with sleep problems at age 3 years.

"Because use of acetaminophen during pregnancy is common, these results are of public health concern and suggest caution in the use of medications containing acetaminophen during pregnancy."

Vaccination during pregnancy was studied, but the data were warped to get the desired results. (See "Maternal Gestational Tdap Vaccination and Autism: A Critique of Becerra-Culqui et al., 2018.)

Here's the abstract of this peer-reviewed critique:

"We report flaws and inconsistencies in a critically important study of autism risk following maternal Tdap vaccination.

"The authors of the 2018 study, Prenatal Tetanus, Diphtheria, Acellular Pertussis Vaccination and Autism Spectrum Disorder (BC18), concluded that Tdap gestational vaccination is not associated with increased autism risk and claimed to provide 'evidence supporting the ACIP's recommendation to vaccinate pregnant women'.

"Our observations, based on information from the study itself, challenge these conclusions.

"We find evidence of a peculiar study design and approach to data analysis forcing outcomes by arbitrary data adjustments, overlooked variables of importance such as Bordetella pertussis infection prevalence and vaccine injury rates, insufficient consideration of likely interactions between multiple historical medical challenges by vaccines and other interventions on their participants, exclusion from the study individuals likely at risk of vaccine intolerance due to genetics, and indications that the study samples were not representative of the general population.

"Their first-year data show a concerning spike in ASD rates, and their findings and conclusions did not hold up to real-world data, which currently reports 3.8% ASD rate in California. Our observations, based on information from the study itself, challenge the conclusions of Becerra-Culqui et al, 2018."

*Originally published on James Lyons-Weiler's Popular Rationalism Substack page.*

*The views and opinions expressed in this article are those of the authors and do not necessarily reflect the views of Children's Health Defense.*

## SUGGEST A CORRECTION

**James Lyons-Weiler, Ph.D.**
James Lyons-Weiler is the president and CEO of the Institute for Pure and Applied Knowledge, an advocacy group that pushes for accuracy and integrity in science and for biomedical researchers to put people's health before profits.