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# Circumcision, Acetaminophen, and Autism: Untangling Association from Causation

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Sohail Rao, MD, MA, DPhil<sup>1</sup>

<sup>1</sup>INNOVACORE™ Center for Research & Innovation, 6918 Camp Bullis Drive, San Antonio, TX, 78256.

Corresponding Author Email: [srao@innovacore.net](mailto:srao@innovacore.net)

Recent remarks published in *USA Today* (Jansen, 2025), linking circumcision to autism “through Tylenol,” conflate correlation, conjecture, and causation. The claim rests on two unsubstantiated assumptions: (1) that neonatal circumcision increases autism risk, and (2) that any such risk is mediated through acetaminophen exposure. Neither assertion is supported by credible, causal evidence.

The often-cited Danish national registry analysis (Frisch & Simonsen, 2015) reported a statistical association between early circumcision and later autism diagnoses. However, the study did not assess pain control methods, acetaminophen exposure, or plausible biological mediators. Its observational design is prone to unmeasured confounding and ascertainment bias (e.g., increased healthcare contact leading to earlier identification of autism). Importantly, the authors themselves urged cautious interpretation, while subsequent commentaries (Morris *et al.*, 2015) have criticized its methodology and discouraged causal inference.

Claims implicating acetaminophen (paracetamol) as a cause of autism also remain unproven. While several observational studies have suggested associations, especially with prolonged prenatal use, recent, better-controlled analyses contradict these findings (Hasan, Shahid, & Rao, 2025). A large sibling-comparison study in *JAMA* found no association between prenatal acetaminophen exposure and risk of autism, ADHD, or intellectual disability after controlling for shared familial factors, indicating that earlier correlations were likely due to confounding rather than causation (Ahlqvist *et al.*, 2024). Likewise, recent guidance from the American College of Obstetricians and Gynecologists (ACOG, 2025a, 2025b) affirms that acetaminophen, when used as directed, remains the preferred first-line agent for managing fever and pain during pregnancy. Untreated high fever itself is a known teratogenic risk factor, and discouraging safe antipyretic use on speculative grounds risks greater harm than benefit.

Global health authorities, including the World Health Organization (2025), concur that no conclusive evidence links prenatal acetaminophen use or circumcision to autism. The proposed causal chain, circumcision → acetaminophen → autism, lacks mechanistic plausibility and empirical support.

In light of this, we emphasize that scientific discourse must remain grounded in rigorous methodology and transparent interpretation, not in conjecture. Public health communication should prioritize the totality of data and uphold the ethical responsibility to prevent misinformation that can endanger patients by undermining evidence-based care.

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## Author's Declaration

This commentary was composed using standard academic tools and verified primary sources. Generative artificial intelligence was used only for grammar refinement and formatting consistency; the author conducted all data interpretation, synthesis, and argumentation.

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