



# ECHO

Environmental influences  
on Child Health Outcomes

A program supported by the NIH

## Study Summary

### ***ECHO Cohort Study Finds No Significant Evidence that Prenatal Cannabis Exposure Increases Likelihood of Child Autism Spectrum Disorder***

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#### Who sponsored this study?

This research was supported by the Environmental influences on Child Health Outcomes (ECHO) Program, Office of The Director, National Institutes of Health.

#### Why was this study needed?

With the legalization of cannabis in some areas of the U.S., there has been a decrease in the perception of risk and an increase in cannabis use among pregnant people. While fetal exposure to cannabis has been linked to poorer neonatal and cognitive outcomes, relatively few studies have examined the association between prenatal cannabis exposure and neurodevelopmental outcomes, including autism spectrum disorder (ASD).

#### What were the study results?

The investigators found no evidence that prenatal cannabis exposure increased the likelihood for ASD in the group of children included in the study. There was also no evidence that child sex or gestational age at birth affected how prenatal cannabis exposure related to likelihood of ASD. No other aspects of brain or child development were evaluated in the study.

Note: Results reported here are for a single study. Other or future studies may provide new information or different results. You should not make changes to your health without first consulting your healthcare professional.

#### What was this study's impact?

Although no significant associations were found with ASD outcomes in this study, other studies have found that prenatal cannabis exposure may still be associated with ASD traits or other facets of child development and behavior that were outside of the scope of this study.

#### Who was involved?

This study included 11,570 school-age children from 34 ECHO Cohort research sites across the U.S., including three sites that enrolled children with a higher likelihood of ASD and three sites that enrolled children from neonatal intensive care units (NICU).

#### What happened during the study?

ECHO Cohort researchers gathered data on cannabis use during pregnancy directly from mothers and indirectly from their medical records. They also collected information on ASD diagnosis, as well as caregiver-reported data on the children's autism-related traits from the ages of 1 to 18 years. The researchers used this information to test whether prenatal cannabis use might be associated with ASD.

### What happens next?

The researchers are planning another large national study to further examine the relationship between prenatal cannabis exposure and autism traits. Other work could examine whether exposure to cannabis *in utero* alters brain functioning.

### Where can I learn more?

Access the full journal article, titled "Examining the Association Between Prenatal Cannabis Exposure and Child Autism Behaviors: A Multi-cohort Investigation in the Environmental influences on Child Health Outcomes (ECHO) Program," in [Autism Research](#).

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