

Cannabis use during pregnancy may cause mental health problems in children

A new analysis finds exposure to cannabis in utero was associated with a higher risk of developing ADHD and aggressive behavior in early adolescence.

By Linda Carroll

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Children whose mothers used cannabis after the fifth or sixth week of pregnancy may be more likely to develop mental health problems in early adolescence, a new study suggests.

An analysis of data from more than 10,000 children aged 11 and 12 revealed that exposure to cannabis in utero was associated with a higher risk of developing disorders such as ADHD, aggressive behavior, conduct disorder and rule-breaking behavior, according to [the report](#) published in JAMA Pediatrics.

“The take-home message from this study is that there is some evidence that one should be cautious about using cannabis during pregnancy,” said the study’s first author, David Baranger, a postdoctoral research associate at Washington University in St. Louis.

The new study is an association and can’t prove that cannabis is the cause of the mental health problems, Baranger said.

However, the results fall in line with earlier research on the same children, who were participants in the ongoing [Adolescent Brain Cognitive Development](#) (ABCD) study. The long-term project, which is supported by the National Institutes of Health, has been tracking the brain development of nearly 12,000 children via MRI scans.

The brain scans of the children “showed a hint of a potential impact of cannabis,” Baranger said.

A [2019 study](#) that looked at the children when they were 9 and 10 found the same association between prenatal cannabis and behavioral issues. It also showed that children exposed to cannabis in utero tended to have lower birth weight, lower brain volume and lower white matter volume.

Although still a small percentage, the number of [women using cannabis](#) during pregnancy is growing. In 2018, 4.7% of pregnant women reported cannabis use and 5.4% did in 2019, according to a [government survey](#).

For pregnant women who rely on marijuana to help with nausea, Baranger advised talking to their health care provider.

Baranger and his colleagues analyzed data from 10,631 children who were participating in the NIH brain study. The researchers compared three groups of children:

- Those whose mothers did not use cannabis during pregnancy.
- Those whose mothers were using cannabis but quit when they learned they were pregnant.
- Those whose mothers continued to use cannabis after learning they were pregnant.

The impact of cannabis use was seen in the middle of the first trimester. Use of it earlier in the pregnancy — before the moms discovered they were pregnant — did not appear to have an impact on the risk of the children developing behavior issues, Baranger said. He suspects that is because cannabinoid receptors haven't developed in the fetal brains yet.

The new research is saying that the issues found in the earlier study persist in kids who are 12, said Staci Gruber, an associate professor of psychiatry at the Harvard Medical School, director of the Marijuana Investigations for Neuroscientific Discovery (MIND) Program and the Cognitive and Neuroimaging Core at Harvard's McLean Hospital.

It's not hard to imagine why cannabis might appeal to some women, Gruber said. "You can understand why they might turn to something like this," she added. "They might think it's natural and won't hurt anything."

But Gruber said there are plenty of examples of natural substances that can hurt people.

The big limitation of the study is that the data set used by the researchers does not have information on how frequently the women were using the cannabis, nor the form they were using, Gruber said.

The use of cannabis during pregnancy appears to increase the risk of children having long-term problems with behavior and cognition, said Dr. Nora Volkow, the director of the National Institute on Drug Abuse at the National Institutes of Health.

"That association is now shown to persist into early adolescence and, in the future, could lead to further psychopathology," she said.

The use of cannabis is “really not desirable because it is a drug that goes through the placenta and gets into the fetus,” Volkow said. “Early on, cannabinoid receptors are widely expressed in the brain.”

[Cannabinoids](#) are important in orchestrating some of the processes that help guide neurons from the center of the developing brain to the distant spots that will become the cortex, Volkow said.

“If the person takes marijuana, it’s going to artificially stimulate the receptors, which could cause deviations from the very specifically orchestrated process,” Volkow said.

How to treat nausea during pregnancy

There are prescription drugs to treat nausea during pregnancy. For those who want to avoid taking medications, there are behavioral interventions, Volkow said.

Several are described in an American College of Obstetricians and Gynecologists [publication](#).

Recommendations for nausea during pregnancy include:

- Eat frequent small meals every 1–2 hours to avoid a full stomach.
- Avoid spicy or fatty foods.
- Eliminate supplemental iron.
- Substitute folic acid for iron-containing prenatal vitamins.
- Eat bland or dry foods, high-protein snacks and crackers in the morning before arising.

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