Maternal Marijuana Use and Childhood Outcomes

Between four and five percent of pregnant women report some level of cannabis use. This level decreases markedly throughout pregnancy. Many people who report using cannabis during pregnancy do so to address symptoms of nausea/morning sickness.

RESOURCES: Cannabis and pregnancy: Maternal child health implications during a period of drug policy liberalization, *Preventive Medicine*, 2017 | Marijuana use in pregnancy and lactation: A review of the evidence, *American Journal of Gynecology & Obstetrics & Gynecology*, 2015 | Survey of medicinal cannabis use among childbearing women: patterns of its use in pregnancy and retroactive self-assessment of its efficacy against 'morning sickness', *Complementary Therapies In Clinical Practice*, 2006

Data to date is inconsistent with respect to whether *in utero* cannabis exposure is independently associated with low birthweight, preterm birth, or other adverse neonatal outcomes (e.g., shorter gestational age)

"The aim of this study is to estimate the association between marijuana use during pregnancy and total, spontaneous and indicated preterm birth. … Marijuana use was not associated with total preterm birth in this cohort, suggesting that among women already at high risk of preterm birth, marijuana does not increase risk further."
Marijuana Use during Pregnancy and Preterm Birth: A Prospective Cohort Study, *American Journal of Perinatology*, 2020

"This is a retrospective cohort study from July 2016 to December 2018 of pregnant women who had universal drug screening of marijuana use before and after legalization of recreational marijuana in California on 1 January 2018. Maternal medical conditions and neonatal outcomes associated with usage were also evaluated. … There were no differences in neonatal outcomes between users and non-users."
The impact of state legalization on rates of marijuana use in pregnancy in a universal drug screening population, *The Journal of Maternal-Fetal & Neonatal Medicine*, 2020

"Compared with babies of mothers who had never used cannabis, infants of those who still used at 15 weeks had lower mean values for birthweight, head circumference, and gestational age at birth."
The deleterious effects of cannabis during pregnancy on neonatal outcomes, *The Medical Journal of Australia*, 2020

"A study was carried out in 4465 infants whose mothers delivered during 2017 and 2018. Self-reported maternal smoking, e-cigarette and cannabis use at booking were recorded. Outcome measures were birthweight and head circumference z-scores and admission to the neonatal intensive care unit (NICU). … Cannabis use alone was not associated with a significant reduction in birthweight or head circumference z-score, but the combination of cannabis and cigarette smoking resulted in a significant decrease in both z-scores compared to cigarette smoking alone."
Maternal smoking and cannabis use during pregnancy and infant outcomes, *Journal of Perinatal Medicine*, 2020

In utero cannabis exposure is not independently associated with significant, consistent adverse effects on childhood development

"Contrary to our pre-registered hypotheses, children with prenatal cannabis exposure had higher scores on the Bayley-III Language scale, and children with prenatal exposure to cannabis and tobacco had a greater age-related increase in language scores, compared with the other groups. … In short, we found no evidence that prenatal exposure to cannabis was associated with impaired cognitive or language development, and no evidence that the combination of cannabis and tobacco was associated with worse outcomes compared with either drug alone, in this sample. … This [finding] could help to reduce the stigma experienced by women who use cannabis during pregnancy and potentially lower the barrier for seeking help in this group."
The association between prenatal exposure to cannabis with and without tobacco and early cognitive and language development in a sample of polysubstance-exposed children, *Early Human Development,* 2026

"This study utilized a large, longitudinal dataset to examine the differential and combined effects of PAE [prenatal alcohol exposure] and PCE [prenatal cannabis exposure] on trajectories of cognitive abilities across adolescence, a critical period of cognitive development. … No effects persisted after including covariates. … Results suggest light prenatal alcohol and cannabis use are not associated with long-term negative cognitive outcomes during adolescence and highlight the importance of considering the impact of social factors when studying associations with prenatal substance use."
Associations of low-level prenatal alcohol and cannabis exposure with adolescent cognitive trajectories, *Alcohol: Clinical & Experimental Research*, 2026

"We examined the association between in utero cannabis exposure and well child care (WCC) attendance, emergency department (ED) visits, and developmental delay (DD) diagnosis during the first two years of life. … No difference in WCC or ED visits was observed between cannabis-exposed and substance-unexposed infants. There was a decrease in the odds of DD in the first 2 years among cannabis exposed infants and no difference at 3 years. CONCLUSION: Compared to those unexposed, Medicaid-insured children who were exposed to cannabis in utero have similar WCC attendance and ED use over the first 2 years and similar developmental outcomes at 3 years."
Health care utilization and developmental delay among infants exposed to cannabis in utero, *Academic Pediatrics,* 2026