

# CANNABIS & PREGNANCY REPORT JUNE 2020

### WHO ARE THE STRONG BELIEVERS IN MARIJUANA USE DURING PREGNANCY?

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**NOTE**: The Nicotine and Cannabis Policy Center (NCPC) at the University of California, Merced provides timely information to assist policy makers at the state and local level to make evidence-based decisions regarding nicotine and cannabis policies. The information in this brief is based on our own research as well as synthases of the most recent evidence.

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#### **BACKGROUND:**

Marijuana use during pregnancy has doubled from 2002 to 2017,<sup>1</sup> with higher prevalence among young, socioeconomically disadvantaged, and ethnic minority populations.<sup>2</sup> The use of marijuana during pregnancy is expected to rise due to increasing perceptions of its safety,<sup>3</sup> the legalization of medicinal and recreational marijuana,<sup>4</sup> and its potential to provide relief for nausea, pain, depression.<sup>5</sup>

#### **PUBLIC HEALTH KNOWLEDGE:**

The most frequently-cited reason for marijuana use during pregnancy is for the treatment of nausea and vomiting, which commonly occur during the first trimester of pregnancy.<sup>1</sup> Because marijuana is promoted as a "natural", plant-based remedy, users consider marijuana's effects to be harmless.<sup>6</sup> This perception is reinforced by dispensaries marketing marijuana as a harmless and effective treatment for nausea during pregnancy.<sup>7</sup> However, the risks and benefits of marijuana use during pregnancy remain unclear.

The American College of Obstetricians and Gynecologists (ACOG) current communication guidelines call for physicians to counsel women against using marijuana while trying to get pregnant, during pregnancy, and while breastfeeding.<sup>8</sup> The Centers for Disease Control and Prevention (CDC) also recommends against the use of marijuana during pregnancy as there may be potential adverse effects on fetal development.<sup>9</sup> However, both the ACOG and CDC acknowledge that there is currently insufficient evidence on the risks and benefits of marijuana use during pregnancy.

Recent research has linked prenatal marijuana exposure to increases in risks for stillbirths<sup>10</sup> and miscarriages.<sup>11</sup> Studies have also found that pregnant women who regularly use marijuana are at an increased risk for preterm delivery<sup>12,13</sup> and neonatal intensive care unit admissions.<sup>14,15</sup> Researchers theorize that the antioxidant effects of tetrahydrocannabinol (THC), the main psychoactive compound found in marijuana, may inhibit normal placental growth and development.<sup>16</sup> Currently, there is insufficient evidence to establish a relationship between prenatal marijuana exposure and the risks for sudden infant death syndrome (SIDS) or adverse effects to a child's cognition and academic achievement.

#### **CURRENT RESEARCH:**

Using data from a survey of 401 San Joaquin Valley adults conducted by Rapid Response Core of UC Merced's Nicotine and Cannabis Policy Center (NCPC), we examined the common beliefs about the benefits and risks of marijuana use during pregnancy.<sup>17</sup> Study participants were mostly female (80%), Hispanic (75%) and parents (70%). Results indicated that more males (16%) than females (13%),



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more non-Hispanic (16%) than Hispanic (13%) community members, and more marijuana users (23%) than non-users (7%) believed that marijuana use during pregnancy reduces nausea. Compared with non-users, marijuana users more firmly believed that that marijuana use during pregnancy reduces depression (12% non-users; 23% users) and pain (23% non-users; 42% users). Compared with community members who had not used marijuana within the past 6 months, marijuana users reported higher agreement that marijuana use during pregnancy reduces nausea (12% non-users; 42% users), depression (17% non-users; 35% users), and pain (31% non-users; 55% users). Those who used marijuana in the past 6 months also reported higher agreement that marijuana use during pregnancy is safe because marijuana is plant-based and natural (24%) when compared with those who had not used marijuana in the past 6 months (14%).

#### **IMPLICATIONS FOR POLICY AND PRACTICE:**

Understanding the common beliefs about safety and health risks of marijuana use during pregnancy is critically important when developing health communications and guidelines aimed at ensuring informed choices of marijuana use during pregnancy. Further, identifying groups with higher prevalence of misperceptions can inform efforts to target health communication campaigns. These findings indicated that men who may have or plan to have pregnant partners, individuals who have used marijuana particularly those who have used marijuana in the past 6 months, and non-Hispanic community members are important targets for health communication campaigns.





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### REFERENCES

- 1. National Institute on Drug Abuse. (2019). Study finds increased cannabis use during pregnancy. Retrieved from https://www.drugabuse.gov/ news-events/news-releases/2019/06/study-finds-increased-cannabis-use-during-pregnancy
- 2. Brown, Q. L., Sarvet, A. L., Shmulewitz, D., Martins, S. S., Wall, M. M., & Hasin, D. S. (2017). Trends in marijuana use among pregnant and nonpregnant reproductive-aged women, 2002-2014. JAMA, 317, 207. doi:10.1001/jama.2016.17383
- 3. Jarlenski M, Zank J, Bodnar LM, Koma JW, Chang JC, Bogen DL. (2017) Trends in perception of risk of regular marijuana use among US pregnant and nonpregnant reproductive-aged women. American Journal of Obstetric Gynecology, 217, 705–7
- 4. Crume, T. L., Juhl, A. L., Brooks-Russell, A., Hall, K. E., Wymore, E., & Borgelt, L. M. (2018). Cannabis use during the perinatal period in a state with legalized recreational and medical marijuana: The association between maternal characteristics, breastfeeding patterns, and neonatal outcomes. The Journal of Pediatrics, 197, 90–96. doi:10.1016/j.jpeds.2018.02.005
- 5. Hill K.P. (2015) Medical marijuana for treatment of chronic pain and other medical and psychiatric problems: A clinical review. JAMA, 313, 2474–2483. doi:10.1001/jama.2015.6199
- Jarlenski, M., Koma, J. W., Zank, J., Bodnar, L. M., Tarr, J. A., & Chang, J. C. (2018). Media portrayal of prenatal and postpartum marijuana use in an era of scientific uncertainty. Drug and Alcohol Dependence, 187, 116–122. doi:10.1016/j.drugalcdep.2018.02.021
- 7. Lusero, I., Paltrow, L. M., & Rosenbloom, N. (2018). Recommendations from cannabis dispensaries about first-trimester cannabis use. Obstetrics
  & Gynecology, 132, 781–782. doi:10.1097/aog.0000000002839
- 8. Committee Opinion No. 722. (2017). Obstetrics & Gynecology, 130, e205-e209. doi:10.1097/aog.00000000002354 2018
- Centers for Disease Control and Prevention. (2018). Marijuana fact sheet: What you need to know about marijuana use and pregnancy. Atlanta, GA: US Department of Health and Human Services. Retrieved from https://www.cdc.gov/marijuana/pdf/Marijuana-Pregnancy-H.pdf
- 10. Varner, M. W., Silver, R. M., Rowland Hogue, C. J., Willinger, M., Parker, C. B., Thorsten, V. R., ... Reddy, U. M. (2014). Association between stillbirth and illicit drug use and smoking during pregnancy. Obstetrics & Gynecology, 123, 113–125. doi:10.1097/aog.0000000000000052
- 11. Coleman-Cowger, V. H., Oga, E. A., Peters, E. N., & Mark, K. (2018). Prevalence and associated birth outcomes of co-use of Cannabis and tobacco cigarettes during pregnancy. Neurotoxicology and Teratology, 68, 84–90. doi:10.1016/j.ntt.2018.06.001
- 12. Dekker, G. A., Lee, S. Y., North, R. A., McCowan, L. M., Simpson, N. A. B., & Roberts, C. T. (2012). Risk factors for preterm birth in an international prospective cohort of nulliparous women. PLoS ONE, 7, e39154. doi:10.1371/journal.pone.0039154
- Leemaqz, S. Y., Dekker, G. A., McCowan, L. M., Kenny, L. C., Myers, J. E., Simpson, N. A. B., ... Roberts, C. T. (2016). Maternal marijuana use has independent effects on risk for spontaneous preterm birth but not other common late pregnancy complications. Reproductive Toxicology, 62, 77–86. doi:10.1016/j.reprotox.2016.04.021
- 14. Gunn, J. K. L., Rosales, C. B., Center, K. E., Nuñez, A., Gibson, S. J., Christ, C., & Ehiri, J. E. (2016). Prenatal exposure to cannabis and maternal and child health outcomes: a systematic review and meta-analysis. BMJ Open, 6, e009986. doi:10.1136/bmjopen-2015-009986
- 15. Warshak, C. R., Regan, J., Moore, B., Magner, K., Kritzer, S., & Van Hook, J. (2015). Association between marijuana use and adverse obstetrical and neonatal outcomes. Journal of Perinatology, 35, 991–995. doi:10.1038/jp.2015.120
- Costa, M. A., Fonseca, B. M., Marques, F., Teixeira, N. A., & Correia-da-Silva, G. (2015). The psychoactive compound of cannabis sativa, Δ9tetrahydrocannabinol (THC) inhibits the human trophoblast cell turnover. Toxicology, 334, 94–103. doi:10.1016/j.tox.2015.06.005
- 17. Cameron, L. D., Fleszar-Pavlovic, S., Yepez, M., Manzo, R. D., Brown, P. M. (2020). Beliefs about the benefits and risks of marijuana and ecigarette use during pregnancy in a Hispanic-majority region of California. Manuscript in preparation.