Cannabis has become more accessible and is the most commonly used federally illegal drug by women of reproductive age in the United States.¹

- In 2020, rates of lifetime cannabis use by females aged 18-25 years old was 51.2% and among those older than 26 years of age was 43.9%.²
- Among patients undergoing infertility treatment, 13% report marijuana use.³

Little is currently known regarding the effect of cannabis use on female reproductive health. This is largely due to the small number of existing studies and confounders such as reliance on patient self-report, patients recruited from assisted reproductive centers (more likely to have an underlying fertility issue), or patients reporting with polysubstance abuse histories all leading to inconclusive results. Additionally, most studies focused on the effects of cannabis from smoking rather than other routes of delivery.⁴ The existing literature suggests that cannabis use has adverse health implications for women, including reduced fertility and reproductive function.⁴,⁵

Clinical Considerations

The endocannabinoid system plays a role in regulating female reproduction,⁶ and the main active component of cannabis, delta-9-tetrahydrocannabinol (THC), is known to bind to endocannabinoid receptors throughout the female reproductive tract. Taken together, this suggests the potential for cannabis to adversely affect female fertility. As a result, the American College of Obstetricians and Gynecologists recommends discontinuation of cannabis use for patients contemplating pregnancy.⁷

- The available information suggests cannabis use may influence female fertility via its effects on the reproductive hormonal axis, specifically sex hormones essential to fertility, and the timing of ovulation.⁴,⁵,⁸,⁹
- Some studies have suggested cannabis use increases time to conception¹⁰-¹² and is associated with an increased probability of early pregnancy loss.⁵,¹²,¹³
- Patients with a history of first trimester loss and who use cannabis may have reduced ability to conceive.¹⁴

Cannabis is the most commonly used federally illegal drug among women of reproductive age.

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Cannabis use can affect in vitro fertilization (combining sperm and eggs in a laboratory) or gamete intrafallopian transfer (transfer of eggs and sperm into the fallopian tubes) success, as it has been associated with a decreased number of oocytes retrieved and lower fertilization rate.\textsuperscript{15}

**Bottom Line**

Although the current data on the impact of cannabis use on female fertility is limited, the available evidence suggests that cannabis exposure may adversely affect female reproductive function. The available studies are limited in number by small sample size, self-reporting, largely retrospective or observational study designs, and methodological challenges such as polysubstance use and other confounders. As the prevalence of cannabis use continues to rise, there is an urgent need for further research in this area. Given the lack of safety and dose-dependent data regarding the potential harm or benefits of cannabis, it is important for health care providers to counsel patients that the safest choice is to abstain from cannabis use when considering or attempting to conceive.

**References**

