

## As A Fertility Doctor, I Am Advising My Patients To Avoid Cannabis

The research so far on marijuana has demonstrated mixed results.

12/03/2018 11:29 EST | Updated 12/03/2018 12:14 EST



**Dr. Caitlin Dunne**

Specialist in fertility and egg freezing at the Pacific Centre for Reproductive Medicine based near Vancouver.



MONKEYBUSINESSIMAGES VIA GETTY IMAGES

Smoking recreational cannabis is now legal in Canada for adults over 19 years old. According to Statistics Canada, 27 per cent of people aged 15 to 24 and 13 per cent of people over 25 years old, use cannabis. That amounts to 4.6 million Canadians who currently consume products of the cannabis plant, which include marijuana and hashish.

As a fertility doctor, I am cognizant that men and women in their prime reproductive years are also the most frequent users of marijuana. The drug was already the most popular and fastest rising in North America, and now that it's legal, doctors expect marijuana consumption to increase further.

Many couples ask their doctors whether marijuana is safe while trying to conceive. Unlike alcohol, which we know is dangerous, the research on marijuana is not nearly as clear.

### Sperm

A man's sperm may be susceptible to damage from tetrahydrocannabinol (THC), the high-inducing component of marijuana.

In one study, researchers exposed sperm samples to low, medium and high concentrations of THC. The doses of THC were intended to mimic recreational and therapeutic use of marijuana. They found a dose-dependent decrease in sperm motility — more THC resulted in more slow-moving sperm. The sperm that was of borderline quality at the start was the most susceptible, demonstrating a 56 per cent reduction in movement with high dose THC exposure. Even sperm

that maintained the ability to swim despite THC exposure had significant impairment in the sperm's ability to bind to, and penetrate, an egg.

These findings contradict previous experiments that found no harm with chronic marijuana smoking. However, most of the previous research was performed in the 1970s, using much less sophisticated technology for analyzing sperm.

## Eggs

Marijuana has been shown to disrupt a woman's ovulation. Laboratory studies in both animals and humans have demonstrated that THC interferes with brain hormones that regulate the ovary and the thyroid. In some cases, this leads to a mature egg becoming trapped inside of the ovary and never released from its follicle for fertilization.

Outside of a laboratory setting, marijuana's impact on fertility is much more difficult to study. Researchers typically rely on surveys to ask people about their drug use and their plans for having children. A recent online survey followed 1125 couples between 2013 and 2017, tracking their fertility rates and self-reported marijuana use. The authors concluded that neither male nor female marijuana smoking reduced fertility.

## Pregnancy

A large American study compared daily users of marijuana with those who had never used. They found no difference between the two groups in terms of the time it took to conceive a pregnancy. However, other scientists have suggested that cannabis products may interfere with the body's naturally occurring cannabinoid hormones, which are critical to growing a normal pregnancy.



ANDERSEN ROSS VIA GETTY IMAGES

Alterations in a woman's internal cannabinoid system are believed to cause serious problems like miscarriage, poor placental growth and abnormal fetal development. Furthermore, the psychoactive component of marijuana, THC, can cross from the mother's blood into the baby's circulation and into breast milk. The Society of Obstetricians and Gynecologists of Canada launched a campaign urging pregnant and breastfeeding women to avoid cannabis.

In summary, the research so far on marijuana has demonstrated mixed results. Many laboratory studies have shown harmful effects on sperm, eggs and early pregnancy. However large studies in humans, fraught with the potential

inaccuracy of self-reported survey data, have failed to link marijuana with infertility. For now, I am advising my patients to avoid the use of cannabis products altogether if they are trying to conceive, are pregnant or breastfeeding.

Sometimes the best advice is the simplest: it's better to be safe than sorry.