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Pregnancy and Marijuana Use

The use or abuse of either illegal or prescription drugs during pregnancy can affect health outcomes for both mother and infant. In 2013, 19.8 million individuals reported using marijuana within the last month.[1] With the rise in legalization of recreational and medical marijuana across the United States, there is potential for increased use among pregnant women. The prevalence of marijuana use during pregnancy ranges 2-27% depending on the population and method of detection.[1]

Marijuana refers to the dried leaves, flowers, stems, and seeds from the hemp plant, *Cannabis sativa*, and can be smoked, consumed or inhaled as vapor ("dabbing") to produce a high. Delta-9-tetrahydrocannabinol (THC) is the main active chemical in marijuana. Some evidence has shown that babies who drink breast milk containing THC absorb and metabolize THC.[1,2] However, there is inconsistent data on the ability of THC to cross the placenta during pregnancy and the specific effects of marijuana use on infants during lactation and breastfeeding.[4]

The March of Dimes recommends that women do not use marijuana during pregnancy or breastfeeding.

There is no known safe amount of marijuana use during pregnancy.[3] Some research has found an association between marijuana use during pregnancy and poor birth outcomes including preterm birth, stillbirth, low birthweight and impaired brain development.[2] However, other studies have not found these associations. The specific effects of marijuana on pregnancy and the developing fetus are uncertain, in part because some individuals use other drugs, including tobacco, alcohol, or illicit drugs that are associated with adverse outcomes.[4]

Key Points

- Marijuana is the most commonly used recreational drug in the United States.
- Delta-9-tetrahydrocannabinol (THC), the main active chemical in marijuana, has been detected in breast milk.
- There is no known safe amount of marijuana use during pregnancy.
- March of Dimes recommends that women do not use marijuana during pregnancy or while lactating.
- Punitive policies regarding drug use during pregnancy deter women from seeking prenatal care, which can result in unhealthy pregnancies and negative birth outcomes.

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March of Dimes recommends that women who are pregnant or contemplating pregnancy should not use marijuana. Additional research is needed to further examine how use of marijuana impacts risk for poor outcomes for women and infants.

March of Dimes opposes policies and programs that impose punitive measures on pregnant women who use or abuse drugs.

In some states, policymakers have proposed punitive measures for women who use or abuse drugs during pregnancy. The March of Dimes believes that targeting women for criminal prosecution or forced treatment is inappropriate and will drive women away from prenatal care vital both for them and their children. Health care providers should counsel women about the potential consequences of marijuana use during pregnancy.

References:
1. Metz, T., Stickrath, E. Marijuana use in pregnancy and lactation: a review of the evidence. *American Journal of Obstetrics and Gynecology* 2015;1-18
2. Conner et al. Maternal Marijuana use and Neonatal Morbidity. *American Journal of Obstetrics and Gynecology*(2015), doi:10.1016/j.ajog.2015.05.050.
3. CDPHE. Marijuana Use During Pregnancy and Breastfeeding Findings Summary. August 2014.
4. Committee on Obstetric Practice. Marijuana Use During Pregnancy and Lactation, Committee Opinion No. 637. *American Journal of Obstetrics and Gynecology(2015); 126:234-238*

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Electronic Cigarettes and Pregnancy

Use of electronic cigarettes (e-cigarettes) has increased dramatically in the US since their introduction in 2007.[i] These products have been marketed both as an alternative to traditional tobacco products and a smoking cessation tool. However, their safety and efficacy remain poorly understood.

E-cigarettes are not currently regulated by the Food and Drug Administration (FDA), although this may soon change. The FDA has proposed to "deem" e-cigarettes as products subject to the Family Smoking Prevention and Tobacco Control Act, which would allow the agency to regulate them similarly to tobacco products.[ii]

Background

- E-cigarettes consist of an 'e-liquid' cartridge, atomizer, battery, and mouthpiece. The e-liquid contains variable amounts of nicotine, flavorings, and other chemicals which help to aerosolize the solution upon inhalation.
- Studies have indicated e-cigarette vapor may contain variable levels of carcinogenic and toxic compounds also found in traditional tobacco cigarettes, including tobacco-specific nitrosamines and diethylene glycol, a poisonous solvent.[iii] Aerosolized e-liquids have also been shown to contain heavy metals such as lead, chromium, and nickel.[iv] The consequences to human health from repeated exposure to these substances at such variable levels is unknown.
- One key study has shown e-liquid flavorings have a more toxic effect on human embryonic stem cells than adult cells.[v] This suggests the developing fetus may be uniquely susceptible to e-liquid toxicity.
- In animal studies, prenatal nicotine exposure increases the risk of developing many chronic diseases, including asthma, diabetes, obesity, cardiovascular disease, and hypertension.[vi]
- Use of other nicotine-containing products, such as smokeless tobacco, during pregnancy is associated with lower birth weight, increased stillbirth rates, and preterm birth .[vii]

Key Points

- E-cigarette use is increasing in women of childbearing age, and particularly among teen girls.[ix]
- No amount of nicotine has been proven safe in pregnancy.
- No studies have been performed on the safety of e-cigarettes in pregnant women or on whether they help pregnant women stop smoking.
- More research is needed to better understand the effects of e-cigarettes on women and their children during pregnancy.

Policy Issues

- In general, the March of Dimes supports the application of tobacco laws to e-cigarettes, including restrictions on sales to minors, public space smoking bans, and taxation.
- Quality control of e-cigarettes is a significant problem. FDA investigations showed that nicotine content varies even in liquid cartridges with the same brand and label, as well as among brands. Low amounts of nicotine were also found in an e-liquid cartridge labeled as nicotine-free.[viii]
- More research is needed to better understand the health effects of e-cigarettes on individuals and specifically their impact on pregnant women and their babies.

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Cessation and Harm Reduction

- While some women may use e-cigarettes in pregnancy because they believe these are safer for their babies than traditional tobacco products, there is no evidence to support this belief to date.
- FDA evaluates both the safety and efficacy of products formally claiming to assist in smoking cessation. However, the FDA has not evaluated these claims for e-cigarettes.