
Cannabis Use in Pregnancy

Jennifer McMahon, MD

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No conflicts to report

Overview

- Data for cannabis use
- Why are women using cannabis?
- Effects on mental health
- Pregnancy and newborn outcomes
- Breastfeeding

Definitions

- Cannabis and marijuana often used interchangeably, although not exactly the same
- Cannabis = all products derived from the plant *Cannabis sativa*
 - Cannabinoids are a group of substances found in the cannabis plant.
 - The main cannabinoids are THC and cannabidiol (CBD).
 - THC is believed to be the main ingredient that produces the psychoactive effect.
 - more than 100 other cannabinoids have been identified.
- Marijuana = parts of or products from the plant *Cannabis sativa* that contain substantial amounts of tetrahydrocannabinol (THC)

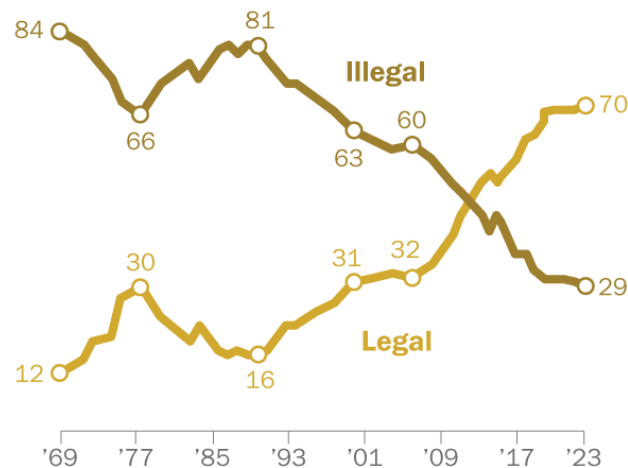
How is cannabis used?

- Smoked
 - smoke contains many of the same respiratory disease-causing and carcinogenic toxins as tobacco smoke
 - often in concentrations greater than in tobacco smoke
- Mixed into food (edibles) or infused in drinks
- Vaped
- Cannabinoids can be extracted to make oils or concentrates that can be vaped or inhaled (dabbing)
- Health risks for all forms; there is not enough evidence to say that using cannabis is one way is safer than another

Changing opinions

U.S. public opinion on legalizing marijuana, 1969-2023

Do you think the use of marijuana should be made legal, or not?



Note: No answer and no opinion responses are not shown. 2019 data from Pew Research Center's online American Trends Panel; prior data from telephone surveys. Data from 1969-1972 and 2020-2023 from Gallup; data from 1973-2008 from General Social Surveys. Source: Gallup survey conducted Oct. 2-23, 2023.

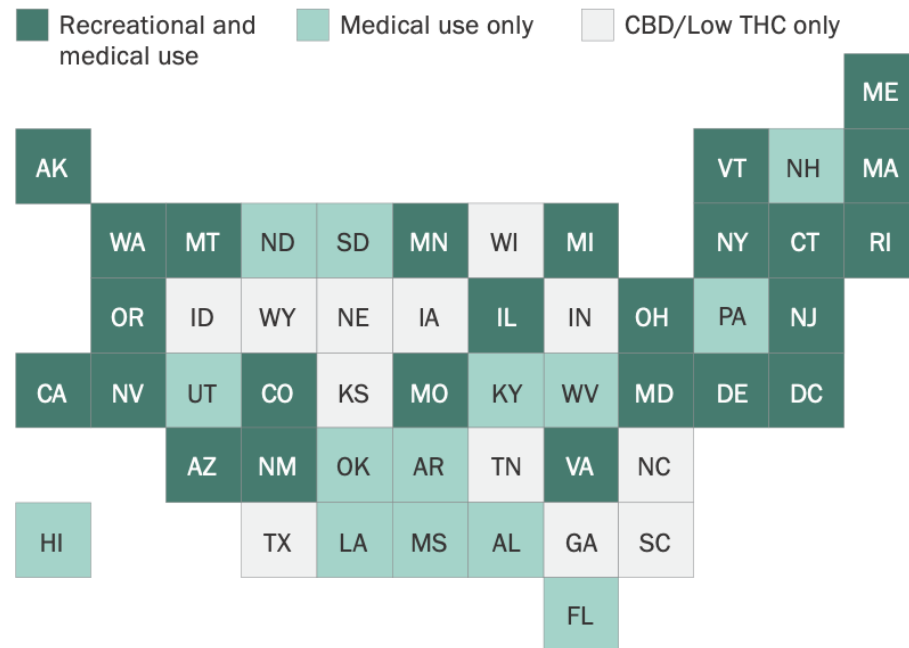
PEW RESEARCH CENTER

Source: Pew Research Center

Legalization

Nearly half of states have legalized the recreational use of marijuana

Legal allowance of marijuana at the state level, as of February 2024



Note: Nebraska's state laws only allow low-THC CBD products derived from hemp. All products derived from marijuana are prohibited.

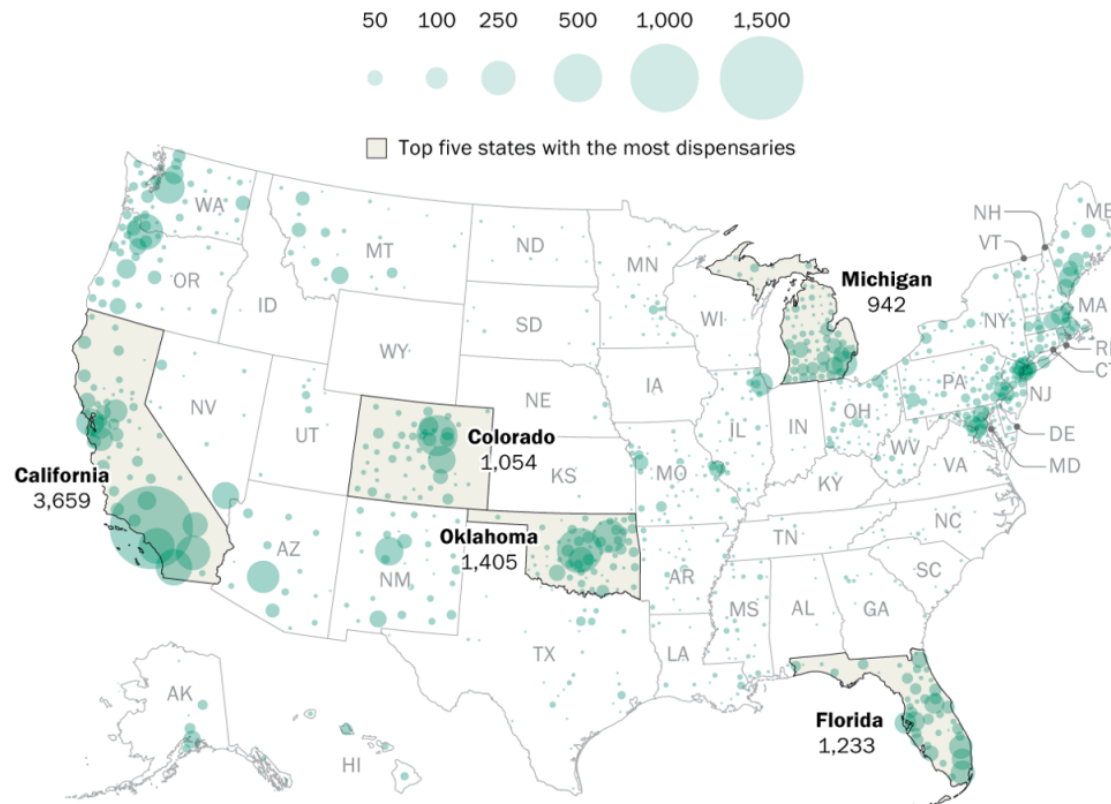
Source: National Organization for the Reform of Marijuana Laws, current to February 2024.

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Dispensaries

Cannabis dispensaries are common along the coasts and in a few specific states

Number of cannabis dispensaries in each county



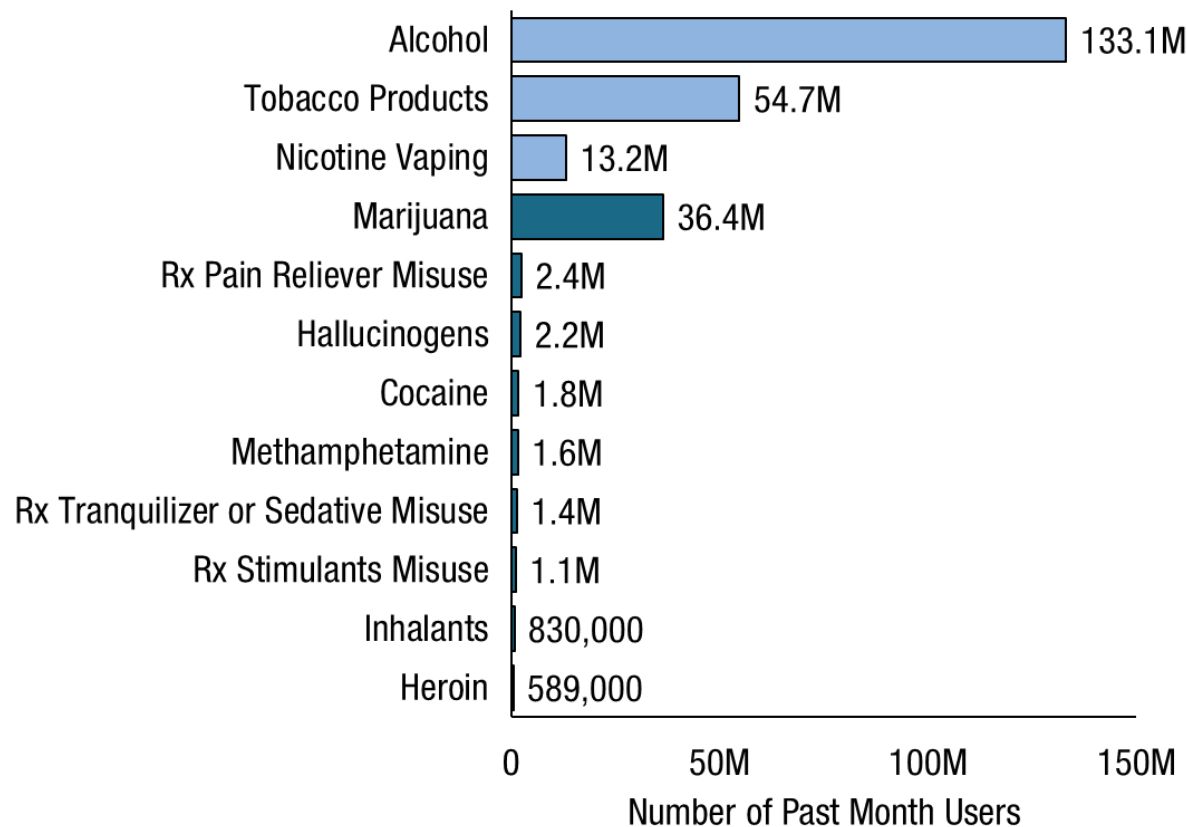
Note: Includes dispensaries that sell cannabis for both recreational and medical purposes, as well as those selling cannabis products containing low amounts of THC or CBD-only products.

Source: Pew Research Center analysis of SafeGraph data for cannabis dispensaries in the U.S. (N=14,932) as of June 23, 2023.

PEW RESEARCH CENTER

Source: Pew
Research Center

Cannabis is the most commonly used federally illegal drug in the United States

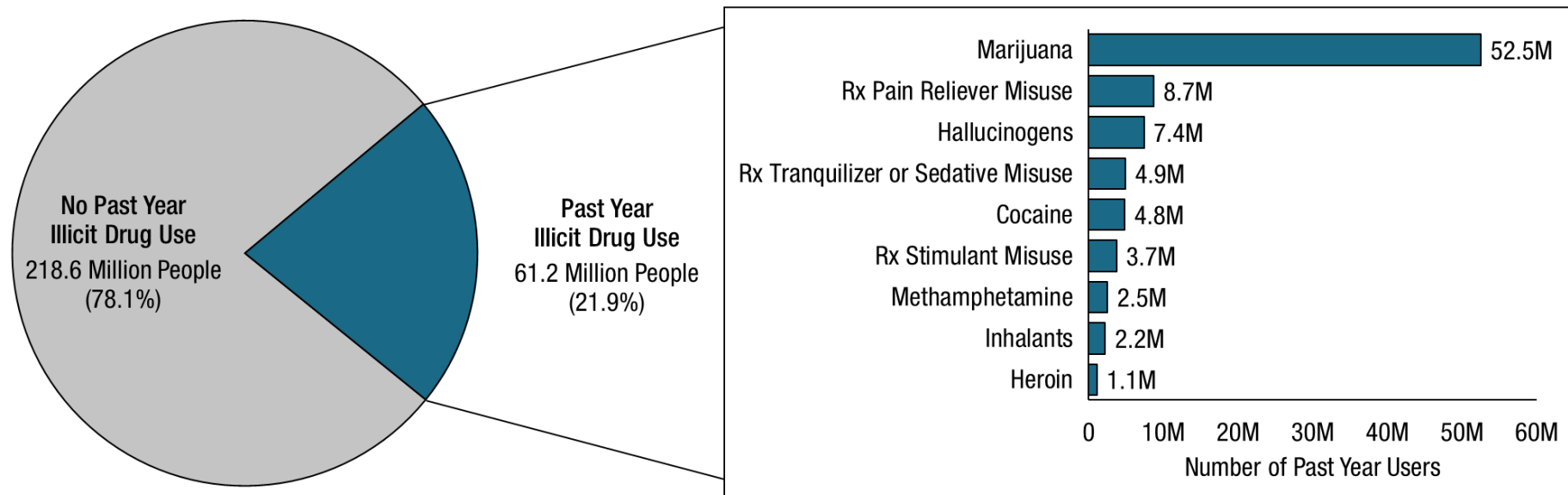


Majority of cannabis users are young and of reproductive age

Source: SAMHSA
2021 National Survey on
Drug Use and Health

Rx = prescription.

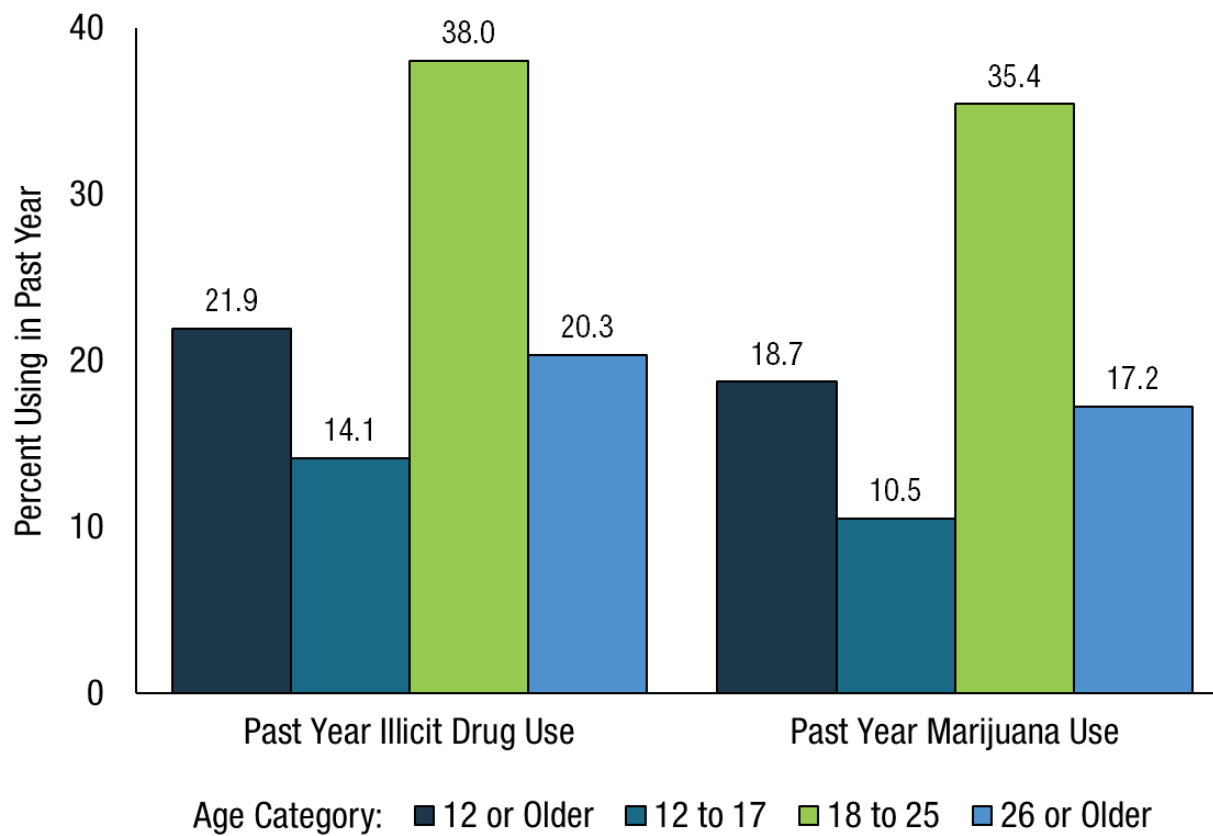
Note: The estimated numbers of past year users of different illicit drugs are not mutually exclusive because people could have used more than one type of illicit drug in the past year.



Source: SAMHSA
2021 National Survey on
Drug Use and Health

Rx = prescription.

Note: The estimated numbers of past year users of different illicit drugs are not mutually exclusive because people could have used more than one type of illicit drug in the past year.



Source: SAMHSA
2021 National Survey on
Drug Use and Health

Cannabis use disorder

- A problematic pattern of cannabis use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12 month period:

Taken in larger
amounts than
intended

Unsuccessful
efforts to cut
back

A lot of time
spent obtaining
or using
cannabis

Craving

Social or
interpersonal
problems

Activities are
given up

Cannabis use disorder

Using in
physically
hazardous
situations

Continued use
despite
knowledge of
problems

Tolerance

Withdrawal

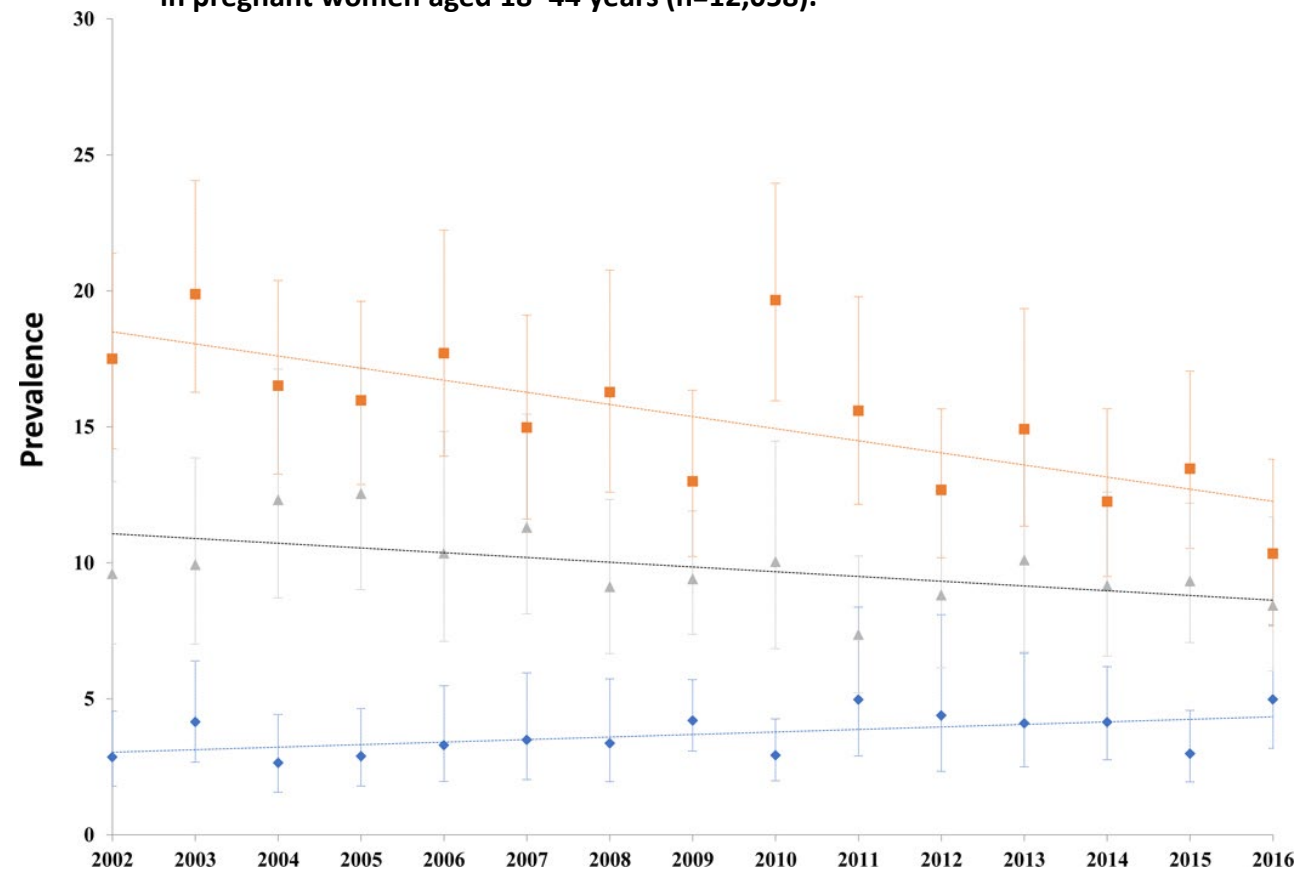
Approximately **3 in 10 people** who use cannabis have
cannabis use disorder

Frequency during pregnancy

	Any cannabis use 1st trimester	Daily or near-daily use 1st trimester	Daily or near-daily 2nd trimester	Daily or near-daily 3rd trimester
2002-2003	5.7%	1.8%	0.6%	0.5%
2016-2017	12.1%	5.3%	2.5%	2.5%

Use has been increasing!
Many states have legalized
& changing attitudes towards marijuana

Figure 1: Trends in past 30-day alcohol use, cigarette smoking, and cannabis use in pregnant women aged 18–44 years (n=12,058).

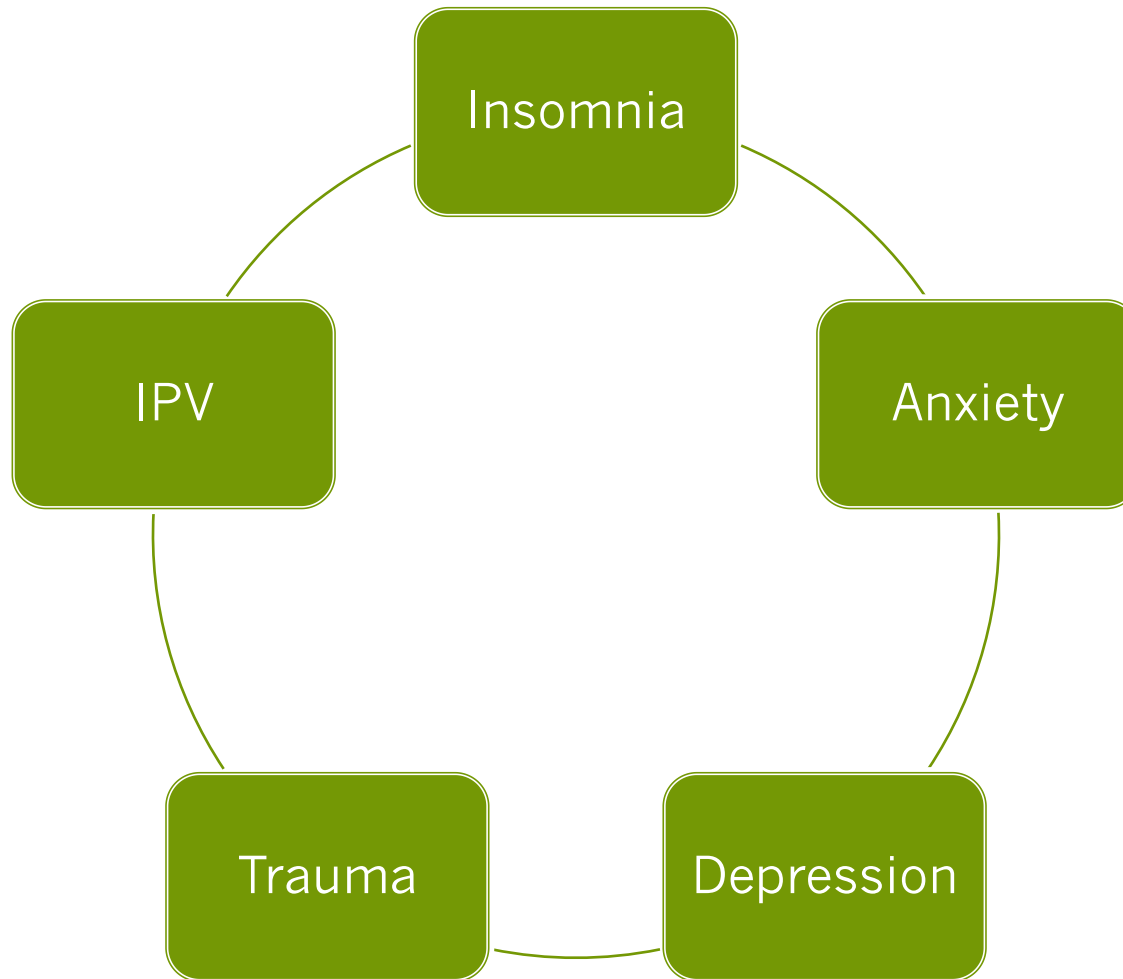


Gray triangle = alcohol; Orange square = cigarettes; Blue diamond = marijuana; adjusted prevalence (adjustment for survey features only) shown as point estimate, with 95% confidence intervals (vertical bars).

American College of Obstetricians and Gynecologists (ACOG) has issued a committee opinion:

Recommend discontinuing marijuana in pregnancy and nursing women.

Why are women using cannabis?



Use of cannabis during pregnancy

- According to data for multiple studies, cannabis was more common in pregnancies with nausea and vomiting
 - More severe nausea, more use of marijuana
- No studies indicate that cannabis is effective for the treatment of nausea and vomiting
 - In one study, many dispensaries surveyed recommended cannabis products for morning sickness

Use of cannabis for nausea and vomiting during pregnancy is not recommended.



Mental Health Effects

Cannabis use, especially frequently (daily or near daily) and in high doses, is linked to:

disorientation

anxiety

psychosis

thoughts of
suicide

More likely to develop long-lasting disorders, such as schizophrenia

- Association is stronger in people who use marijuana at an earlier age

Pregnancy and newborn outcomes

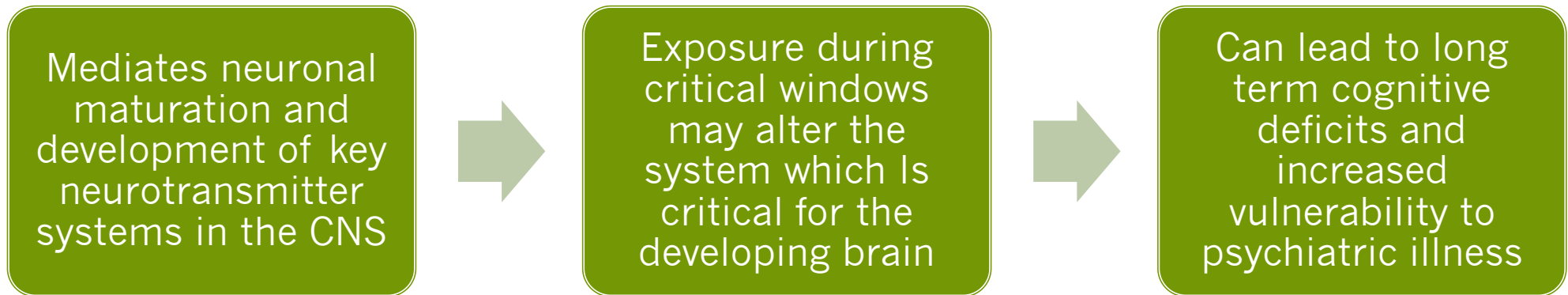
Very little information on the physiological effects of cannabis in pregnancy on the mother



Most of the data reflect cannabis administration by smoking and not cannabis exposure through other routes of administration

The developing brain is vulnerable to cannabis

- THC crosses the placenta
- The endocannabinoid system is present early in fetal development



Current evidence during pregnancy

Current evidence does not show an association with any specific congenital birth defects

Associated with:

- Stillbirth
- Preterm birth
- Fetal growth restriction
- Lower birth weight
- Exaggerated and prolonged startle response
- Sleep cycle problems

Children & Adolescents

- Impulsivity
- Hyperactivity
- Impairments in
 - early executive function
 - Abstract and visual reasoning
 - Visuo-perceptual functioning
- Potential increase in autism (?)

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- Findings inconsistent and confounded
 - frequent co-use with tobacco & other substances
 - sociodemographic factors
 - Don't know the degree that these effects are related to cannabis exposure vs confounding variables

The Adolescent Brain Cognitive Development Study

- Largest long-term study of brain development and child health in the United States.
- The current analysis included 11,489 children recruited between the ages of 9 and 10

Children whose mothers used cannabis

- higher BMIs
- higher levels of psychotic symptoms
- more frequent sleep problems
- social problems
- lower scores on tests of attention and cognition

The Adolescent Brain Cognitive Development Study

Researchers observed that children born to mothers who stopped using cannabis when they discovered they were pregnant did not differ from children born to mothers who reported no cannabis use.

mothers who continue using cannabis during pregnancy may differ from mothers who choose to stop

these women may be heavier users or may be dependent on cannabis

Potential exposure to maternal stress/depression

Limitations

Reliance on self reporting

Drug testing involves informed consent

Many women may not disclose use for fear of negative appraisals or legal consequences

Different modes of exposure

Potency of cannabis varies over time

Dosage and timing of exposure during pregnancy

Difficult to obtain accurate data, particularly the frequency of use

Often used in conjunction with other substances, tobacco, and alcohol

Treatment

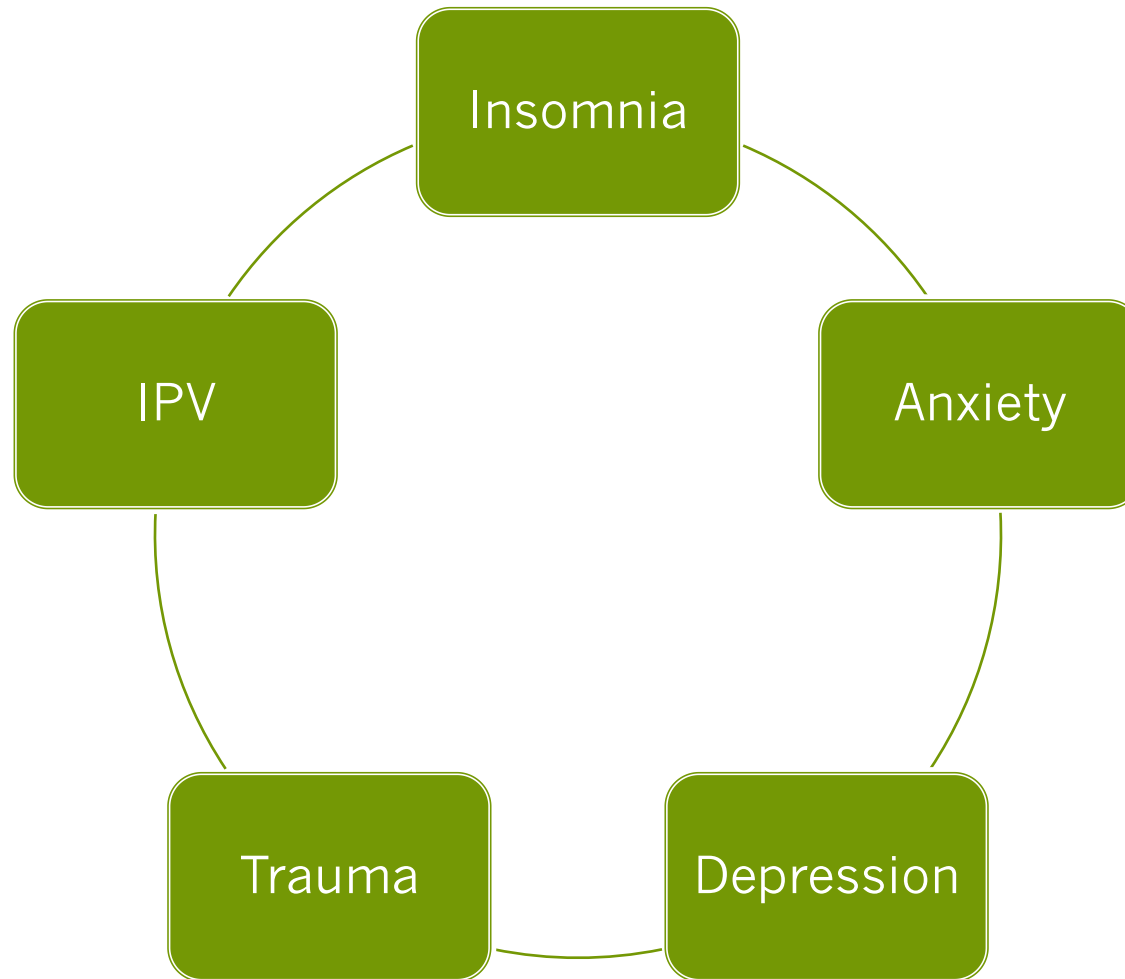
- No pharmacologic treatment currently available

Treatment

- Some success (but not specifically evaluated in pregnant women!):
 - Motivational interviewing
 - Cognitive behavioral therapy
 - Contingency management
- Providers should:
 - Screen
 - Provide education about risks
 - Provide psychotherapy

Evidence based treatment for underlying reasons

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Breastfeeding

American Academy of Pediatrics and Hale:
Cannabis consumption during breastfeeding is
contraindicated.



The health effects on an infant are not fully
known & the available data are limited and
conflicting.

What do we know?

- THC is secreted in breastmilk and can accumulate to high concentrations
- THC is stored in body fat and is slowly released over time, meaning that a baby could still be exposed even after a breastfeeding person stops using marijuana
 - Infants exposed to marijuana through their mother's milk will excrete THC in their urine for 2 to 3 weeks

Breastfeeding

Cannabis may affect the quality and quantity of breastmilk

- Animal studies suggest that cannabis could inhibit lactation by inhibiting prolactin
- No human data

Breastfeeding: infant

Cannabis could produce sedation and growth delay in the infant.

Many factors are difficult to control!

Cannabis
exposure during
pregnancy

Passive
exposure to
cannabis smoke

Quality of
mother-child
relationship

Summary

- There are limitations on the current data on cannabis use during pregnancy, however there are concerning trends.
- Cannabis use is not recommended during pregnancy or breastfeeding.
- Women should be counseled on the potential risks encouraged to discontinue use.
- Higher quality studies are needed to guide providers and patients.

Resources

- SEPI-CT: Substance exposed pregnancy initiative of Connecticut: <https://www.sepict.org/individuals-and-families/resources/>
- <https://beintheknowct.org/pregnancy/>

References

- ACOG
- Agrawal A, Rogers CE, Lessov-Schlaggar CN, Carter EB, Lenze SN, Grucza RA. Alcohol, Cigarette, and Cannabis Use Between 2002 and 2016 in Pregnant Women From a Nationally Representative Sample. *JAMA Pediatr.* 2019 Jan 1;173(1):95-96. doi: 10.1001/jamapediatrics.2018.3096. PMID: 30398527; PMCID: PMC6500767.
- Garry A, Rigourd V, Amirouche A, Fauroux V, Aubry S, Serreau R. Cannabis and breastfeeding. *J Toxicol.* 2009;2009:596149. doi: 10.1155/2009/596149. Epub 2009 Apr 29. PMID: 20130780; PMCID: PMC2809366.
- National Academies of Sciences, Engineering, and Medicine. The health effects of cannabis and cannabinoids: the current state of evidence and recommendations for research. Washington, DC: The National Academies Press; 2017.
- MGH Center for Women's Mental Health
- SAMHSA 2021 National Survey on Drug Use and Health
- CDC: <https://www.cdc.gov/marijuana/health-effects/mental-health.html>
- Pew Research Center
- Volkow ND, Han B, Compton WM, McCance-Katz EF. Self-reported Medical and Nonmedical Cannabis Use Among Pregnant Women in the United States. *JAMA.* 2019 Jul 9;322(2):167-169. doi: 10.1001/jama.2019.7982. PMID: 31211824; PMCID: PMC6582258.

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