



Marijuana Use During Pregnancy and Breastfeeding Findings Summary

Retail Marijuana Public Health Advisory Committee

The Colorado Department of Public Health and Environment (CDPHE) was assigned the responsibility to appoint a panel of health care professionals with expertise in cannabinoid physiology to monitor the emerging science and medical information relevant to the health effects associated with marijuana use (C.R.S. Sec. 25-1.5-111). This panel is the Retail Marijuana Public Health Advisory Committee and consists of 13 members who are physicians, scientists, or public health officials. Currently, the committee has members with expertise in drug epidemiology, surveillance epidemiology, medical toxicology, pediatric medicine, psychiatry, drug addiction, pharmacology, pulmonary medicine, neonatal and perinatal medicine, and public health prevention. The duties of this advisory committee are to:

- Review the scientific literature currently available on health effects of marijuana use.
- Judge and openly discuss the science using expert medical opinion.
- Come to consensus on population health effects of marijuana use based on current science.
- Come to consensus on translation of the science into public health messages.
- Recommend public health related policies based on the current science and expert medical discussion.
- Recommend public health surveillance activities to address any gaps in knowledge discovered.
- Identify and prioritize gaps in science important to public health.

More information on the topics and schedule of this advisory committee can be viewed at: <https://www.colorado.gov/pacific/cdphe/retail-marijuana-public-health-advisory-committee>

This document provides an overview of the major findings of the Retail Marijuana Public Health Advisory Committee related to Marijuana Use During Pregnancy and Breastfeeding. This overview represents information that has been officially approved by the committee. A full report on this and other topics will be available no later than January 31, 2015.



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Evidence Statements

Evidence statements are based on systematic scientific literature reviews performed by CDPHE staff with oversight and approval by the Retail Marijuana Public Health Advisory Committee.

Birth Outcome Risks of Marijuana Use During Pregnancy

Birth Defects -

We found mixed evidence that maternal use of marijuana during pregnancy is associated with birth defects.

We found mixed evidence that maternal use of marijuana during pregnancy is associated with neural tube defects such as anencephaly.

We found mixed evidence that maternal use of marijuana during pregnancy is associated with gastroschisis.

We found moderate evidence that maternal use of marijuana during pregnancy is associated with isolated, simple ventricular septal defects (heart defects).

Preterm Delivery

We found mixed evidence that maternal use of marijuana during pregnancy is associated with preterm delivery.

SIDS

Based on limited evidence, there does not appear to be an association between maternal use of cannabis during and after pregnancy and SIDS.

Stillbirth

We found limited evidence that maternal use of marijuana during pregnancy is associated with an increased risk of stillbirth.

Low Birth Weight

We found mixed evidence that maternal use of marijuana during pregnancy is associated with low birth weight infants.



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Small for Gestational Age

We found mixed evidence that maternal use of marijuana during pregnancy is associated with infants being born small for gestational age.

Decreased birth weight

We found mixed evidence that maternal use of marijuana during pregnancy is associated with decreased birth weight.

Effects of Prenatal Marijuana Use on Exposed Offspring

We found insufficient evidence that maternal marijuana use during pregnancy is associated with exposed offspring initiation of marijuana use as an adolescent.

We found limited evidence that maternal marijuana use during pregnancy is associated with exposed offspring frequency of use of marijuana as an adolescent.

We found moderate evidence that maternal use of marijuana during pregnancy is associated with decreased cognitive function in exposed offspring.

We found mixed evidence that maternal use of marijuana during pregnancy is associated with newborn behavior issues.

We found moderate evidence that maternal use of marijuana during pregnancy is associated with decreased IQ scores in exposed offspring.

We found moderate evidence that maternal use of marijuana during pregnancy is associated with attention problems in exposed offspring.

We found moderate evidence that maternal use of marijuana during pregnancy is associated with decreased growth in exposed offspring.

We found moderate evidence that maternal use of marijuana during pregnancy is associated with decreased cognitive function in exposed offspring.

We found moderate evidence that maternal marijuana use during pregnancy is associated with decreased academic ability of exposed offspring.



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We found limited evidence that maternal use of marijuana during pregnancy is associated with increased depression symptoms in exposed offspring.

There is insufficient evidence to suggest that maternal marijuana use during pregnancy is associated with psychosis symptoms in exposed adolescent offspring.

We found limited evidence that maternal marijuana use during pregnancy is associated with delinquent behaviors in exposed offspring.

Marijuana Use and Breastfeeding

Biological evidence shows that THC is present in the breast milk of women who use marijuana.

Biological evidence shows that infants who drink breast milk with THC in it absorb and metabolize THC.

We found mixed evidence of an association between maternal use of marijuana while breastfeeding and motor development in exposed infants.

There is insufficient evidence for a statement on maternal use during breastfeeding and SIDS.

Public Health Statements

Public health statements are plain language translations of the major findings (Evidence Statements) from the systematic literature reviews. These statements have been officially approved by the Retail Marijuana Public Health Advisory Committee.

- There is no known safe amount of marijuana during pregnancy.
- THC can pass from mother to the unborn child through the placenta.
- The unborn child is exposed to THC used by the mother.
- Maternal use of marijuana during pregnancy is associated with negative effects on exposed children that may not appear until adolescence.
 - The most negatively affected are academic ability, cognitive function and attention, which may not become evident until adolescence when these typically develop.
- There are negative effects of marijuana use during pregnancy regardless of when it is used during pregnancy.



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- THC can also be passed from the mother's breast milk, potentially affecting the baby.

Public Health Recommendations

Public health recommendations have been suggested and approved by the Retail Marijuana Public Health Advisory Committee with the goals of: 1) Improving knowledge regarding population-based health effects of retail marijuana use, 2) Developing and targeting public health education and prevention strategies for high-risk sub populations.

Data Quality Issues:

- Standardization of data collection on dose, amount, frequency and method of marijuana use
- Separate and account for other drug use

Surveillance:

- Better data on prevalence of marijuana use in pregnant and breastfeeding women
- Enhanced surveillance for birth outcomes
- Collection of reported marijuana use in electronic health records
- Data collection to identify specific target populations for public health intervention (geography, income, race, etc.)

Education:

- Education of health care providers
- Education of pregnant women
- Public education
- Educational materials provided at dispensaries

Research Gaps

Research gaps are suggested and approved by the Retail Marijuana Public Health Advisory Committee to identify important gaps in the scientific literature that may impact public health policies and prevention strategies.

- Effect of CBD and other cannabinoids
- Effect of consumption of edibles or by vaping
- Contribution of smoking of marijuana to its health effects
- Effect on miscarriage
- Marijuana use and breastfeeding
 - Effect on growth and weight gain in infant



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- How long does THC remain in breast milk?
- Replicate presence of THC in breast milk
- Pair self-report with biomarker testing in Colorado
- Impact of potency on health effects
- Reasons for use of marijuana during pregnancy/breastfeeding