

Marijuana, Pregnancy & Breastmilk: Getting Closer to Answers

By Sonia Alvarado, MotherToBaby California Teratogen Information Specialist

I wrote a blog about marijuana and pregnancy **three years ago** and it's become the most visited blog on the MotherToBaby website. No surprise, considering that marijuana is an even hotter topic today than it was previously! Three years ago, two states had laws allowing recreational use. Now, 29 states allow medicinal use, recreational use or both (with limits on amounts varying from state to state). I was recently asked to revisit this topic and to provide an update on what we know about marijuana use during pregnancy and breastfeeding.

In this blog article, I use the terms marijuana, cannabis or pot interchangeably, as do most people.

At this time, there is no FDA approved indication for cannabis use as a medical treatment. The FDA gives approval to drugs only when the manufacturers of those drugs have gone through all of the required testing, have met the standards for safety, and have shown that it works when treating specifically named conditions. Marijuana has not met these standards. However, there are two FDA-approved drugs that contain man-made (synthetic) forms of marijuana. These medications, dronabinol and nabilone, are used to treat nausea caused by cancer medications. Neither one has been studied in human pregnancy, so we do not know how safe they are if taken during pregnancy.

The use of marijuana by pregnant women, either unintentionally before they know that they are pregnant or intentional use after pregnancy recognition, continues to increase. One survey suggests that marijuana is the leading recreational drug that pregnant women report using. The National Survey of Drug Use and Health reported that 3.85% of pregnant women reported using marijuana in the past month in 2014, compared with 2.37% in 2002. Other self-report studies indicate the number may be 5-8%. Our information service also receives many questions from pregnant and breastfeeding women who want to continue to use marijuana. Because of increasing legalization, the reported increased use and the need for answers from the public and health care providers, MotherToBaby has set aside sections of its **June 2017 professional meeting** in Denver, Colorado to bring experts together to discuss the latest research.

What do pregnant women, doctors and teratogen specialists, like myself, want to know about cannabis use during pregnancy?

- We know that the developing baby is exposed to drugs, medications, infections and chemicals in the mother's blood. Pregnant women, their health care providers and researchers want to know the differences in the amounts of the drug that reach the blood when cannabis products are used topically, when they are ingested and when they are smoked.
- We also want to know the risks associated with each type of exposure and the doses that are associated with the risk. For example, what is the difference in risk if a pregnant woman smokes pot once a day (a hit or two or more) vs. smoking pot once a week (one hit or two)? What about if she ingests the drug? What is the difference in risk to her developing baby?

It used to be that teratogen specialists like me were mostly concerned about the risk for birth defects, such as cleft lip and palate, or heart defects. However, now we know that for some drugs, the risks are not specific just to the baby's structure, such as development of limbs. Instead, some drugs, like alcohol, affect development of the baby's brain and therefore the effects on the child's learning and behavior might not be noticed until much later. We need studies that follow children exposed prenatally to marijuana, in all its forms and at a range of doses, so that we can better inform pregnant women if their babies have risks for learning or mental health problems.

What the Available Studies Do Show

The few studies that have focused on birth defects like heart defects or cleft lip and palate have not found a specific pattern of birth defects linked with marijuana when it is smoked. This does not mean that we know for sure that the drug does not ever cause birth defects. What it could mean is that the risk may be small or there is an increased risk

only at higher doses or more frequent use. Larger and better studies are needed to determine if there is or is not an increased risk. We do not know for sure yet, and studies are continuing.

Many of the studies have continued to report a higher risk for low birth weight babies, preterm delivery, babies that are small for gestational age and higher rates of admission to intensive care nurseries for babies born to women who smoke marijuana during pregnancy. All of these complications are important and associated with serious health risks for the newborn baby. They could require a longer hospital stay, medical treatment and in some cases, could result in life-long disability. Prematurity, regardless of the cause, is associated with a higher risk for apnea, bleeding in the brain, lung problems (breathing problems), intestinal problems, a higher risk for infections and other problems. Studies continue to look at the issue of complications from smoking pot during pregnancy.

THC and Baby's Brain

Another issue that is very important is the risk of learning and mental health problems from prenatal exposure to cannabis. As many people know, the primary psychoactive component of cannabis is $\Delta 9$ -tetrahydrocannabinol or THC. This part of the plant produces the "high" when it binds to cannabinoid receptors in the brain. In the field of psychiatry, for some time it has been reported that smoking pot is linked to psychosis or schizophrenia. This type of research has generated questions about the risk to the unborn baby's brain from exposure to the drug. Because the brain of the baby continues to grow after birth, there is also concern about what can happen if the baby is exposed to THC through breastmilk. This is part of the important research that will be presented at the MotherToBaby/OTIS conference in Denver this month. We look forward to hearing what the researchers have been learning about cannabis in pregnancy and lactation. Let's just say I have a strong feeling that after this meeting and as we get more and more up-to-date, evidence-based information for our readers, marijuana blog #3 will be right around the corner!



Sonia Alvarado is a bilingual (Spanish/English) Senior Teratogen Information Specialist at MotherToBaby's California affiliate. MotherToBaby aims to educate women about medications and more during pregnancy and breastfeeding. Along with answering women's and health professionals' questions regarding exposures during pregnancy/breastfeeding via MotherToBaby's toll-free helpline, email and private chat counseling service, Alvarado has provided educational talks regarding pregnancy health in community clinics and high schools over the past decade.

MotherToBaby is a service of the Organization of Teratology Information Specialists (OTIS), suggested resources by many agencies including the Centers for Disease Control and Prevention (CDC). If you have questions about exposures during pregnancy and breastfeeding, please call MotherToBaby toll-FREE at 866-626-6847 or try out MotherToBaby's new text information service by texting questions to (855) 999-3525. You can also visit MotherToBaby.org to browse a library of fact sheets about dozens of viruses, medications, vaccines, alcohol, diseases, or other exposures during pregnancy and breastfeeding or connect with all of our resources by downloading the new MotherToBaby free app, available on Android and iOS markets.

Questions? Call 866.626.6847 | Text 855.999.3525 | Email or Chat at [MotherToBaby.org](https://www.MotherToBaby.org).

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By Kristen Hutchinson Spytek, National CMV Foundation President

C-M-V. Three letters that keep me up at night and shake me to the core. Three letters that have managed to routinely shatter my expectations, body slam my optimism, expose my vulnerability, alter my perspective and even now, force me to recalibrate daily. My daughter, Evelyn Grace, was born on March 12, 2013 at 36 weeks with congenital cytomegalovirus. Or CMV.

Evelyn was my first pregnancy; I was thirty-one years old. My husband and I had been married for five years, and together since college, and we were ready. Emotionally, fiscally and socially ready.

The beginning of my pregnancy was largely uneventful. My husband and I talked with anticipation about the future, shared names we liked, vetoed ones we didn't, and spent many evenings dreaming about who he or she would become. We agreed that most importantly, we wanted to raise a kind, compassionate human being that positively contributed to society. Easy right? I met with my OB at all required appointments, avoided all of the "things" like sushi, soft cheese, alcohol, etc., and at the mid-point anatomy scan, my husband and I were ready to learn whether we were expecting a boy or a girl. We wanted the tech to write it down in an envelope so we could open it together, privately, when we were ready.

After 45 minutes, the Maternal-Fetal Medicine specialist came into the room and started explaining something about an echogenic bowel. What? My heart rate accelerated and I held my breath. His lips were moving but I literally could not decipher the words. What did this mean? Should we be concerned? Is this a genetic issue? Will my baby be ok? The truth was, it could be something, or it could be nothing.

My pregnancy progressed and after several tests and consultations with specialists in pediatric cardiology, pediatric neurology, genetic counseling, and social work, we still did not have a realistic view of what we were dealing with. We were terrified. We remained hopeful for a healthy baby but the remainder of our pregnancy was clouded with fear of the unknown.

My daughter was breech and after five weeks of extensive monitoring of both me and the baby, my maternal fetal medicine physician made the call to move up my C-section due to low amniotic fluid. My husband and I practically skipped to the hospital that Tuesday afternoon. We couldn't wait to hold our baby girl in our arms.

The surgery was fast and cold and clinical. I snuck a peak at Evelyn, all three beautiful pounds and 14 ounces, before they whisked her off to the NICU. But even then I did not have a real sense for the gravity of the situation. It was not until the neonatologist uttered the letters "CMV" did I truly realize the weight. Even though I understood very little about CMV, I knew that Evelyn was going to have special considerations. We were devastated for our daughter. The hopes and dreams we had shared for her, and the things we once believed to be big issues or milestones, now seemed trivial and small in comparison. We were in mourning for our "atypical" daughter and for what we wished we had known that may have potentially improved her prognosis. What should we have done differently? What questions should we have asked?

I experienced a primary (first-time) infection, likely during my first or second trimester. Evelyn (pictured right) was severely affected by CMV, receiving weekly early intervention services and private sessions in occupational, physical and speech therapies, in addition to countless specialist appointments. She couldn't do much independently but she had a smile that lit up the room, a laugh that was beyond infectious, and a determination that continues to motivate every cell in my being. She gave my husband and I twenty-one months of unconditional, unequivocal love. Tragically, we lost Evelyn in December 2014 due to complications from a surgery, three weeks before our son, Jack, was born. It was an impossible time. I don't remember much from the weeks that followed but at some point, my adrenaline kicked in while my heart exploded in my chest, and through my tears, I knew my daughter's journey was going to help change the outcome for future babies. Her legacy will positively contribute to society.



There is an overwhelming amount of scary information bombarding pregnant women every single day. Information overload is real, yet simple dialogue between a patient and her caregiver (e.g. midwife, doula, OB, maternal fetal medicine specialist, primary care physician, etc.) is extremely important and sometimes, it's the patient who has to lead the conversation. I only wish I had known more or had time to effectively plan before Evelyn arrived. I felt overwhelmed and ill-prepared.

Only **9%** of women have heard about CMV according to a 2016 HealthStyles™ Survey, yet it's **more common** than Down Syndrome, Fetal Alcohol Syndrome, Fifth Disease, Spina Bifida, Sudden Infant Death Syndrome (SIDS), and Toxoplasmosis. Absorb that for a minute. It is an often symptomless virus, or may present as a cold or flu, and only causes harm when a pregnant woman passes it through the placenta to the baby in utero (or in a person with a weakened immune system). More than half of the adult population has been infected with CMV before the age of 40, and once it's in a person's body, it stays there for life.

How do we successfully educate pregnant women about the risks associated with this virus, if hardly anyone has heard about it?

My best advice is to **take control of your health!** Have you ever been infected with CMV? If you're thinking about becoming pregnant, ask your doctor for an **IgG vs. IgM antibody test** to understand if you've had CMV in the past, and whether or not you currently have an active infection. Already pregnant? No worries, ask for it anyway. It's a simple blood test and is covered by most insurances. Professionals' advice and recommendations will vary depending on the results and where you are in your pregnancy.

June is CMV Awareness Month. Our mission is to educate women of childbearing age about congenital CMV, with the goal of eliminating congenital CMV for the next generation. Whether you're pregnant with your first or you've been down this road a few times, know this:

- **CMV is common.** Congenital CMV is the most common viral infection that infants are born with in the United States — totaling 30,000+ babies each year, with 5,000+ suffering from permanent disabilities.
- **CMV is serious.** Congenital CMV is the leading cause of non-genetic childhood hearing loss. Complications from congenital CMV results in up to 400 deaths yearly.
- **CMV is preventable.** Pregnant women who have toddlers, or work with young children, are at the highest risk of acquiring CMV. The virus is typically spread through urine, blood, mucus, tears, semen or saliva, and there are simple behavior modifications that will help reduce this risk:
 - Do not share food, utensils, drinks or straws
 - Avoid contact with saliva when kissing a child
 - Do not put a child's pacifier or toothbrush in your mouth
 - Wash your hands thoroughly, especially after changing a diaper

Please take a deep breath, practice the above prevention methods, and report any sign of illness to your midwife or doctor. If you are screened for CMV while pregnant, and the result is a positive active infection, your medical professional can do an amniocentesis to see if congenital CMV has spread through the placenta to the unborn baby. And if it has, interventions and therapies may be recommended.

CMV. Know Your Risk. Protect Your Family.



Kristen Hutchinson Spytek is the President of the National CMV Foundation. She has an M.A. in Global Marketing Communications & Advertising from Emerson College and a B.A. in Communication Studies from the University of Michigan. Kristen resides in Tampa, FL with her husband John, and sons Jack (2) and Thomas (4 mo)."

The National CMV Foundation is a non-profit organization dedicated to promoting awareness, providing access to resources and sharing prevention information to eliminate congenital CMV. Learn more at www.nationalcmv.org.

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