

Birth Defects Prevention Month Series- Alcohol, Smoking and Other Drugs: Why Ten Fingers Plus Ten Toes Doesn't Always Equal the Whole Story

By Lauren Kozlowski, MSW, MPH, MotherToBaby Georgia

Carly called and I could hear the stress in her voice immediately. She had been smoking marijuana on weekends and having a glass of wine most evenings with her dinner. She just found out she was pregnant with her fifth child. Carly knew her baby could suffer if she did not change her use of alcohol and marijuana. Carly was scared, so she contacted MotherToBaby. We were able to discuss what kinds of risk the substances she had used may have, and I shared information with her that she could talk to her doctor about. Carly's story immediately came to mind when talking about Birth Defects Prevention Month's **Tip 0: Boost your health by avoiding harmful substances during pregnancy, such as alcohol, tobacco, marijuana and other drugs.**

Alcohol

Alcohol is actively advertised as a way to relax after a hard day, and it's almost always a part of celebrations. Alcohol is legal to purchase in any amount for most adults 21 and older, making it very accessible. Changing your lifestyle to not drink any alcohol during pregnancy may seem hard, but it is worth it for the health of your developing baby. Though having one drink likely does not mean your baby will automatically have health problems, no amount of alcohol has been proven safe during pregnancy. This means that not drinking alcohol at all during pregnancy is your best bet. Alcohol can cause a range of issues for the health of your child. Some are physical birth defects, while others are related to controlling emotions effectively and learning abilities. Some of these issues last long after birth and can have lifelong effects on your child.

Cigarettes & e-cigarettes

Smoking and the use of tobacco products are activities that many associate with stress reduction and, like alcohol, can be hard to stop. Cigarette smoke contains more than 4,000 chemicals and toxins, including nicotine, tar, arsenic, lead, and carbon monoxide. Some of these chemicals cross the placenta and lower the amount of oxygen and food available for a developing baby. Babies born to mothers who smoke are at increased risk for being born too small (with low birthweight) and prematurely (before 37 weeks of pregnancy). Babies born too small and too early are more likely than other babies to have health complications and may need to stay in the hospital longer. Some studies suggest that babies born to moms who smoke are at risk of having an oral cleft, a birth defect where the lip or roof of the mouth does not fully close. Not smoking is best for you and your baby during pregnancy. Every little bit counts, so even reducing the amount can be helpful to your baby!

In comparison to traditional cigarettes, we know very little about the safety of e-cigarettes (or vaping) during pregnancy. This is because e-cigarettes are largely unregulated, and little research has been done on them. While some moms-to-be may view e-cigarettes as safer alternatives than traditional cigarettes, e-cigarette solutions contain several of the same reproductive or developmental toxins that are found in traditional cigarettes, like nicotine, cadmium and lead. So until more studies have been done on the safety/risk of e-cigarettes, it is best for moms-to-be not to use them.

Marijuana and other street drugs

Another way to boost your health during pregnancy is to not use harmful drugs. For example, women may think marijuana may help with nausea and vomiting (morning sickness). Though we still need more research, studies in animals have shown that exposure to marijuana in the womb may harm a baby's brain development. Marijuana is unregulated in most places, so you don't know what may be in it – certain chemicals, pesticides or other drugs may

cross the placenta and impact your baby. In addition to smoking marijuana, using substances that include THC (the active ingredient in marijuana), such as edibles and oils, carries the same potential to affect a baby's brain development. No amount of marijuana or THC has been proven safe to use during pregnancy.

Other street drugs, like cocaine, heroin, LSD, MDMA (ecstasy or Molly), and methamphetamine, also are harmful during pregnancy. Using these kinds of drugs during pregnancy increases a baby's risk for miscarriage, preterm birth, birth defects and neonatal abstinence syndrome (NAS). NAS is a group of conditions caused when a baby withdraws from certain drugs she's exposed to in the womb before birth. NAS is most often caused when a woman takes drugs called opioids during pregnancy. Not a single one of these drugs has a beneficial effect on pregnancy or a developing baby – so for your baby's sake as well as your own, a drug-free pregnancy is a healthier pregnancy.

It is important to realize that giving birth to a baby with ten fingers and ten toes – who looks healthy at birth – is not the end of the story. Effects caused by the use of alcohol, tobacco and other drugs during pregnancy can take a while to show. As a child develops and reaches or fails to reach developmental milestones, only then is it possible to evaluate the long-term effects of prenatal substance exposure on things like the ability to learn and manage emotions. While every pregnancy carries some risk that is out of anyone's control, we want to encourage women to focus on areas of their health that they do have some control over. Taking care of yourself and your health means a healthier baby. Doing what you can to boost your health by avoiding harmful substances during pregnancy is a great place to start!

If you are struggling with substance addiction, talk to your health care provider. You can also find help and treatment referrals by visiting the Substance Abuse and Mental Health Services Administration (SAMSHA) website or by calling their national helpline, 1-800-662-HELP (4357).



Lauren Kozlowski, MSW, MPH is serving as the Program Coordinator for MotherToBaby Georgia. She graduated from Boston University with both a Masters of Social Work and a Masters of Public Health. She has experience working with families in both an educational setting, as well as in housing and health, allowing her to recognize the multiple factors contributing to the ability of women and children to thrive. She enjoys living in Atlanta and exploring what the city has to offer.

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By Beth Conover, APRN, CGC MotherToBaby Nebraska, UNMC

"I am 20 weeks pregnant...when is it safe to get my flu shot?" The texted question came in to the MotherToBaby texting helpline, and the answer that I texted back was simple - "As soon as possible...it's safe at any time in pregnancy and really important for you and your baby!"

Once we are into influenza (flu) season (November to March), pregnant women are strongly recommended to get immunized (vaccinated), regardless of how far along they are in their pregnancy. Yet many women delay, and in the end only about 50 percent of pregnant women get their flu shot.

The flu can cause severe illness and even death in pregnant and postpartum women. The flu shot contains an inactivated virus that won't make you or your baby sick. It is the most effective way to prevent the flu or help you have less severe symptoms if you do get the flu. Currently the nasal-spray flu vaccination is NOT recommended for pregnant women because it contains live attenuated (weakened) virus.

As if the benefits to you from the flu shot aren't enough, here's another one: getting vaccinated while you are pregnant can protect your baby from getting the flu after birth! This is because the antibodies that you develop when you get the flu shot get passed to your developing baby during pregnancy and help protect your newborn for the first few months of life.

Here's another common question that I get about vaccines during pregnancy.

"I received my diphtheria/pertussis/tetanus (Tdap) shot last year. Since I am already immune, why do I have to get it again in my third trimester of pregnancy?"

The third trimester Tdap booster is to help your baby, not you. Diseases like pertussis (whooping cough) can cause serious life-threatening illness in newborns. When a pregnant woman gets a Tdap booster in her third trimester, she

mounts a strong antibody response which is passed on to her baby and helps protect the newborn until the baby starts a vaccination series at 2 months of age.

Some pregnant women are worried about whether immunizations will harm their baby. The scares about vaccines being associated with problems like autism have been debunked. Most vaccines are safe for pregnant and breastfeeding women. A few, such as the **measles, mumps and rubella (MMR)** and chicken pox vaccinations, contain live attenuated virus and are best given when you are not pregnant. The benefits of protection against disease strongly outweigh any potential risk. That's why Birth Defects Prevention Month's Tip ⑤ is a really important one: **Become up-to-date with all vaccines, including the flu shot.** Better yet...if you are thinking about getting pregnant, it's an excellent time to speak with your health care provider to make sure you are current on all of your recommended vaccinations. Remember, a healthy mother is more likely to have a healthy baby!

Are you interested in learning more about vaccinations in pregnancy or while breastfeeding?

Visit the Mother to Baby website and read all of our vaccine-related fact sheets. There is a general fact sheet on all vaccines, and then specific fact sheets on the influenza vaccine and Tdap vaccine (of course!) but also many others like the Measles, Mumps, and Rubella (MMR), HPV, hepatitis A, and chicken pox vaccinations.



Beth Conover, APRN, CGC, is a genetic counselor and pediatric nurse practitioner. She established the Nebraska Teratogen Information Service in 1986, also known as MotherToBaby Nebraska. She was also a founding board member of the Organization of Teratology Information Specialists (OTIS). In her clinical practice, Beth sees patients in General Genetics Clinic, Prenatal Clinic, and the Fetal Alcohol Syndrome Clinic at the University of Nebraska Medical Center. Beth has provided consultation to the FDA and CDC.

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By Ginger Nichols, Licensed Certified Genetic Counselor at MotherToBaby Connecticut

With Birth Defects Prevention Month in full swing, it's time to focus on **Tip #2 for Preventing Birth Defects: Booking a visit with your health care provider before stopping or starting any medicine.**

Callers to **MotherToBaby** often wonder why it's important to talk with their health care provider before stopping or starting a medication. My most recent caller to MotherToBaby asked this very question.

Maria contacted us at **MotherToBaby** telling us that she and her partner had decided that they would like to start a family. Like many women, Maria was taking medications for a health condition, and she wanted to learn if it would be OK to use them while trying to get pregnant and during pregnancy. She was planning to stop taking them because she was worried that they could be harmful for her baby. She told me that she felt alone as she faced this decision.

In fact, Maria is not alone; 70 percent of women need to take prescription medication during pregnancy to treat a wide variety of health conditions, like **depression, asthma, diabetes, nausea and vomiting of pregnancy and inflammatory bowel disease**. And most women (90 percent) report using over-the-counter medication, vitamins or supplements for overall health or for specific health concerns, such as **acne, allergies, colds, constipation, headaches and lice**.

Why should you talk with your health care provider before starting or stopping taking medication?

Here's why it's important to check with your providers about taking medications and supplements before and during pregnancy:

- Some medications or herbal products can make it harder to get pregnant. And some medications can help you get pregnant.
- In some cases, stopping a medication and having an untreated medical condition may be more of a concern for

pregnancy than the medications used to treat it. If a medicine can be harmful during pregnancy, your provider may want to switch you to one that's safer for your baby. But some medications are necessary, even if they may be risky for your baby. You and your provider can talk about all your treatment options to make the best decision for you and your baby. Some medications can cause you to go through withdrawal (have unpleasant physical and/or mental symptoms) if you stop suddenly (also called "cold turkey"). If you and your provider decide to stop a treatment, you may need to stop taking the medicine slowly over time rather than stopping all at once.

- Some medications may need to be increased or decreased during pregnancy in order to continue working properly.
- Some vitamins and supplements may have too much or too little of the nutrients that you need during pregnancy. You may need to adjust the amount you take.
- **Supplements and herbal products** are not regulated by the Food and Drug Administration. There are no standards for ingredients and strength, and most have been poorly studied regarding their safety for use in a pregnancy.

Now that you know why it's important to check on the safety of medication before and during pregnancy, what's next?

- Whether you are planning a pregnancy or currently pregnant, talk to your health care providers before starting any medication (prescription or over-the-counter), vitamins or herbal products.
- Don't stop taking your prescription medication unless your health care provider says that it is OK.
- Make appointments with your health care providers to review medications they prescribe, and make an appointment with your prenatal provider. If you are planning a pregnancy, talk with your providers before you get pregnant; and talk with them again as soon as you find out that you are pregnant.
- Tell your provider about any medicine you take, including medications that you only use once in a while, like seasonal allergy medication or rescue inhalers. Tell them about over-the-counter medicines, **supplements and herbal products, too**. A product may be made from herbs if it has word on the label like indigenous or tribal medicine, traditional Chinese medicine, **natural remedies**, herbal supplements, **nutritional shakes**, **essential oils** and tinctures.
- Start taking a prenatal vitamin as soon as you stop your birth control. Talk to your provider about which prenatal vitamin to take.

How can you get ready to talk to your providers about medication and pregnancy?

- Prepare and bring with you a list of all the medications and supplements that you take, including the ones you may only take occasionally.
 - Bring all pill bottles/boxes with you to the appointment so your provider can check on the active ingredients.
 - For each medication/supplement on your list, include information on:
 - Dosage (how much you take),
 - Frequency (how often you take it), and
 - Indication (why you are taking it).
- Some medications can stay in the body for a long time. If your treatment plan includes stopping a medication before getting pregnant, discuss the timing of when you should stop.
- There may be alternative treatments that work just as well for you and are better options during pregnancy and breastfeeding.
 - Ask about alternative treatments. Find out if you can try them out before pregnancy to see if they will

work for you.

- Talk about the right **prenatal vitamins** with the right amount of **folic acid** for you.
 - Some medications can affect how your body uses folic acid, which is important for pregnancy.
 - Ask your prenatal provider to prescribe you a prenatal vitamin to make the choice easier.

After our call, Maria felt more comfortable in learning about her medications and questions she should have ready to discuss with her providers about the best way to treat her medical condition throughout her pregnancy.

Remember, just like Maria, you are not alone. MotherToBaby is here to help you and your providers work together to make informed decisions about your medication options for pregnancy and breastfeeding.



Ginger Nichols is a licensed certified genetic counselor based in Farmington, Connecticut. She currently works for MotherToBaby CT, which is housed at UCONN Health in the Division of Human Genetics, Department of Genetics and Genome Sciences. She obtained her Bachelor of Science degree in Biology and Sociology from Juniata College and her Master's Degree in Medical Genetics from the University of Cincinnati. She has a special interest in occupational and environmental exposures.

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Selected References:

- Bohio R, et al. 2016. Utilization of over the counter medication among pregnant women; a cross-sectional study conducted at Isra University Hospital, Hyderabad. J Pak Med Assoc. 66(1):68-71.
- Centers for Disease Control and Prevention (CDC). 2018. Treating for Two: Medicine and Pregnancy. <https://www.cdc.gov/pregnancy/meds/treatingfortwo/facts.html> [Accessed 11/2018]
- Tasnif Y, et al. 2016. Pregnancy-related pharmacokinetic changes. Clin Pharmacol Ther. 100(1):53-62.
- U.S. Food and Drug Administration (FDA). 2018. Medicine and Pregnancy. <https://www.fda.gov/forconsumers/byaudience/forwomen/ucm118567.htm> [Accessed 11/2018].

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By Lori Wolfe, CGC, MotherToBaby North Texas

Nicole called me in tears. She had been trying to become pregnant for the past nine months and was not having any luck. She asked if it could be due to being overweight. As I talked with Nicole, I found out she is about 100 pounds over a healthy weight for her height. As a MotherToBaby specialist, I often talk with women who are trying to become pregnant. It just so happened this question came along as I was reviewing tips for January's Birth Defects Prevention Month. Tip #4 is: **Before you get pregnant, try to reach a healthy weight.**

I explained to Nicole that studies have shown that women who are overweight can have a number of different problems trying to become pregnant, but she shouldn't worry. Many of the problems outlined below can be reversed when healthy eating and exercise are incorporated into her routine. Some of the issues which can result from being overweight while trying to conceive include:

- An increased chance of having irregular or absent periods, making it difficult to conceive
- Producing too much estrogen, which can also make it harder to get pregnant
- An increased chance of having complications during fertility treatments
- Having polycystic ovary syndrome, a hormonal disorder that is a major contributor to infertility in women of child bearing age

Once they get pregnant, women who are overweight or obese are at a higher risk for the following complications during pregnancy:

- Miscarriage

- Heart disease
- Increased chance for a birth defect in the baby
- Gestational diabetes
- High blood pressure and preeclampsia (a dangerous kind of high blood pressure that can happen during or right after pregnancy))
- Cesarean birth

After discussing all of this with Nicole, her next question to me was what can she do to reduce these possible risks? Fortunately, most women with overweight can expect to have a healthy pregnancy. I explained to Nicole that it is best to talk with her doctor and try to lose weight before becoming pregnant. Losing weight once you are pregnant is not advised. Start now to eat a healthy diet and exercise regularly before pregnancy, and keep this up once you become pregnant.

Healthy eating includes folic acid

Another important Birth Defects Prevention Month tip is Tip #1: **Be sure to take 400 micrograms (mcg) of folic acid every day.**

We all need folic acid every day in our bodies to help make new cells. Folic acid is a synthetic form of Vitamin B9, also known as folate. It is very important to take enough folic acid just before and during pregnancy. Many studies have shown that taking 400 mcg of folic acid before and early in pregnancy every day reduces the chance that a baby will have serious birth defects of the spine and brain, called neural tube defects (NTDs). This is even more important in women who are overweight as their body requires more folic acid.

Nicole was relieved to hear that her weight didn't have to be an obstacle and that there were things she could do to increase her chance of becoming pregnant and having a healthy baby. Losing weight, eating healthy foods and daily exercise can increase her chances of becoming pregnant and can decrease her chances of miscarriage, birth defects and other pregnancy problems. She said she will call her health care provider right away to schedule an appointment to talk about everything and was excited that the future looked brighter to one day become a mom!



Lori Wolfe, CGC, is a board certified Genetic Counselor and the Director of MotherToBaby's North Texas 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 number, text line and by email, Wolfe also teaches at the University of North Texas, provides educational talks regarding pregnancy health in community clinics and high schools.

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