A Closer Look at Controlling Cholesterol during Pregnancy

By Mara Gaudette, MS, CGC, Teratogen Information Specialist, MotherToBaby California

The chat message came through promptly at my morning start time. The words and exclamation marks clearly highlighted worry. “Just found out I’m pregnant! Taking a statin medication to lower cholesterol since 6th grade! Talked to my doctor and stopped taking it yesterday. But what damage have I already done? I know it’s a class X drug! Need info – please help!” Mae agreed to a phone call, and I logged off from our MotherToBaby live chat service and phoned Mae.

First, you may wonder why someone would be on a cholesterol-lowering medication since late elementary or middle school. Isn’t that extreme? Actually no- in Mae’s case she has an inherited condition called familial hypercholesterolemia – or “FH” for short. This is a condition that occurs in about 1 in every 250 persons but is underdiagnosed and therefore undertreated. A simple blood test checking cholesterol levels and a review of your family history (such as checking for heart attacks at younger ages) can help determine if you have FH. Much less common, a more severe form of FH, inherited from both parents, can occur.

To back up a bit, cholesterol is that fatty substance in our bodies that is needed in some amount, but too much cholesterol increases our chance for early heart disease. The lifestyle changes that are recommended to all of us, such as exercising regularly, avoiding smoking, and eating a healthy diet are also part of the treatment plan for FH (and Mae had been working hard to follow these guidelines). But, cholesterol lowering medications are still often a needed part of treatment because lifestyle alone won’t lower cholesterol levels enough in persons with FH. For some with FH, statin medications might be prescribed starting at 8-10 years old.

But what about the “category X” classification Mae mentioned-does this mean that statin medications are absolutely proven to increase birth defects? Fortunately, for Mae the answer is a resounding “no!” Many persons are not aware that the FDA decided in 2014 to phase out their letter category rating system. While an easy system to use, it was not a reliable system to predict pregnancy risk (see our January 2015 blog for more information).

So why were statins assigned that old category X? Well, the developing baby needs cholesterol to form properly so there is a theoretical concern that cholesterol-lowering medications could pose a pregnancy risk. Also, for many persons, particularly those without FH, stopping a cholesterol-lowering medication in the short term of a pregnancy is thought unlikely to significantly increase their heart disease risks. However, for some persons, avoiding all cholesterol treatments might pose concerns for both the pregnant woman and baby. So, if you have FH, talking with your cardiologist and obstetrician about a cholesterol treatment plan is important when planning a pregnancy or when you learn of your pregnancy.

Most studies with the class of medications called “statins” have not found an increase in birth defects with accidental use early in pregnancy. This should provide some reassurance to pregnant women who were taking statins before they realized they were pregnant, like Mae. (For more info, see our fact sheet on Statins in pregnancy.)

“I feel a little better. But, I wish there were more pregnancies that were studied. We need more info about medications we might have to take during pregnancy,” Mae said. At MotherToBaby, we completely agree! And I appreciated her lead to bring up our optional follow-up program. I let Mae know that in addition to providing information, we have a study team that follows pregnancy outcomes. This will allow us to provide more information to worried parents and their healthcare providers. So, if you find yourself like Mae drawn to the importance of this information and wondering how you can contribute, call 877-311-8972, email mothertobaby@ucsd.edu or you can volunteer for a study through our website. There is no cost to participate and pregnant women are never asked to take a medication.



Mara Gaudette is a genetic counselor and received her Masters Degree from Northwestern University. Drawn to the satisfaction of providing immediate reassurance to worried women, she began educating the public about teratogens at MotherToBaby's Illinois affiliate more than a decade ago. Today, she not only continues to counsel for MotherToBaby via phone, but also on live chat and email as part of MotherToBaby California's team of experts.

MotherToBaby is a service of OTIS, a suggested resource by many agencies including the Centers for Disease Control and Prevention (CDC). If you have questions about exposures like cholesterol medication, please call MotherToBaby toll-FREE at 866-626-6847 or try out MotherToBaby's 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.

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Atopic dermatitis, commonly known as eczema, is a condition that makes the skin itchy and inflamed and can cause red or darker colored patches during a flare-up. Symptoms can be mild, moderate, or severe and can come and go. If you are one of the many people who are pregnant and dealing with this itchy, inflamed skin issue, you are not alone. Atopic dermatitis is common in pregnancy. Over half of people with eczema develop symptoms for the first time during their pregnancy. Hormonal changes in pregnancy can make symptoms worse.

There are many ways your healthcare providers may treat your atopic dermatitis during pregnancy. Treatment may be topical (used on the skin) such as moisturizers and creams or systemic (medication taken by mouth or by injection). Information on specific medications can be found in our fact sheets at https://mothertobaby.org/fact-sheets/ or by contacting a MotherToBaby specialist at 866.626.6847.

Generally, the first line of treatment in pregnancy is topical because of the route of exposure. The developing baby is exposed to things in a pregnant woman's blood. When you take a medication by mouth or swallow something, we know that is very likely to enter the bloodstream, where it can then potentially cross the placenta and reach the baby. With most topical products, the skin serves as a good barrier, so it is not expected that a significant amount of the product would be able to enter the pregnant woman's blood where it can then reach the baby. This is especially true when the topical product is used on small areas of the body, used infrequently, or used on healthy (non-broken) skin.

If topical treatment is not working for you, fear not, there may be a glimmer of hope – light therapy.

Understanding Light Therapy:

Light therapy, also known as phototherapy, is a treatment option for atopic dermatitis that involves exposing the skin to ultraviolet (UV) light under controlled conditions. There are various types of light therapy including: narrowband (NBUVB), broadband (BBUVB), UVA, UVA1, full-spectrum light, saltwater bath plus UVB (balneophototherapy), psoralen plus UVA (PUVA), and other forms of phototherapy. UV light is the same light that comes from the sun, and it is not radiation. This therapy aims to reduce inflammation and itchiness, ultimately improving the overall condition of the skin.

Light Therapy During Pregnancy:

While there's limited research on light therapy during pregnancy, it is not expected to increase the chance of pregnancy complications. Most of the types of light are not expected to be absorbed through the skin and reach the developing baby. However, while NBUVB and BBUVB phototherapy can be used during pregnancy, they may reduce folic acid levels. Folic acid is very important for baby's development especially in the first trimester of pregnancy. Make sure you talk with your healthcare provider about folic acid supplementation and monitoring folic acid levels if you do need to get phototherapy in the first trimester. You may find our factsheet on folic acid helpful here: https://mothertobaby.org/fact-sheets/folic-acid/. Additionally, psoralen plus ultraviolet A (PUVA) light therapy should be avoided during pregnancy due to increased chance of low birth weight (weighing less than 5 pounds, 8 ounces [2500 grams] at birth).

In order to learn more about how atopic dermatitis and light therapy may affect pregnancy, MotherToBaby is currently enrolling people who are pregnant in the Eczema & Pregnancy Study. You can make an impact on the health of future families today by joining the study. Learn more about the study here: https://mothertobaby.org/ongoing-study/eczema-moderate-to-severe-atopic-dermatitis/

Protecting the Skin:

Your healthcare provider may recommend using sunscreen for additional skin protection after light therapy. Sunscreen ingredients such as avobenzone, homosalate, octisalate, and octocrylene may be absorbed through the skin in small amounts with regular use, especially if they are used on large areas of the body. However, there is no proven increased risk to a pregnancy from using these ingredients. Mineral sunscreens contain zinc or titanium which are physical blocking agents and stay on top of the skin. That means they are not absorbed through the skin and are not expected to reach the developing baby. More information is available on our blog: https://mothertobaby.org/baby-blog/screening-your-sunscreen-during-pregnancy/

As with any medical treatment during pregnancy, it's essential to weigh the potential risks and benefits with your healthcare provider.

Things to Consider:

Before diving into light therapy, here are a few things to consider:

1. Consult Your Healthcare Provider: Always consult with your healthcare provider before starting any new treatment, especially during pregnancy. Your healthcare provider can help you assess potential risks and determine if light therapy, and what type of light therapy, is right for you.

2. Alternative Treatments: If light therapy isn't suitable for you during pregnancy, don't worry! There may be other treatment options available that can help manage your symptoms. Information on specific medications can be found in our fact sheets at https://mothertobaby.org/fact-sheets/ or by contacting a MotherToBaby specialist at 866.626.6847.

3. Consider Joining the MotherToBaby Eczema & Pregnancy Study: Are you interested in joining our community of expecting parents who are sharing their pregnancy journey with our study team? If you would like more information, visit https://mothertobaby.org/ongoing-study/eczema-moderate-to-severe-atopic-dermatitis/ or call 877-311-8972.

In Conclusion:

Atopic dermatitis can be challenging to manage, especially during pregnancy. However, light therapy offers a ray of hope for many people who are pregnant and struggling with this skin condition. Remember to always consult with your healthcare provider to determine the best course of action for you and your baby. You've got this!

Questions? Call 866.626.6847 | Text 855.999.3525 | Email or Chat at MotherToBaby.org.

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A Closer Look at Controlling Cholesterol during Pregnancy

By Beth Conover, APRN, Beth Kiernan, MPH, and Al Romeo, RN, PhD – MotherToBaby Teratogen Information Specialists

From images of buildings destroyed by high wind to families stranded on roof tops by flooding (and the rising death toll), to say that hurricanes can be devastating would be an understatement. At MotherToBaby, we receive questions from moms and moms-to-be in storm-affected areas regarding the potential exposures they may be experiencing as powerful forces of nature wreak havoc on their homes and communities. We just wanted to let you know – ***MotherToBaby is here for you, your unborn child and your baby.*** We can answer your questions about the known facts surrounding these potential natural disaster-related exposures during your pregnancy or while breastfeeding. You can call us toll-free (866-626-6847), text us (855-999-3525), chat with us online or send us an email via MotherToBaby.org. Here are some common questions we're getting and answers to help provide you with as much information as possible during this difficult time:

I'm pregnant and worried about possible things associated with a hurricane that might harm my baby.

Being pregnant can be a stressful time, without having the additional concerns of a natural disaster like a hurricane! However, remember that many pregnant women have been in similar situations and had normal pregnancy outcomes and healthy babies. There are some common sense things you can do to keep you and your baby safe:

- Continue to eat nutritious food…even if it is from a can.
- Drink safe fluids…bottled or boiled water, for example.
- Rest whenever you can and get the proper amount of sleep.
- Don't overdo heavy lifting.

MotherToBaby has a fact sheet on pregnancy during natural disasters:
https://mothertobaby.org/fact-sheets/natural-disasters/

I am worried that there might be industrial chemicals released into the air and water after a hurricane. Will this present a risk to my pregnancy?

Local industry may be affected by heavy rain, wind, tornadoes, and flooding from a hurricane. Various chemicals (carbon monoxide, ammonia, chlorine, hydrochloric acid, sulfuric acid) can be released into the air or flood waters from damage to those industrial sites. Local authorities will often notify the public about any chemical spills and explain what the public should do to avoid or reduce exposures (staying indoors, for example). If you think the smell is natural gas, go to a safe area away from the smell and call 911 or the local gas company.

You may want to start taking notes on paper or making some mental notes in case you have questions about how those chemicals might affect your pregnancy or your breastfed baby. Contact your health provider or MotherToBaby and be prepared to answer these questions:

- The names of the chemicals
- New or increased symptoms (vomiting, headache, dizziness, etc.)
- How you came into contact with the chemicals (breathing, touching, in your mouth or eyes, etc.)
- How long you were in contact with the chemicals

Fortunately, exposures like these are often small enough that they don't present a risk to the pregnancy. For example, just smelling something may not result in a significant amount being passed to the baby. However, each chemical is different, so be sure to ask about any of your concerns.

I'm worried about whether my drinking water is safe…can I get an infection from it that could harm my pregnancy?

Infections are common after a natural disaster. These can include bacterial infections and parasites from dirty water. Many of these infections are important to treat, and you should contact your obstetrical health provider (Midwife or OB) if you think you have an infection. MotherToBaby has fact sheets on common infections and many medications used to treat them: https://mothertobaby.org/fact-sheets-parent/

All this water is resulting in a lot of mosquitoes! Not only are they unpleasant but can't they spread infections that may harm my pregnancy? Is insect repellent safe to use in pregnancy?

You are correct that mosquitos can sometimes carry serious infections such as Zika and West Nile disease. MotherToBaby has fact sheets on these diseases and many others:
https://mothertobaby.org/fact-sheets/zika-virus-pregnancy/ and
https://mothertobaby.org/fact-sheets/west-nile-virus-infection-pregnancy/.

There are also some things you can do to lower your chances of being bitten by a mosquito:

- Stay indoors with proper screens during peak times of mosquito activity (usually overnight from dusk through dawn)
- Wear long sleeved shirts and pants when outdoors
- Consider using insect repellent containing an effective ingredient such as DEET or picaridin. Apply the repellent sparingly to exposed skin and outer clothing, and wash it off when you are back inside and no longer need it. MotherToBaby has a fact sheet on insect repellents at https://mothertobaby.org/fact-sheets/insect-repellents/

I'm just so stressed out by the whole situation! Our home is destroyed and we are staying in a shelter. I've heard from my grandmother than stress can harm the baby. Is this true?

Pregnant women often worry that stress can affect the pregnancy and cause miscarriage, premature delivery or low birth weight. Fortunately, most experts agree that moderate levels of stress are unlikely to harm the pregnancy. It's still best to keep as calm as possible, and try to quit worrying about worrying! It's normal to feel irritable and out of control, and to be tearful and worried. Stress can make existing medical conditions worse, so it's important that you take care of yourself even as you are taking care of family members:

- Pay attention to your blood sugar levels and blood pressure.
- Do things to relax. Get some exercise, even if it's just a short walk.

- Take deep breaths and think positive thoughts about your baby.

If you feel depressed, talk to someone such as your partner, a relative or friend, or a health care provider. If you have been taking medicine for mental health issues, keep taking it unless your doctor tells you to stop. It's OK to ask for help. Treating depression and anxiety helps your baby. Check out this fact sheet for more information: https://mothertobaby.org/fact-sheets/stress-pregnancy/

The good news is that my home is still standing. The bad news is that the hurricane has caused a real mess in my home! What types of cleaning agents are safe to use while I am pregnant?

First of all, remember that you don't need to take on everything…you are pregnant after all! Let others do the heavy lifting or handle possibly toxic cleaning chemicals. However, most household cleaning agents are pretty low risk. To help protect yourself and your baby, wear gloves when using cleaning agents and try to keep fresh air moving through your work area (consider a fan and open the windows).

What about mold? Hurricanes involve rain and can cause flooding…and all this water in my house has caused mold in my walls. Will this hurt me or my pregnancy?

After the rain has stopped and flood waters go down, mold may start to grow in damaged homes, cars and businesses. Whether you are young or older, pregnant or not pregnant, mold exposure can make you sick. However, there is no proof that exposure to mold increases risks for birth defects or pregnancy complications. Companies can help with the cleanup, but you can do some on your own if you take the right precautions. MotherToBaby has a fact sheet on mold: https://mothertobaby.org/fact-sheets/mold-pregnancy/

Here's how to learn about cleaning mold in your home: https://www.epa.gov/mold/mold-cleanup-your-home

If you must live or work in a place where mold is being removed, try to open windows so that your exposure is less to airborne mold spores. If you can sleep somewhere else at night and just return to clean up for a short period each day, that may be best for you.

What if I am breastfeeding my baby? Do I need to worry about exposures or should I use formula?

Breastfeeding is good for you and your baby! It is even more important when there are concerns that the water used to make formula may be contaminated. Be sure to keep yourself well hydrated, and use common sense about your exposures. MotherToBaby has a fact sheet on breastfeeding in a natural disaster: https://mothertobaby.org/fact-sheets/breastfeeding-natural-disaster/

Here is another website to check out:

Centers for Disease Control and Prevention:

https://www.cdc.gov/reproductivehealth/emergency/safety-messages.htm

More about MotherToBaby

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Lately, it seems like every few months a new infectious disease makes the headlines. The COVID-19 pandemic dominated the news cycle for some time, but as more and more people get vaccinated and the number of severe cases starts to decrease, the media's focus has shifted to other known or emerging threats. From the flu and respiratory syncytial virus (RSV), to mpox and syphilis, infections seem to be spreading like wildfire. Most recently, measles has made yet another comeback, prompting many women who are planning pregnancy, currently pregnant, or breastfeeding to make sure they are taking steps to avoid infection.

When I logged into our live chat service at www.mothertobaby.org on Tuesday morning, a chat from Alyssa popped up right away. "I'm currently 18 weeks pregnant and there was a measles case reported at my son's preschool. Do I need to be worried?"

It's understandable that Alyssa would be concerned. Measles (also known as rubeola) is a highly contagious respiratory disease caused by a virus. According to the Centers for Disease Control and Prevention (CDC) the measles virus can live for up to two hours in an airspace where the infected person coughed or sneezed. If people breathe the contaminated air or touch the infected surface, then touch their eyes, nose, or mouth, they can become infected. Measles is so contagious that if one person has it, up to 90% of the people close to that person who are not immune will also become infected.

Symptoms of measles generally appear about 7-14 days after a person is infected, and can include high fever, dry cough, runny nose, red watery eyes, and a rash all over the body. To date, studies have not identified an increased risk for birth defects when pregnant women get infected with measles during pregnancy. However, research suggests that a measles infection can be associated with an increased risk for miscarriage, premature delivery (having the baby before 37 weeks), and stillbirth.

The first question I asked Alyssa on chat was if she had ever received the Measles, Mumps, and Rubella (MMR) vaccine. Just one dose is about 93% effective at preventing measles, while two doses is close to 97% effective, so it's the best way to prevent this disease. These vaccines are routinely given in childhood, so Alyssa couldn't remember if she had received both, but after texting her mom she was able to confirm that she was fully vaccinated. Whew, that was good news. Next we discussed the date of exposure. I asked Alyssa when the positive case was reported at daycare, to which she answered that it was about two weeks ago. More good news. Since neither Alyssa nor her son had experienced any symptoms yet, infection was unlikely.

Since measles doesn't seem to be going away anytime soon, knowing how to best protect yourself against the illness at all reproductive life stages is important.

Pre-Conception: Women who are planning a pregnancy in the future should make sure they are up to date with their MMR vaccines **BEFORE** they get pregnant. If you can't find your vaccine record, call your healthcare provider who may know. If they don't have a record, a blood test (titer) can be done to determine if you have immunity to measles. If it turns out you are not immune, you'll want to get two doses of MMR vaccine for optimal protection. Just make sure you wait at least one month after getting the last shot before attempting to get pregnant.

Pregnancy: Since pregnant women shouldn't receive live vaccines (like MMR), the best thing you can focus on during pregnancy is prevention. Good hand washing is always a good idea. If there is a confirmed measles outbreak near you, consider avoiding crowded public places and steer clear of any locations that have been identified as a known risk.

Breastfeeding: Once you are no longer pregnant, the MMR vaccine can be administered. The CDC considers the MMR vaccine compatible with breastfeeding and side effects for the breastfed baby are not expected.

If you have any questions about measles infection or the MMR vaccine while planning a pregnancy, during pregnancy or while breastfeeding, MotherToBaby is here to help. Give us a call at 866-626-6847, text, or chat with one of our information specialists today.

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Emily called MotherToBaby and confided, "My husband and I are thinking about getting pregnant…I am so excited but scared, too. I am wondering what I can do to make it more likely we will have a healthy pregnancy and baby."

I assured Emily that we ***love*** it when people call ahead of their pregnancy and ask these questions. Preconception

health is a topic that does not receive as much attention as it deserves, and it is important for both Emily and her husband. Good preconception health care can impact fertility and make it easier to conceive, and also helps to improve pregnancy outcomes and the health of the baby.

Here is a preconception prep guide– because if you are ready to have a baby, you want to take steps now to keep you and your baby as healthy as possible:

- **Make a pre-conception checkup appointment:** Begin by making an appointment about three months in advance with your obstetrical care provider. At that appointment you can confirm you are in good health. If you have any chronic conditions such as high blood pressure, thyroid disease, depression or diabetes you and your provider can make sure the condition is being managed effectively and confirm that any prescription or over-the-counter medications you are taking can be continued in the pregnancy. If you have a question about medications during pregnancy, MotherToBaby can help by providing you with information to bring to your appointment.

- **Begin taking a prenatal vitamin:** If you are not already taking a vitamin with folic acid this is a great time to start. The Centers for Disease Control and Prevention (CDC) recommend that all women who can become pregnant take a vitamin containing 400 micrograms of folic acid; this helps reduce the chances for certain birth defects such as spina bifida (when the spinal cord does not form properly).

- **Review your vaccine status**: During your preconception checkup, make sure that you are up to date on vaccinations such as the MMR (measles, mumps, rubella), Tdap (tetanus, diphtheria, whooping cough), influenza, and COVID. Planning ahead makes it more likely you will not get ill during pregnancy and helps protect the baby from getting infections from parents after birth.

- **Get your body fit for pregnancy:** Get regular exercise and consider whether you and your partner are at your preferred weight. If not, make plans to remedy that prior to attempting to get pregnant. You can also learn more about a healthy diet and nutrition. This is something that may improve fertility in both parents and lay the groundwork for a healthy pregnancy.

- **Eliminate harmful exposures:** It goes without saying that this is a great time to make lifestyle changes such as reducing use of alcohol, tobacco, and recreational drugs. Addressing stress and mental health concerns up front can improve fertility, make the whole pregnancy experience better, and prepare you for the excitement and hard work of parenthood.

- **Evaluate your home and work environment:** If you and your partner are exposed to toxic substances like lead in your work or home environment, working to reduce those exposures is very effective when done ahead of the pregnancy.

MotherToBaby has many resources for Emily and her husband – and you! We have fact sheets on medications, herbal agents and supplements, diabetes and other health conditions, illnesses and vaccinations, occupations such as veterinarian and dental, exercise, paternal exposures, and cosmetics (sunscreen, skin creams, nail polish, hair dye). There are also useful blogs and podcasts, and whole web pages on various conditions, and if you have questions, our information specialists are here to help.

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