The Headache of Dealing with a Migraine during Pregnancy

"I can't get rid of it fast enough!" Caroline was 5 months pregnant and at her wits end when she contacted MotherToBaby. "My migraine is so bad that I can barely get out of bed, but I feel like there's nothing I can do about it since I'm pregnant. I don't want to harm the baby!" We often get questions like Caroline's from women planning a pregnancy or already pregnant who would like information on the prevention and treatment of migraine headaches, so I start by asking Caroline what she would have used if she weren't pregnant. Caroline told me that she would have taken ibuprofen and or sumatriptan.

Migraine preventions and treatments fall into three basic categories:

- **Over the counter remedies** such as aspirin or other NSAIDs, or acetaminophen with or without caffeine.
- **Prescription medications** such as opioids, various anticonvulsants, triptans, tricyclic antidepressants and beta blockers.
- **Alternative therapies** such as Botox or other nerve block injections, massage therapy, acupuncture, high doses of magnesium, or essential oils.

Most women have tried more than one therapy that has failed before they find one or a combination of products that will work for them. Migraines can be very debilitating, so the thought of having to go without a prevention or treatment that works can be very anxiety producing. Yes, it is true that some women find that their migraines disappear during pregnancy, but in others, they become more frequent. Having a plan for prevention and treatment, just in case, is necessary. We can help with the development of that plan by providing migraine sufferers with evidence-based information about the safety of various treatments during pregnancy (and also while breastfeeding!). Below is a brief summary of many common migraine medications and treatments, but we encourage you to visit our Fact Sheets or contact our experts for more detailed information.

Over the Counter Remedies

Typically, non-steroidal anti-inflammatory medications like aspirin, naproxen and ibuprofen are not recommended in pregnancy.

Acetaminophen alone does not always provide relief for a migraine, but its use should not be of great concern depending on how much or how often it is needed.

Caffeine can sometimes be added to enhance the relief of a migraine in some individuals. Typically, such doses of caffeine are not expected to create an increased chance for adverse pregnancy outcome. For further guidance on caffeine, see our fact sheet.

Other over the counter remedies that fall into the herbal or supplement categories are also not recommended since they are not well regulated or studied for safety. See our fact sheet on herbal supplements.

Prescription Medications

Many women find that over-the-counter products are not helpful enough and turn to healthcare providers for prescription medication relief. Prevention of the headache in the first place is key for some.

Beta blockers have been around a long time and used daily for migraine prevention in some individuals. Studies do not suggest that their use in pregnancy is high risk. See our Fact Sheets on metoprolol and propranolol for additional information.

The tricyclic antidepressants, such as amitriptyline and nortriptyline, are older drugs that have been successful in some at the prevention of migraine headaches when used daily. They too have not been found to be high risk products when used in pregnancy.

Other medications such as certain anticonvulsants have been used to prevent or reduce the severity or frequency of migraines. However, these medications have more complex concerns when used in pregnancy. The chance for complications in pregnancy must be individually and carefully weighed against the benefits of keeping migraines in check.

The “triptan” products were designed specifically to treat migraine headaches and include sumatriptan, rizatriptan, frovatriptan and naratriptan. As the “triptan” medication that has been around the longest time, sumatriptan has relatively reassuring data on use during pregnancy.

Opioids are used to treat the extreme pain caused by migraines. While they are not typically found to cause a significant increased chance for birth defects, regular use can create problems later in pregnancy or after birth. In some cases, their use may cause rebound headaches and therefore create more need for treatment.

Alternative Therapies

Migraines can be really difficult to prevent or treat, and some women turn to alternative therapies. Botox, bupivacaine, or lidocaine injections have been used as nerve blockers to treat migraines. However, it may not be best to try these out for the first time during a pregnancy.

Some non-pharmaceutical options include massage therapy and acupuncture. Your healthcare provider may be able to refer you to someone who has experience implementing these treatments with pregnant women.

Essential oils are used topically or in a diffuser. Be careful not to ingest any. If you are nursing or have an infant, be sure not to leave oils on your body where they might accidently ingest them.

We have had questions about the use of high doses of magnesium to curb migraines. We cannot recommend this option and suggest that you seek out the advice of your healthcare provider to determine if such treatment would be helpful or wise.

The Takeaway

I gave Caroline a summary of what is known about her usual migraine treatments, and suggested she have a conversation with her healthcare provider to discuss a safer alternative to ibuprofen and whether her provider would suggest any other changes to her treatment plan. The bottom-line is the benefits of some treatments may outweigh the risks of not treating migraines. A healthy mama from toe to head (especially a pain-free head) is best for baby too.

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“I just found out I’m pregnant. Can I keep drinking my energy shake in the mornings?”
“My doctor gave me the go-ahead to work out. Okay to have a protein shake after the gym?”
“My immunity-boosting drink is a life-saver. Can I keep using it while I’m pregnant?”

These are common questions during pregnancy, and ones that we hear a lot at MotherToBaby. Perhaps you’ve

wondered the same thing yourself. As teratogen information specialists, we provide facts about how a woman's exposure in pregnancy might affect her developing baby. So, when we get questions about shakes, powders and other nutritional supplements in pregnancy, we look to the research. And that research, or lack of it, leads us to caution women against drinking that favorite nutritional shake while they're pregnant. Here's why:

Lack of FDA approval
Nutritional shakes and powders fall under the category of "supplements." Supplements aren't approved by the U.S. Food and Drug Administration (FDA) in the way that food and medicines are. The FDA does set out safety requirements for supplements, but the manufacturers are responsible for ensuring that their own products meet those requirements (kind of like a home builder inspecting their own house.) This means that shake makers and other manufacturers can put their products on the market without proving their safety, or even showing that the products actually do what they claim they will. Once a supplement is on the market, the FDA relies mostly on consumers' reports to alert them of side effects or other problems that could lead to warnings or recalls.

This is not to say that all supplement makers are unscrupulous or careless. Many manufacturers go above and beyond the FDA requirements for safety, and stand behind the purity and efficacy of their products. But the lack of oversight has allowed supplements to wind up on shelves despite being contaminated with bacteria, pesticides or heavy metals (such as lead), or having mislabeled ingredients or amounts of those ingredients. These inconsistencies can be dangerous, especially for people who take medications that might interact with unknown ingredients, or for pregnant women who need to avoid potentially harmful additives that can affect the baby.

Lack of studies in pregnancy
Nutritional shakes often contain vitamins, herbs, plant derivatives and other goodies intended to boost energy, strengthen immunity or have other positive health effects. But these additives are often listed on the label as "herbal blends" or "proprietary blends," meaning that the individual ingredients are not revealed. And even if they are listed individually, some of those ingredients may have been studied in pregnancy, while others have not. The lack of studies means we don't know if they might have harmful effects on a developing baby or otherwise increase risks in pregnancy.

For example, some ingredients may be "generally recognized as safe (GRAS)" when eaten in the amounts usually found in food, but they could increase the risk of miscarriage when used at high concentrations in pregnancy. The concentration of a plant-derived ingredient can vary from batch to batch, depending on the growing and harvesting conditions of the plant. So in the end, you can't be sure what you and your developing baby are getting with that shake.

Nutritional needs in pregnancy
A varied, healthy diet along with a daily prenatal vitamin recommended by your healthcare provider should give you all the vitamins, minerals and other nutrients that you and your growing baby need during pregnancy. Adding the extra vitamins found in that shake to your diet might result in exceeding the daily recommended amounts for pregnancy. On the flip side, if you are using a nutritional shake as a meal substitute, you might be missing essential nutrients that you and your baby should be getting from food. Always talk to your healthcare provider about the best way to meet your specific nutritional needs during pregnancy.

So, what to do about that container of protein powder sitting in your pantry or those bottles of energy shake taking up space in the fridge? Our advice? Find a new home for them until after you've delivered and are no longer breastfeeding. After all, you want to give your pregnancy a "fair shake," right?

References:
• Natural Products Database, adapted from The Review of Natural Products. Facts & Comparisons (database online]. St. Louis, MO: Wolters Kluwer Health Inc.; 2012.
• U.S. Food and Drug Administration. ***FDA 101: Dietary Supplements.*** https://www.fda.gov/Food/DietarySupplements/UsingDietarySupplements
• U.S. Food and Administration. ***Daily Values for Infants, Children Less Than 4 Years of Age, and Pregnant and Lactating Women***. https://www.fda.gov/food/dietary-supplements-guidance-documents-regulatory-information/dietary-supplement-labeling-guide-appendix-c-daily-values-infants-children-less-4-years-age-and

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Maya has been a healthy, happy vegan since she was a teenager. Now, at age 25 and pregnant for the first time, she is suddenly worried and uncertain about whether she can provide all the nutrients her developing baby needs if she continues to follow her vegan diet during pregnancy. She contacted us at MotherToBaby looking for answers. Maya's question is not unusual, but since it's a bit outside our area of expertise, I enlisted the help of an expert in maternal nutrition to help answer it.

Registered dietitian Kerry Jones, MPH, RDN, LDN is the owner of Milestones Pediatric & Maternal Nutrition in Cary, North Carolina. She works with women who are trying to conceive, pregnant, or breastfeeding, as well as children, which makes her a perfect resource for this topic. Kerry was happy to weigh in on Maya's concerns and other common questions we get at MotherToBaby about vegetarian and vegan diets in pregnancy and breastfeeding.

First, what exactly does vegetarian mean? And how is vegan different from vegetarian? By definition, vegetarian means eating everything except meat, poultry, or seafood. Some vegetarians also choose to exclude eggs but consume dairy products (lacto-vegetarian), or exclude dairy but eat eggs (ovo-vegetarian). A vegan diet takes it a step further by avoiding all ingredients that come from animals, including eggs, dairy, gelatin, and honey. While these diets may seem limiting to someone who doesn't follow them, vegetarians and vegans still enjoy an abundant variety of foods. Now, on to Maya's question…

Q: Can I have a healthy pregnancy if I'm vegetarian or vegan?

Kerry Jones: Yes, you can definitely have a healthy pregnancy, even if you follow a vegetarian or vegan diet. However, that does not mean that eating during your pregnancy will be without its challenges, since there are many nutrients that are crucial to your child's development that can be hard to obtain from a plant-based eating pattern, such as vitamin B12, choline, vitamin K2, DHA, iodine, iron, and zinc, to name a few. However, with proper planning,

supplementation, and support, I believe that women who are vegetarian or vegan can have healthy pregnancies.

Q: Are there any vitamins I'll need to take during pregnancy in addition to my regular prenatal vitamin?

Kerry: As I mentioned, there are several nutrients that are crucial to fetal development that are hard to obtain in a vegetarian or vegan diet. It will be important to make sure that your prenatal vitamin is high quality and contains not only enough of these nutrients, but also the best forms of these vitamins and minerals to ensure they will be well absorbed by your body (such as Methylcobalamin and/or adensylcobalamin when looking for vitamin B12). It is also important to ensure the prenatal vitamin you choose does not contain unwanted additives or nutrients (such as having both calcium and iron in the same supplement, since we know these minerals compete for absorption) and is third-party tested (since there is currently no governing organization that oversees the safety, content, purity, dosage, or effectiveness of supplements). In addition to a high-quality prenatal vitamin, it will likely be beneficial to take an algae-based DHA supplement. However, it is important to talk to your OB/GYN before starting any supplements.

Q: How can I be sure I'm getting enough protein during pregnancy if I don't eat animal products?

Kerry: That's a great question. We know that getting enough protein during pregnancy is important for both mothers and developing babies. Luckily, there are a variety of plant-based protein sources, such as: seitan, tempeh, beans, seeds, nuts, and lentils, to name a few. I recommend that all adults, including women who are pregnant, aim to have one-fourth of their plate or bowl be composed of protein sources at each meal and have a protein source at each snack. Following this meal pattern typically allows most pregnant women to meet their protein needs. However, if you are concerned about your specific protein needs during early and late pregnancy, contact a prenatal registered dietitian, such as myself, to get customized recommendations.

The biggest concern related to meeting protein needs for pregnant women following plant-based diets is ensuring they are getting the individual amino acids they need. Animal proteins are often referred to as complete proteins, which means the protein source contains all of the essential amino acids (or protein building blocks) that our body needs. However, not all plant protein sources are complete proteins. Therefore, it is important that pregnant women following plant-based diets not only get enough protein throughout the day, but also eat a variety of protein sources to make sure they are getting all of the needed amino acids.

Q: I love my OB, but she doesn't have experience with vegetarian and vegan diets in pregnancy. Any advice?

Kerry: If you are getting push back or hesitation from your OB/GYN to support your dietary decision, it is important to remember that your OB/GYN is likely concerned that you and your baby are not going to get the nutrients that you both need during this critical period. Make sure to be an advocate for your health and beliefs to explain why you want to be a vegetarian and vegan while pregnant. Additionally, consider working with a prenatal registered dietitian to get evidenced-based, individualized recommendations on how to meet you and your baby's nutrient needs. This will help give you the support you need to meet your unique needs and give your OB/GYN the reassurance they need to feel

confident in your dietary decisions.

Q: My baby is almost due. Is there anything I need to know about being vegetarian/vegan while breastfeeding?

Kerry: Yes! Just like when you were pregnant, what you eat when breastfeeding matters. This is because when you are breastfeeding exclusively you are still the single source of nutrition for your little one just like you were during pregnancy. While the levels of some nutrients in breastmilk are not affected by maternal diet, the amount of many vitamins and minerals in breastmilk is dependent on how much you consume as a mom, such as vitamin B12, vitamin K2, choline, DHA, and iodine, to name a few. Therefore, it is important to continue your prenatal vitamin or switch to a postnatal vitamin and have a plan to get the nutrients that your baby needs while breastfeeding and you need for postpartum recovery.

After hearing Kerry's feedback, Maya was relieved to know that by incorporating a few changes to her diet she could indeed have a healthy plant-powered pregnancy! If you have questions about your diet in pregnancy or breastfeeding, talk to your healthcare provider or a registered dietitian with expertise in maternal nutrition. And as always, MotherToBaby is here for you for any questions about exposures during pregnancy and breastfeeding.

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The Headache of Dealing with a Migraine

during Pregnancy

Back when Zika swept the western hemisphere, the travel recommendations for women who were pregnant or planning a pregnancy were clear: avoid any areas that had a risk of Zika infection. It was fairly easy to know where those areas were, as governments and public health organizations around the world worked tirelessly to identify and report cases. World maps showing areas of risk provided clear "yes/no" guidance. Was there any doubt about who shouldn't travel where? Not really. Not back then.

But what about now? The number of reported Zika cases has fallen dramatically in recent years. However, the accuracy of reporting can vary widely from country to country, so the once-clear world map of Zika risk now appears much less well-defined.

One of the most common Zika-related questions we still get at MotherToBaby is, "How likely is it that I'll get Zika if I travel to Country X?" (Or a variation of the same: "We went to Country X. Do we ***really*** need to wait 3 months before we try to get pregnant?") One resource to help answer that question is the interactive world map maintained by the Centers for Disease Control and Prevention (CDC) to illustrate areas with Zika risk. Visit the map now and you'll find four colors, each indicating a different level of Zika risk and the corresponding recommendations for pregnant women, their partners, and those who are planning pregnancy. Let's take a look at what each color means :

- **Red** areas have active Zika transmission. ***Travelers to red areas are at risk of Zika infection.***
  - Pregnant women and their partners should avoid all unnecessary travel to red areas.
  - Couples and individuals who travel to red areas should wait at least 2 months (women) or 3 months (men) before trying to get pregnant, and have only protected sex during that wait time.
- **Purple** areas have had active Zika transmission sometime in the past, and there could still be sporadic cases. ***Travelers to purple areas might be at risk of Zika infection.***

Pregnant women, their partners, and those who are planning pregnancy are encouraged to talk with their healthcare providers to make decisions about travel to purple areas. Careful consideration should be given to the risks and consequences of Zika infection in pregnancy, the nature of their travel, how much potential risk they are willing to accept, how soon they want to get pregnant (if they are not already), and any other factors specific to that individual or couple at that time.

- If pregnant women or their partners decide to travel to purple areas, they should take steps to minimize risk, including using insect repellent and considering the use of condoms for the rest of the pregnancy.
- Women planning pregnancy who travel to purple areas should also take steps to minimize risk, including using insect repellent and considering following recommended wait times before trying to get pregnant (2 months for women, 3 months for men).

There is a sub-category of **light purple**, which shows higher elevations above 6,500 feet where mosquitoes that can transmit Zika don't usually live. The chance of getting Zika in light purple areas is very low. However, be sure to consider if your travel plans would take you through dark purple areas on the way to these lighter purple zones.

- **Yellow** areas have mosquitoes that can transmit Zika, but have not had reported cases of Zika transmission. ***Travelers to yellow areas are at low risk of Zika infection.***
  - All travelers to yellow areas should take precautions to prevent mosquito bites.
- **Green** areas do not have mosquitoes that can transmit Zika and have not had any reported cases of Zika transmission. ***Travelers to green areas are not at risk of Zika infection.***
  - There are no Zika-related travel recommendations for green areas.

Given that many countries are included in the purple category, how does this map help you know what your risk ***really*** is if you travel to a purple area? The answer is that it doesn't. Purple only tells you there is ***some*** level of risk. Here's why purple—and we at MotherToBaby—can't be more specific:

- ***Reliable data for every country around the world simply does not exist.*** Since Zika virus is no longer considered a public health emergency, many resources that once helped support global data collection have moved on to other, more pressing issues.
- ***The level of risk within a purple country could change without us knowing right away.*** The ability of any country to quickly identify and report cases depends on resources, logistics and other factors. This means there could be delays in detecting and announcing any new outbreaks.

The bottom line is that our post-Zika-epidemic world requires that we take the health of current and future pregnancies into consideration when planning travel. Ask ourselves how much potential risk we are willing to accept when we book our vacations and business trips. Does that mean that couples and individuals who want to have children should never go to areas that ever had Zika? Not at all! But if they are currently pregnant, or are not willing or able to effectively prevent pregnancy for at least 3 months after traveling, they might prefer to visit one of the many areas where there is no known risk of Zika. (Think yellow! Think green!)

MotherToBaby is here to answer your questions about Zika or other exposures before or during pregnancy. Happy travels!

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Migraine headaches affect one billion people worldwide. Migraines are more common in people who could become pregnant, and during pregnancy their frequency can increase, decrease, or stay the same. Last year we talked to

Caroline about treating her migraine headache at five months of pregnancy. Now she has reached out to us to discuss treatment options before she tries to get pregnant again. Back when she was pregnant with her first child, she was using acetaminophen and sumatriptan, but found that her migraines were much less responsive to these products over time. Today, Caroline is considering the newer drugs that have come onto the market since her last pregnancy. She has never used a preventive medication and was curious about the data on the new products. Caroline's healthcare provider has mentioned trying Emgality® (galcanezumab-gnlm) or Nurtec ODT® (rimegepant).

Since there are many new drugs marketed to treat and prevent migraines, let us start with an overview. These newer medications are called calcitonin gene-related peptide (CGRP) antagonists, CGRP receptor blockers and CGRP blockers, and are a new category of migraine treatments. Some treat migraine attacks, while some prevent migraines, and some do both (like those Caroline is interested in).

There are so many choices, so let's look at what the data says when these medications are studied during pregnancy.

Medications that *prevent* chronic migraines:

- Qulipta® (atogepant) – oral; CGRP receptor antagonist
- Ajovy® (fremanezumab-vfrm)-injection; CGRP blocker
- Vyepti® (eptinezumab-jjmr)- injection; CGRP receptor blocker
- Aimovig® (erenumab-aooe)- injection; CGRP receptor blocker
- Emgality® (galcanezumab-gnlm)- injection; CGRP blocker
- Nurtec ODT® (rimegepant)- tabs; CGRP receptor antagonist

Medications that *treat* the symptoms of acute migraines:

- Emgality®(galcanezumab-gnlm) – injection; CGRP blocker
- Nurtec ODT® (rimegepant)- tabs; CGRP receptor antagonist
- Ubrelvy® (ubrogepant)- oral; CGRP receptor antagonist

Medications that *prevent* and *treat* migraines:

- Emgality®(galcanezumab-gnlm) – injection; CGRP blocker
- Nurtec ODT® (rimegepant)- tabs; CGRP receptor antagonist

Unfortunately, there is very little information involving human data on Quilipta®, Nurtec ODT® or Ubrelvy® so we are left without the information we need for a full risk assessment of these medications. However, there are some data in humans on the medications on Ajovy®, Vyepti®, Aimovig® and Emgality®. These data are limited, meaning we don't have a lot of information.

Let's begin by breaking down the information that we have on Ajovy®, Vyepti®, Aimovig® and Emgality®. These four medications are all monoclonal antibodies, which in scientific terms means they are extremely large molecules. That means that they are unlikely to cross the placenta until around mid-pregnancy after the baby's structures and organs have developed. Therefore, these medications should not have a direct impact on the baby's development. It cannot be said that there is no increased chance of the baby being affected, but these medications may not be high risk exposures. These medications stay in the person's system for a very long time. So if Caroline would like to have any of these out of her system before she gets pregnant, it may take approximately 5 months to clear.

What are the specific reports that we have on Ajovy®, Vyepti®, Aimovig® and Emgality® that help us assess the risk of use in pregnancy?

There are 13 cases of exposure prior to pregnancy and 10 exposures during pregnancy in one report on Ajovy® (fremanezumab-vfrm). In these cases, there was no increase in pregnancy loss, and one child was born with kidney and GI issues that cannot be proven to be caused by the medication treatment at this time.

There are two cases of Vyepti® (eptinezumab-jjmr) use during pregnancy. Outcome was reported on only one pregnancy which resulted in a miscarriage. However, based on what we know about monoclonal antibodies and the size of this molecule potentially being too large to pass through the placenta, it also would not be expected to have an increased risk of problems when used in the first trimester. More data and studies are needed to support this statement, though.

There are 116 cases of Aimovig® (erenumab-aooe) in one report. These studies include one prior to pregnancy, 108 during pregnancy, five during lactation and two at an unknown time. There was no increase in pregnancy loss or pattern of birth defects seen in the cases with known outcome. There were six cases of early birth in this group. One infant had growth issues but that mother was on multiple medications. There are at least five other cases in the medical literature that resulted in infants born without adverse pregnancy outcome or birth defects.

Finally Emgality® (galcanezumab-gnlm) was suggested to Caroline. There are 125 cases with data to consider. Six cases were with use of the medication prior to pregnancy, 107 cases were with use during pregnancy, 5 were with use during lactation and 1 case was use of the medication by dad. Six cases had unknown timing of use. No increase chance for pregnancy loss or pattern of birth defects was reported in this group of cases.

Back to our call with Caroline, and how we advised her on the medications that she was interested in – remember these: Nurtec ODT® and Emgality®. Both of the choices offered to Caroline can treat ***and*** prevent migraines, so one doesn't have an advantage over the other in that area. We discussed with Caroline that at this time there are no human studies on Nurtec ODT®. However, the animal data looks promising and low risk at this time. Additionally, it is a drug that quickly clears from the body. So she would not have to be off of it for months to have it clear from her body prior to pregnancy. In that time, there may be new human data reported that we could share with her closer to when she would try to conceive. Otherwise, the current human data on Emgality® looks promising. Caroline stated she plans to discuss these reproductive data with her prescribing healthcare provider and come up with a plan of action. Caroline may decide to try either of these medications now see how they work for her before trying to get pregnant knowing there may be waiting periods to have the medications clear from her body.

At the end of the day, dealing with a migraine might be a pain, but examining up-to-date data doesn't have to be a headache. That's why MotherToBaby is here to help!

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