Meeting Dietary Requirements as a Pregnant Vegetarian

In recent years, plant-based diets have become more and more popular. People choose to go vegetarian for a variety of reasons including health benefits, sustainability concerns, and ethical motivations. Whatever the reason, this type of diet can be healthy and nutritionally adequate, even during the reproductive years. However, during pregnancy, a bit of planning may be required to make sure the developing baby is getting all the nutrition necessary from a plant-based mom.

First, let's talk about different plant-based diets. Some people choose to avoid meat on occasion such as those who participate in "Meatless Mondays." Others commit fully to a vegetarian lifestyle, which means avoiding all forms of meat. Lacto-vegetarians also exclude eggs from their diet, while ovo-vegetarians also avoid dairy. Vegans have more restrictions, avoiding any products that come from animals such as eggs, dairy, gelatin, and honey. The good news is that there are still many food groups available to vegetarians and vegans. Fruit, vegetables, grains, nuts, legumes, meat substitutes, and dairy alternatives are all still on the table.

During pregnancy, nutritional requirements change to meet the needs of the developing baby. Most women can easily meet these new requirements by taking a prenatal vitamin with 100% of the daily value (DV) to get all the important vitamins and minerals. However, vegans and vegetarians may require a different approach to keep mom and baby as healthy as possible.

Let's take a look at B12 first. Vitamin B12 is involved in the development and function of the central nervous system, formation of red blood cells, and DNA synthesis. During pregnancy the recommended dietary allowance (RDA) for B12 is 2.6 mcg for everyone. However, vegetarians and vegans are at risk of deficiency since this vitamin only occurs naturally in products that come from animals. To ensure that enough is consumed, plant-based moms-to-be should focus on eating foods fortified with B12. Blood work can also help to identify any deficiencies, and if a woman is found to have low B12 during pregnancy, a higher dose supplement may be recommended by the health care provider.

Iron is another vitamin that requires a second look for those with a veggie diet. During pregnancy, iron requirements increase due to a rise in plasma volume and red blood cell concentration. For women who eat meat, an RDA of 27 mg is advised. However, for vegetarians the RDA is 1.8 times higher, meaning 48.6 mg per day is needed. Iron can be obtained from plant-based foods but it is not as bioavailable as iron from meat, so supplementation is usually required.

Around 90-95% of pregnant women don't consume enough choline, regardless of what diet they follow. An RDA for choline of 450 mg is suggested for every pregnant woman. Soybeans, wheat germ, kidney beans, and eggs are some of the best plant-based forms of choline, but this vitamin can also be obtained from a dietary supplement. Choline has been shown to improve liver health, memory, mood, and other brain and nervous system functions.

What about calcium? Vegetarians who still consume milk, cheese, and yogurt may not be too worried about this one. However, it's known that certain plant foods contain large amounts of oxalates, a naturally occurring compound that can reduce the amount of calcium absorbed from food. For example, a cup of spinach contains about 30 mg of calcium, however because this food has a high oxalate content, the calcium is not well absorbed by the body. Another interesting point about calcium is that smaller doses are better absorbed. This means that spacing out a supplement and calcium rich foods throughout the day may be a better approach than taking it all at once. Lastly, it's important to note that calcium should always be taken with vitamin D since the body needs vitamin D to absorb calcium. An RDA for calcium of 1,000 mg/day is advised for women over the age of 18 during pregnancy, regardless of diet type.

The term "Omega 3s" commonly refers to alpha-linolenic acid (ALA), eicosapentaenoic acid (EPA), and docosahexaenoic acid (DHA). It is suggested thaf pregnant women get 1.4 grams/day of ALA, however, there is no official dose for DHA or EPA that has been established for pregnancy. ALA is present in plant oils, such as flaxseed, soybean, and canola oils. Walnuts and chia seeds are also good sources of ALA. The problem is that ALA does not easily convert to DHA in the body, so even when a woman who is plant-based consumes a good amount of ALA they can still have low DHA levels. Although there is no official recommendation in place to take a DHA supplement during pregnancy, vegetarians and vegans can talk to a health care provider to determine if it makes sense to take an algae based one.

A blog about nutrition wouldn't be complete without talking about folic acid, especially during January's National Birth Defects Awareness Month. When folic acid is taken for at least one month prior to pregnancy, this important vitamin reduces the chance of neural tube defects (a type of birth defect affecting the baby's brain and spinal cord) by as much as 50-70%! Like everyone else, vegetarians and vegans should get 400 mcg/day prior to pregnancy and 600-800 mcg/day during pregnancy from a supplement.

As a vegetarian myself, if I had a dollar for every time someone asked me about protein I'd be a millionaire by now! For some reason, well intentioned friends and family seem to be very concerned about this topic – especially during pregnancy! A general recommendation of 71 grams of protein/day is currently in place for everyone during pregnancy. Vegetarians can easily meet this requirement by consuming foods like yogurt, chia seeds, quinoa, beans, eggs, and certain vegetables. Vegans can focus on many of the above foods as well as tofu, lentils, soy milk, and nut butters. Although most women can meet the RDA with the right attention to diet, if you're concerned about not getting enough protein during pregnancy, your health care provider can refer you to a nutritionist to help further.

Pregnancy as a vegetarian or vegan doesn't have to be stressful, but some additional planning may be needed. When possible, focus on getting nutrients from your diet. However, to meet RDAs during pregnancy, or if a deficiency is noted by blood work, supplementation can be beneficial. If you ever have any questions about vitamins, minerals, omega 3s, or protein during pregnancy, contact a MotherToBaby specialist to receive individualized counseling. With the right approach, a plant-based mom and baby can get all the nutrients they need!

References:

Melina V, Craig W, Levin S. 2016. Position of the Academy of Nutrition and Dietetics: Vegetarian Diets. ***Journal of the Academy of Nutrition and Dietetics***, ***116***(12), 1970–1980. https://doi.org/10.1016/j.jand.2016.09.025

National Institute of Arthritis and Musculoskeletal and Skin Diseases. May 2023. Bone Health and Osteoporosis. Available at: https://www.niams.nih.gov/health-topics/bone-health-and-osteoporosis

National Institutes of Health. June 2022. Choline Fact Sheet for Health Professionals. Available at: https://ods.od.nih.gov/factsheets/Choline-HealthProfessional/

National Institutes of Health. July 2024. Calcium Fact Sheet for Health Professionals. Available at: https://ods.od.nih.gov/factsheets/Calcium-HealthProfessional/

National Institutes of Health. October 2024. Iron Fact Sheet for Health Professionals. Available at: https://ods.od.nih.gov/factsheets/Iron-HealthProfessional/

National Institutes of Health. December 2024. Omega-3 Fatty Acids Fact Sheet for Health Professionals. Available at: https://ods.od.nih.gov/factsheets/Omega3FattyAcids-HealthProfessional/

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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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