

# Shake it Up, Baby? Maybe Not. Considering Nutritional Shakes in Pregnancy

---

“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>

---

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

Disclaimer: MotherToBaby Fact Sheets are meant for general information purposes and should not replace the advice of your health care provider. MotherToBaby is a service of the non-profit Organization of Teratology Information Specialists (OTIS). Copyright by OTIS, June 12, 2023.

---

## Shake it Up, Baby? Maybe Not. Considering Nutritional Shakes in Pregnancy

---

If you are researching prenatal vitamins, we are guessing that you might be considering a pregnancy, or you just found out that you are pregnant. How exciting! We're also guessing that you have some questions. Pregnancy does that to a woman: it makes us start questioning the safety of everything that we used to take for granted. At **MotherToBaby**, we answer many types of questions about exposures during pregnancy and breastfeeding. But hands down, **the most common question I'm asked about involves prenatal vitamins.**

Many women ask me what brand of prenatal vitamins they should take or if the brand they are currently using is the right choice. With so many different prenatal vitamins available over-the-counter and by prescription, this is a very good question. We applaud you for doing your research. You are going to be a great Mom.

## **Prenatal Vitamin Tips**

Before delving too much further, some basic tips. The **1st tip**: We recommend that you discuss your prenatal vitamin options with your healthcare provider, since she or he will know you and your health care needs the best. As mentioned, this will review prenatal vitamins for healthy women. Some women may have medical concerns that require a different nutrient intake.

The **2<sup>nd</sup> tip** that I always mention is that it may be easier **and cheaper** (depending on your healthcare insurance plan) to simply ask for a prescription for prenatal vitamins from your healthcare provider.

**3<sup>rd</sup> tip**: Do not buy a prenatal vitamin that contains herbal ingredients. Herbal products have not been well studied for use during pregnancy and breastfeeding. They are not regulated by the U.S. Food and Drug Administration (FDA) and there are no standard recommended amounts to take. In addition, purity of herbals found in over-the-counter products can be of concern. For more information on why herbals should be avoided, please see our MotherToBaby fact sheet on [Herbal Products](#).

**Prenatal vitamins are made up of vitamins and minerals.** A healthy diet is the best way to get the vitamins and minerals that your body needs. But even if we eat a healthy diet, we might fall short on some nutrients during pregnancy. Prenatal vitamins help fill in the gaps and increased needs for vitamins and minerals during a pregnancy.

There are **Dietary Reference Intakes (DRI)** to help people know how much of each vitamin or mineral they should aim to get each day.

Some vitamins and minerals also have a recommended **Tolerable Upper Intake Level (UL)**. The UL is designed to help us know the maximum recommended daily intake for a typical healthy person.

DRIs and ULs are there to help guide us in getting enough of a good thing but also to keep us from getting too much of a good thing.

As mentioned, vitamins should not be the only source of our nutrients. Therefore, your vitamin does not need to contain 100% of the DRI. Remember to take into account all sources of the vitamin or mineral when adding up your daily intake. This means including food sources as well as any other supplements you might take. DRI values can change by age, gender, and pregnancy and breastfeeding status. If you have a medical condition, talk to your healthcare providers/dieticians for your specific dietary needs.

Research on taking vitamins and mineral supplements at levels that are higher than the DRI and UL during pregnancy are limited. Because of the lack of information about taking high levels of vitamins and minerals in a pregnancy, it is generally recommended that pregnant women do not exceed the DRI unless your healthcare provider has prescribed it for the medical management of a specific deficiency or medical condition.

Now, we come to the main question: **What are the basic vitamins / minerals generally suggested for prenatal vitamins for healthy women, and how much of each vitamin and mineral do women need for pregnancy?**

## Vitamins and Minerals

For pregnant women 19 years old and older, the first 5 vitamins/minerals listed below are the basic supplements from which healthy pregnant women might benefit. The DRI and UL for pregnancy are listed. Not all items have an UL.

- **Iron:** DRI: 27 mg. UL: 45 mg.
- **Calcium:** DRI: 1,000mg. UL: 2,500mg. Supplements should have at least 250 mg, but all women should be getting at least 1,000 mg per day of elemental calcium.
- **Folic Acid (Folate):** DRI: 600 mcg (0.6 mg) to 800 mcg (0.8 mg). At least 400 mcg (0.4 mg) should be in your prenatal vitamin.
- All women who could become pregnant should be getting enough **folic acid / folate**, even if they are not currently planning on a pregnancy.
- **Iodine:** DRI: 220 mcg to 290 mcg. UL: 1,100 mcg. At least 150 mcg should be in your prenatal vitamin.
- **Vitamin D (calciferol):** DRI: at least 15 mcg (600 IU). UL 100 mcg (4,000 IU).

In addition to the above suggested supplements for prenatal vitamins, pregnant women should make sure they are getting enough of the vitamins / minerals listed below. If they cannot manage this with diet, then a supplement might help.

- **Vitamin A:** DRI 770 mcg. UL 3,000 mcg.
  - Vitamin A is found in two primary forms: plant-based carotenes (**beta-carotene**) and animal-based retinoids (**retinol**, retinal, retinoic acid, retinyl palmitate, and retinyl acetate).
  - Look for vitamin A that is from beta-carotene. Beta-carotene is less likely to build up toxic levels in the body than with retinoids. In addition, high levels of retinoids (**retinol**, retinal, retinoic acid, retinyl palmitate, and retinyl acetate) have been linked to an increased chance for birth defects.
- **B Vitamins**
  - There are eight B vitamins:
    - Vitamin B<sub>1</sub> / thiamine: DRI: 1.4 mg
    - Vitamin B<sub>2</sub> / riboflavin: DRI: 1.4 mg
    - Vitamin B<sub>3</sub> / niacin: DRI: 18 mg
    - Vitamin B<sub>5</sub> / pantothenic acid: 6 mg
    - Vitamin B<sub>6</sub> / pyridoxine: DRI 1.9 mg
    - Vitamin B<sub>7</sub> / biotin: DRI: 30 mcg
    - Vitamin B<sub>9</sub> / folic acid (already mentioned above)
    - Vitamin B<sub>12</sub> / cobalamin: DRI: 2.6 mcg
  - These are a group of water-soluble vitamins, which means that your body will not store them. Therefore, it

would be unlikely to reach a toxic level in the body. If you and your healthcare provider feel that you are unable to meet your DRI of the B vitamins through diet, then you should look for a prenatal vitamin that includes them. All prenatal vitamins should include at least folic acid (Vitamin B<sub>9</sub>), which I mentioned earlier as an essential vitamin for pregnancy.

- **DHA/ Omega-3 Fatty Acids:** There is no clearly defined DRI, but in 2000 it was suggested that pregnant women should aim for 300 mg/day. The best way to get these is to include fish in your diet. MotherToBaby has a blog on [eating fish in pregnancy](#). The FDA also has a guide on which fish are the best options to eat in pregnancy by breaking the fish into categories of Best Choices, Good Choices, and Choices to Avoid. The guide can be found [here](#). However, if you do not get enough in your diet, your healthcare provider might suggest including a supplement for DHA during your pregnancy.
- **Vitamin E:** DRI: 15 mg. UL: 1,000 mg.
- **Vitamin C:** DRI: 85 mg. UL: 2,000 mg
- **Zinc:** DRI. 11 mg. UL: 40 mg.

It is recommended to start taking prenatal vitamins before you try to become pregnant; at a minimum, take folic acid daily. If you are already pregnant, start as soon as you learn about your pregnancy.

Again, if you have a medical condition (including but not limited to diabetes, celiac disease, eating disorders, substance misuse, malabsorption, irritable bowel, inflammable bowel, or history of bariatric surgery), talk with your healthcare providers about your specific nutritional needs.

Now that you are an expert in reading your prenatal vitamin label, you can tackle (with the advice of your health provider) selecting the one that is best for you. MotherToBaby is always available to answer questions about all exposures during pregnancy and breastfeeding. Pregnancy will bring wonder-filled moments for you and your family. MotherToBaby is here to help you and your healthcare providers to make it as stress-free as possible with up-to-date information on medications and more.

## Selected References:

- ACOG Nutrition During Pregnancy FAQ001. 2018.
- ACOG Committee on Obstetric Practice. ACOG Committee Opinion No. 495: Vitamin D: Screening and supplementation during pregnancy. *Obstet Gynecol* 2011; 118:197. Reaffirmed 2019.
- Becker DV, et al. 2006. Iodine supplementation for pregnancy and lactation—United States and Canada: recommendations of the American Thyroid Association. *Thyroid*; 16:949-951.
- 2018. **National Report on Biochemical Indicators of Diet and Nutrition in the U.S. Population.** Center for Disease Control and Prevention.
- Council on Environmental Health. 2014. Iodine deficiency, pollutant chemicals, and the thyroid: new information on an old problem. *Pediatrics* 133: 1163-1166.
- 2005. **Dietary Supplement Labeling Guide:** Appendix C. Food and Drug Administration.
- Glinioer D. 2007. The importance of iodine nutrition during pregnancy. *Publ Health Nutr*; 10:1542-1546.
- Institute of Medicine (US) Food and Nutrition Board. 1998. *Dietary Reference Intakes: A Risk Assessment Model for Establishing Upper Intake Levels for Nutrients.* Washington (DC): National Academies Press (US).
- Natural Medicines Database. Available at [naturalmedicines.com](https://naturalmedicines.com)
- NIH: **Nutrient Recommendations:** Dietary Reference Intakes (DRI).

- Obican SG, et al. 2012. Teratology public affairs committee position paper: Iodine deficiency in pregnancy. Birth Defects Res A Clin Mol Teratol; 94(9):677-82.
- Segal K, et al. 2018. **Recommending Prenatal Vitamins: A Pharmacist's Guide.**
- The National Academies of Sciences, Engineering, and Medicine. **Dietary Reference Intakes Tables and Application.**
- Trumbo P, et al. 2001. Dietary reference intakes: vitamin A, vitamin K, arsenic, boron, chromium, copper, iodine, iron, manganese, molybdenum, nickel, silicon, vanadium, and zinc. J Am Diet Assoc 101:294-301.

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

Disclaimer: MotherToBaby Fact Sheets are meant for general information purposes and should not replace the advice of your health care provider. MotherToBaby is a service of the non-profit Organization of Teratology Information Specialists (OTIS). Copyright by OTIS, June 12, 2023.

---

## Shake it Up, Baby? Maybe Not. Considering Nutritional Shakes in Pregnancy

---

**By Kurt Martinuzzi, MD, Asst. Professor in the Dept of Ob/Gyn at Emory University and Claire D. Coles, PhD, MotherToBaby Georgia Director**

Aryan\* and Shanaya had been married for two years and very much wanted to start a family. When they were not successful at getting pregnant, they were tested for fertility (all tests came back as normal) and months of expensive medical treatments were tried without success. Emotionally and financially spent, the couple sought the counsel of friends and family. A childhood friend from India recommended an over-the-counter herbal fertility supplement called **vasantha kusumakaram**. The product is described as being “100% natural” so she was certain that it must be safe. Shanaya took this daily for 5 months and hoped for a baby.

In India, the traditional approach to medical care is referred to as **ayurvedic medicine**. In this 2000-year-old tradition, naturally occurring herbs are mixed with other substances and are prescribed for a range of symptoms. Vasantha

kusumakaram is reported to be a treatment for many illnesses and problems including diabetes, lung, heart and kidney diseases as well as heavy periods, impotence and tuberculosis. It is also felt by some to be an aphrodisiac!

During the months that Shanaya took the herbal treatment she did not become pregnant. Eventually, her husband suggested checking in again with her primary health care provider because she had started to suffer from abdominal pain, constipation, fatigue and loss of appetite. At that return visit, her blood pressure was surprisingly elevated and her blood count was low (anemia)...the combination of symptoms was a dead ringer for lead poisoning.

After recognizing the symptoms of lead poisoning, her doctor took a detailed history.

- Renovating a home that was built prior to 1978 can expose occupants to high lead levels from old paint, but Aryan and Shanaya's apartment had been built in 2002.
- Some occupations such as construction, plumbing, and auto refinishing cause exposure to lead, but Aryan was an engineer and Shanaya was an accountant.
- Hobbies such as pottery, target shooting and working with stained glass involve lead, but Aryan and Shanaya mostly spent their free time hiking with their dog and watching movies on Netflix.
- Her doctor knew that 1 out of 5 ayurvedic medicines purchased over the internet contain heavy metals such as lead, mercury, and arsenic suggesting that the vasantha kusumakaram might be responsible.

### **Lead Shouldn't Be In Your Body At All**

Lead levels greater than 5 micrograms/deciliter (ugm/dl) are considered harmful. Shanaya's level was 114 ugm/dl! Unfortunately, the lead in her body had become incorporated into her bones where it would be released over the next decade.

At Shanaya's next visit she reported that she had missed a period and had a positive home pregnancy test result. She and Aryan had thought that they would never be able to have children and now they had gotten pregnant on their own!

### **Lead + Babies = Not Good. Now what?**

Lead is not good for babies. During pregnancy, calcium is released from bones to help form the baby's bones... bringing any lead along with it. Thankfully, prior to Shanaya's surprise pregnancy, she underwent chelation treatment in order to get lead out of her bones more quickly. This is a process in which a medication is given that sticks to the lead and allows the body to excrete it. The chelation worked and her lead levels came down to 70 and then 22 ugm/dl over 6 months of treatment.

After discovering her pregnancy, a repeat lead level showed a slight climb in lead levels to 30 ugm/dl. While Shanaya and Aryan's developing baby was at an increased risk for problems such as miscarriage, brain and kidney development issues, and the potential for learning and behavior issues and decreased IQ, chelation was not an option to reduce lead levels. It is potentially harmful in pregnancy and unless lead levels climb above 45 ugm/dl, it is not recommended.

### **Essential Supplements Are Musts**

As her OBGYN, I saw Shanaya and Aryan at 7 weeks along in their pregnancy. We were all relieved to see a healthy fetus with a normal heart rate! I made recommendations to improve chances for a healthy baby, including taking in 2,000 mg of calcium through diet and supplements to provide the calcium that the baby's bones would need. Green leafy vegetables, almonds and dairy products are excellent sources of calcium. Because of her anemia, we had her start to take iron twice a day. Vitamin D is also involved with bone development so this was the final supplement that we added. At 7 weeks into her pregnancy, her lead level was 17 ugm/dl and by the second part of pregnancy it was stable at 13 ugm/dl.

We performed an ultrasound scan at 20 weeks and their healthy daughter is developing perfectly with no signs of birth defects. While it appears that all will turn out well for this couple, they are already investigating ways to enrich their daughter's early years to make up for any possible small decrease in IQ as a result of the lead exposure.

### **Avoiding Lead Exposure**

Lead is a metal that doesn't belong in any of us, but especially in pregnant women. Sadly, though, the only two states that require pregnant women to have lead levels checked are New York and Minnesota. Here's what you can do to avoid lead:

- Avoid natural or herbal supplements unless your doctor tells you that they are 100% safe.
- Don't be misled by advertisements that are designed to sell products that haven't been evaluated for safety and quality.
- Doctors should consider screening all women (not just those who are pregnant) exposed to lead through work or hobbies, who are recent immigrants, live in homes built before 1978, or who have cravings to eat non-food items (pica).

For more information, visit MotherToBaby's [Lead Fact Sheet](#), or contact a MotherToBaby expert via [phone](#), [text](#), [live chat](#), or [email](#). In addition, MotherToBaby has a whole section dedicated to lead exposure education including videos and brochures [here](#).

***\*The names and some of the details of this couple have been changed to protect their identity.***

### **About the Authors**

***Kurt Martinuzzi, MD, is an assistant professor and specialist in Obstetrics and Gynecology at Emory University in Atlanta, Georgia. His interests include resident and medical student education, recurrent pregnancy loss, premature ovarian failure and polycystic ovary syndrome. He has been an active member of the Region 4 Pediatric Environmental Health Specialty Unit since 2015. Over his 25 plus year career he has been awarded multiple teaching awards and presented at many national and regional Ob/Gyn meetings.***

***Claire D. Coles, PhD, is Professor of Psychiatry and Behavioral Sciences and Pediatrics at Emory University, Director of the Maternal Substance Abuse and Child Development Laboratory, and Director of MotherToBaby Georgia. Her expertise is in the developmental and behavioral effects of prenatal exposure to drugs and alcohol and the interaction of these effects with the postnatal environment. She was among the first to describe the behavioral effects of prenatal alcohol exposure and to investigate the effects of cocaine exposure on child development. Dr. Coles established the only multidisciplinary clinic in the Southeastern United States that provides specialized services to individuals prenatally exposed to drugs and alcohol. Her team also designed interventions for those affected, including the Math Interactive Learning Experience and the GoFAR intervention.***

### **About MotherToBaby**

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

### **References**

Saper RB, Russell SP, Sehgal AS et al. Lead, Mercury, and Arsenic in US- and Indian-manufactured Medicines Sold via the Internet. *JAMA* 2008; 300(8):915-923.

Guidelines for the identification and management of lead exposure in pregnant and lactating women. <https://www.cdc.gov/nceh/lead/publications/leadandpregnancy2010.pdf>

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

Disclaimer: MotherToBaby Fact Sheets are meant for general information purposes and should not replace the advice of your health care provider. MotherToBaby is a service of the non-profit Organization of Teratology Information Specialists (OTIS). Copyright by OTIS, June 12, 2023.

---

# Shake it Up, Baby? Maybe Not. Considering Nutritional Shakes in Pregnancy

---

**By Chris Colón, Certified Genetic Counselor at MotherToBaby Arizona**

We here at MotherToBaby are always looking for new and interesting topics to write about in our monthly blog series. We like to make sure that we do our best to target questions and concerns that are important to our readers. We of course spend a lot of time focused on over-the-counter and prescription medications, but not everyone feels comfortable taking traditional remedies. In fact, more and more people are looking to alternative medicine practices to treat a variety of conditions. Practices such as hypnosis, massage therapy and the use of essential oils is becoming more common.

As a teratogen information specialist I've fielded more than a few calls about the use of essential oils during pregnancy and breastfeeding. While information on the use of FDA-approved medications in pregnancy and breastfeeding is improving, reliable information on the use of products that are not regulated by the FDA is uncommon. Still, when callers want answers, it's our job to provide them with the most current and accurate data we can find.

Having no personal experience of my own with the use of essential oils, I wanted to talk to someone who did. Luckily, my friend, colleague and mom of three, Nicole Greer, was willing to share her personal story.

Nicole came to find out about the use of essential oils through a friend. "Three years ago, a friend invited me to her 'oils' party, and while I had no idea what that meant, because she was a good friend, I went to support her," she said. "When I arrived at the party, there were people trying different oils and discussing the life-altering differences oils had made for their families. Each of them had a story about changes such as elevated mood, better digestion issues, increased overall health - the list goes on."

While curious, Nicole was not ready to take the full plunge into oil therapy without some more information. "I went looking for credible sources to validate what I was hearing before I invested any time or money. I thought, if this is as great as they say it is, why haven't I heard about them before and why don't more people use them? Why isn't there use of these products in medical settings?"

Turns out there is. As the approaches to total patient care continue to change, more institutions are looking "outside the box" for treatments. There are many alternative medicine practitioners who use oils as part of their patient care routine. Vanderbilt University began using essential oils in their emergency room and their own study showed that the use of essential oils reduced stress and improved overall wellness among staff and patients. The Department of Integrative Medicine at Beth Israel Hospital in New York launched a program to help encourage self-care of its staff members, which includes essential oil therapy. And, there are large organizations both in the United States and abroad, that offer guidance on the practice of aromatherapy and the use of essential oils.

So what does all this mean for pregnancy and breastfeeding? Well, let's start with the basics. Before the use of any products, it's recommended to consult your healthcare provider to discuss the risks and the benefits. If you're looking for information on the use of oils during pregnancy and breastfeeding that can be found on the internet, here are a few tips:

**Information is limited.** Depending on the product in question, there may be few studies on its use in pregnancy and breastfeeding. For many products, there is no information at all. That doesn't mean that the oils are necessarily helpful or harmful; it means that they haven't been studied. The lack of data can sometimes make it hard to decide if the product should be used or not.

**Not all information is created equal.** Some information available is based on sound research and scientific proof. Some is "anecdotal", meaning it's based on people's experiences and not necessarily facts. When deciding what is best for you, make sure you're getting information from a reliable source.

**Still talk with your healthcare provider.** Information from books, media, and/or the internet may be helpful, but it cannot predict what exactly will happen with you. Everyone is different, and every pregnancy is different, too. What works for others may not work for you. There may be something in your medical history that makes using certain products potentially more risky- even products that are not a problem for others. It's best to always check with a medical professional.

**If you have used a product without knowing its possible side effects, don't panic.** Call your healthcare provider. The use of products on the skin (topical) usually does not lead to large absorption by the person using them. That means not a lot is getting to the bloodstream, or to the baby. Constant use, use on broken or diseased skin, use over large areas of the body, use on certain body parts and swallowing of products have a greater rate of absorption by the body. However, assessing if there a possibility of negative effects on pregnancy or breastfeeding depends on what product is used, when in pregnancy it was used, and how much was used.

Nicole's experience with oils has been a positive one. "For me, the defining moment came when I had a headache, and decided to give some oils a try. I have been plagued by headaches my entire life. I have used over-the-counter pain medication for years, and still my headaches never completely went away until I used a few dabs of oils on my temples. Also, after using the oils for almost two years, I believe the amount of times my three children have been sick is much lower than before. I have many friends who all have similar stories now, and my kids and husband have certainly gotten on board now that they have seen results," she said.

Like everything else, the use of essential oils in pregnancy and breastfeeding is a very personal decision, and one that should be made after careful information gathering and thinking about what's best for you and your baby. MotherToBaby is available to help provide information for questions on the use of essential oils during pregnancy and breastfeeding. You can reach a teratogen information specialist by calling 866-626-6847 or by visiting [www.MotherToBaby.org](http://www.MotherToBaby.org).



***Chris Colón is a certified genetic counselor based in Tucson, Arizona and proud mother of two. She currently works for The University of Arizona as a Teratogen Information Specialist at MotherToBaby Arizona, formerly known as the Arizona Pregnancy Riskline. Her counseling experience includes prenatal and cardiac genetics, and she has served as MotherToBaby's Education Committee Co-chair since 2012.***

***MotherToBaby is a service of the international Organization of Teratology Information Specialists (OTIS), a suggested resource by many agencies including the Centers for Disease Control and Prevention (CDC). If you have questions about viruses, alcohol, medications, vaccines, diseases, or other exposures, call MotherToBaby toll-FREE at 866-626-6847 or try out MotherToBaby's new text counseling service by texting questions to (855) 999-3525. You can also visit [MotherToBaby.org](http://MotherToBaby.org) to browse a library of fact sheets, email an expert or chat live.***

References:

<https://kansashealthrevolution.wordpress.com/2011/05/23/doterra-essential-oils-assist-staff-at-vanderbilt-university-medical-center/>

[http://www.wehealny.org/services/bi\\_im/specialgrants.html](http://www.wehealny.org/services/bi_im/specialgrants.html)

<https://www.naha.org/>

<http://www.ifparoma.org/index.php>

---

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

Disclaimer: MotherToBaby Fact Sheets are meant for general information purposes and should not replace the advice of your health care provider. MotherToBaby is a service of the non-profit Organization of Teratology Information Specialists (OTIS). Copyright by OTIS, June 12, 2023.

---

## Shake it Up, Baby? Maybe Not. Considering Nutritional Shakes in Pregnancy

---

**Photo Credit: © Bernd Esche | Dreamstime Stock Photos**

**By Lauren Bryl, MS, Certified Genetic Counselor, MotherToBaby IL**

It's National Birth Defects Prevention Month, and you've found yourself here - standing in the pharmacy aisle in search of prenatal vitamins. You think, "I should start taking one of these if I want to have a baby, right? At least that's what I've heard..." Your eyes are swimming and head is spinning with all the options. "Should I choose the old-fashioned tablets, the fruit-flavored gummies, or the minty chewables? With DHA or without? Do I need extra calcium or vitamin D? Is 200% daily value better than 100%? This seems like a good one," you think to yourself. "Oh wait! Maybe this one is better..." Shelf after shelf of bottles of vitamins and supplements...but which one is right for you?

### **Give yourself a pat on the back.**

First of all - well done, Mama! You've already made the most important decision by choosing to kick off your pregnancy journey with a solid supply of vitamins to support a growing baby! But why are prenatal vitamins so important anyway? Well, one of the main reasons is that deficiency of a vitamin called folate (also called folic acid) in very early pregnancy increases the risk for neural tube defects. Neural tube defects are a group of birth defects in which there is an opening in the spine. They include things like spina bifida. While the other vitamins and minerals may also provide benefits to mom and baby, the folic acid in the prenatal multivitamin is one of the most important for birth

defect prevention. Taking folic acid prior to and during pregnancy is the best thing we can do to reduce the risk of neural tube defects.

### **Take a deep breath.**

As a prenatal genetic counselor, I've had many patients ask me which prenatal vitamin is the best. While there are, of course, many factors that go into making a decision about which prenatal vitamin to take including cost considerations and personal preferences, I'm here to give some thoughts from a medical professional's perspective. First of all, you may not even have to make this choice yourself. Your doctor may prescribe you a prenatal vitamin with folic acid, so check with her first. But if she tells you to pick something up over the counter, don't panic.

### **Check the ingredients and their doses.**

The exact vitamins and minerals that you, personally, will need in a multivitamin depends on a few things. One is whether you have any known vitamin or mineral deficiencies or risk factors for such a deficiency. For example, vegans and vegetarians are more likely to have deficiency of vitamin B12, a vitamin found in meat and other animal products. The amounts of vitamins and minerals you receive through your diet should be considered. It is common for women to need extra help getting the recommended amounts of calcium, iron, and vitamin D. The daily recommended intakes for pregnant women over 18 years are 1,000 mg (milligrams) of calcium, 27 mg of iron, and 600 IU (International Units) of vitamin D. Some health care providers will also suggest docosahexaenoic acid (DHA) supplementation of 200 mg per day for those who do not eat fatty fish (like salmon and tuna) at least twice a week.

Regardless of your diet, folic acid supplementation is a must. The natural form of the vitamin found in certain foods (called folate) is not as well absorbed as the supplemental form (folic acid). Because of this, the U.S. Public Health Service recommends that all women of childbearing age take a folic acid supplement of 400 micrograms (0.4 mg) per day. Once you become pregnant, this dosage increases to 600 micrograms (0.6 mg) per day. If you are at higher risk for neural tube defects than the average woman because of family history or another factor, an even higher dosage may be recommended. You should consult with your health care provider for her recommendation.

With vitamins, more is not always better, though. While some vitamins are unlikely to be harmful even if taken at high dosages in pregnancy, this is not true for all. Specifically, very large amounts of supplemental vitamin A have the potential to increase the risk of birth defects and intellectual disabilities. For this reason, it is recommended that vitamin A supplementation not exceed 10,000 IU per day.

### **Don't go too far off the beaten path.**

Unlike medications and foods, vitamins and supplements are not regulated by the U.S. Food and Drug Administration (FDA). This means that the FDA does not test vitamins and other supplements to ensure that they contain the ingredients written on their labels at the doses indicated. The FDA also does not test for contamination with other, potentially harmful ingredients in vitamins and supplements. It is the responsibility of those who make the vitamins to perform these types of tests to ensure quality and safety.

Does this mean that most vitamins are dangerous? No, but it does mean that it may be safer to choose a widely available multivitamin rather than one produced by a small, specialized manufacturer. Companies with wider distribution are under more pressure to produce a safe product than those whose products you may only be able to buy in a specialty store or through their website. If in doubt, speak with your healthcare provider or a pharmacist.

### **Choose what works for you.**

While perhaps the most obvious point, choosing a vitamin that you will actually take is arguably the most important one as well. The perfect multivitamin won't do you any good if it is gathering dust in the medicine cabinet. If even just the thought of swallowing a pill half the size of a golf ball every morning has you queasy, you could consider trying a liquid or chewable form. Iron in your prenatal vitamin giving you constipation? Ask your health care provider if it's necessary that you have iron supplementation if you receive adequate amounts through the foods that you eat.

So if you find yourself in the pharmacy aisle overwhelmed with all the multivitamin options, try not to stress! Remember these tips and save that energy for other difficult decisions down the road...like choosing a preschool!



**Lauren Bryl, MS, is a certified genetic counselor, licensed in the state of Illinois. She graduated from Haverford College with a Bachelor's degree in molecular biology and earned a Master's of science in genetic counseling at Northwestern University. Located out of Chicago, Lauren serves as the coordinator for MotherToBaby Illinois. Since 2011 she has counseled women, their family members and their healthcare providers regarding the effects of exposures during both pregnancy and lactation. In addition to her role with MotherToBaby, Lauren is a clinical genetic counselor at Insight Medical Genetics where she provides both reproductive and hereditary cancer risk counseling.**

**MotherToBaby is a service of the international Organization of Teratology Information Specialists (OTIS), a suggested resource by many agencies including the Centers for Disease Control and Prevention (CDC). If you have questions about alcohol, medications, vaccines, diseases, or other exposures, call MotherToBaby toll-FREE at 866-626-6847 or try out MotherToBaby's new text counseling service by texting questions to (855) 999-3525. You can also visit [MotherToBaby.org](https://www.MotherToBaby.org) to browse a library of fact sheets.**

#### **References:**

American College of Obstetricians and Gynecologists; American Academy of Pediatrics. Guidelines for Perinatal Care. 6th ed. Washington, DC: American College of Obstetricians and Gynecologists; 2007. Elk Gove Village, IL: American Academy of Pediatrics; 2007.

Centers of Disease Control and Prevention (CDC). Use of dietary supplements containing folic acid among women of childbearing age—United States, 2005. *MMWR Morb Mortal Wkly Rep.* 2005;54(38):955-958.

De-Regil LM, Fernandez-Gaxiola AC, Doswell T, Pena-Rosas JP. Effects and safety of periconceptional folate supplementation for preventing birth defects. *Cochrane Database Syst Rev.* 2010;(10):CD00795.

Food and Nutrition Board, Institute of Medicine, National Academy of Sciences. Recommended Dietary Allowance and Adequate Intake Values, Vitamins and Elements. Institute of Medicine Web site. [www.iom.edu/Activities/Nutrition/SummaryDRIs/DRI-Tables.aspx](http://www.iom.edu/Activities/Nutrition/SummaryDRIs/DRI-Tables.aspx). Updated September 12, 2011. Accessed January 5, 2016.

Koebnick C, Hofmann I, Dagnelie PC, et al. Long-term ovo-lacto vegetarian diet impairs vitamin B-12 status in pregnant women. *J Nutr.* 2004;134(12):3319-3326.

Office of Dietary Supplements, National Institutes of Health, U.S Department of Health and Human Services. Dietary supplements: What you need to know. National Institutes of Health Web site. [https://ods.od.nih.gov/HealthInformation/DS\\_WhatYouNeedToKnow.aspx](https://ods.od.nih.gov/HealthInformation/DS_WhatYouNeedToKnow.aspx) Updated June 17, 2011. Accessed January 5, 2016.

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

---

Disclaimer: MotherToBaby Fact Sheets are meant for general information purposes and should not replace the advice of your health care provider. MotherToBaby is a service of the non-profit Organization of Teratology Information Specialists (OTIS). Copyright by OTIS, June 12, 2023.