

Plant-Based Diets for Pregnancy

PhysiciansCommittee
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Pregnancy means eating for two. But remember, one of you is very small. While you will need more nutrition, your overall diet will not be all that different.

Calorie needs increase only modestly during pregnancy. In the first trimester, no additional calories are needed at all. Women typically need an extra 340 calories (e.g., 1 cup cooked black beans plus 1 cup soy milk) per day in the second trimester, and an additional 450 calories per day in the third trimester (e.g., add 1 tablespoon peanut butter or an 8-ounce orange juice to the previous example).¹⁻³ All pregnant women need to choose their meals wisely. It is important to eat foods that are rich in nutrients, and not high in fat, sugar, or empty calories.

A plant-based diet, based on nutritious whole foods, is a healthy choice for any pregnant woman. Centering meals and snacks around beans, whole grains, fruits, vegetables, and moderate amounts of nuts and seeds will set you on track for optimal nutrition during pregnancy.

Research shows that vegetarian women have no greater risk of adverse pregnancy outcomes than nonvegetarian women.⁴ In fact, a vegan diet may offer many benefits during pregnancy. Mothers who eat mainly plant foods while pregnant have a lower risk for excess weight gain.⁵ Vegetarian mothers also tend to have fewer pregnancy-related complications such as preeclampsia, gestational diabetes, and calf cramps. Children of vegetarian mothers also benefit, as they have fewer chronic illnesses later in life and are less likely to grow up to be overweight.^{6,7}

Nutrients

To make certain that you are getting optimal nutrition, pay attention to the following nutrients.

Calcium: Pregnant women do not need to consume any more calcium than before pregnancy. The dietary reference intake (DRI) for calcium during pregnancy remains the same, 1,000 mg/day for women ages 19-50, because pregnant women tend to absorb more calcium.³

Just as before pregnancy, getting enough calcium on a vegetarian diet is easy. In fact, calcium absorption from plant foods is often superior to that of dairy products.⁸ Good sources of calcium include calcium-set tofu and soybeans, dark green leafy vegetables, bok choy, broccoli, beans, figs, sunflower seeds, tahini, almond butter, calcium-fortified plant milks, and calcium-fortified cereals and

juices. Include these foods daily to meet your calcium needs.

Essential fats: Alpha-linolenic acid (ALA) is an essential fat and an important component of the diet. The body converts ALA into long-chain polyunsaturated fatty acids (DHA and EPA), but conversion rates vary from person to person.²

The adequate intake (AI) for ALA is 1.1 grams per day for women ages 19-50 and 1.4 grams per day during pregnancy.¹ ALA can be found in a number of plant foods, especially flaxseed and flaxseed oil. You can also find ALA in canola and walnut oils, walnuts, chia seeds, hemp seeds, kale, and soybeans.

However, the typical Western diet is high in omega-6 fats (from animal products and vegetable oils) relative to omega-3 fats. This excess prevents omega-3 fats from being efficiently elongated to EPA and DHA.⁹ Avoiding processed foods like chips and baked goods can help you cut down on unnecessary omega-6 fats.

DHA has been shown to be lower in the plasma and umbilical cord of babies born to vegetarian mothers.⁵ Since vegetarians do not consume DHA in the diet, their body must make it from ALA. Since people convert ALA to DHA and EPA at different rates, taking an algae-based DHA supplement (100-300 mg) is a good insurance policy.¹⁰⁻¹²

Folate: Folate, or folic acid, is especially important in the first weeks of pregnancy and necessary to help prevent neural tube defects. It serves other functions as well. As its name implies (derived from the word “foliage”), its natural source is leafy greens. Beans are also rich in folate. Because diets can change daily, it is best to take a multivitamin or prenatal supplement that provides at least 400 µg/day of folic acid. Many breakfast cereals and other grain products now come fortified with folic acid. Aim for 600 µg/day during pregnancy.²

Iron: Iron needs increase during pregnancy to support the developing fetus and placenta and to maintain increased maternal blood volume.¹³ The recommended intake of iron for women ages 19-50 is 18 mg/day, increasing to 27 mg/day during pregnancy.^{3,14} Iron needs may be greater for those on a plant-based diet because of less-efficient absorption of iron from nonanimal sources.¹⁵ Iron supplements (or prenatal vitamins containing iron) are often prescribed for women on any kind of diet, as it can be difficult for anyone to meet these increased needs through diet alone. However, if your blood tests show normal iron levels, it may be

harmful to take a high-dose iron supplement.¹⁶ Ask your doctor if you need a supplement.

Do not take iron supplements at the same time as tea, coffee, or calcium supplements, because they can decrease iron absorption. Avoid dairy products, which may lower iron absorption.

Vegetarian women should include iron-rich plant foods in their diet daily, in addition to taking their prescribed vitamins or supplements. Iron sources include whole and enriched grains, legumes, nuts, seeds, dark green vegetables, dried fruit, and blackstrap molasses. Including vitamin C-rich foods (most fruits and vegetables) at meals increases absorption of iron from plant foods.

Protein: Before pregnancy, women ages 19-50 are recommended to consume 0.36 grams of protein per pound that they weigh. For a 125-pound woman, that would be $125 \times 0.36 = 45$ grams of protein. During pregnancy, protein needs increase by 25 grams per day. So the same woman who is pregnant would need 70 grams of protein per day.

Protein sources on a vegetarian diet include whole grains, beans and lentils, vegetables, and nuts and seeds. A balanced vegetarian diet, providing adequate calories and including these foods, will likely meet protein needs.¹⁷

Vitamin B12: Vitamin B12 needs increase only slightly during pregnancy, from 2.4 µg/day for women ages 19-50 to 2.6 µg/day during pregnancy.² Vitamin B12 is found in fortified foods, such as fortified cereals, meat substitutes, nondairy milk, and nutritional yeast. Be certain to check the labels to find out which



foods are fortified. Seaweed and foods like tempeh are generally not good sources of vitamin B12. Since not everyone absorbs B12 efficiently, take a prenatal vitamin or a vitamin B12 supplement with at least 100 µg vitamin B12.¹⁸ Taking 250 µg of additional chewable or sublingual vitamin B12 on an empty stomach can further increase blood levels of B12. Please ask to have your B12 levels checked early in pregnancy and during lactation to ensure you're getting the right amount for you.

Vitamin D: Women of reproductive age and pregnant women need 600 IU of vitamin D per day. It is important to both mother and baby. Vitamin D is made in the body as the result of exposure to sunlight. For some, 5-15 minutes per day of sun between the hours of 10 a.m. and 3 p.m. on the arms and legs or hands, face, and arms during the spring, the summer, and the fall is enough to meet vitamin D needs. Those with darker skin pigments require more time in the sun to get the same effect.¹⁹

This nutrient is poorly supplied in all diets unless people eat fortified foods, although many brands of ready-to-eat cereals and nondairy milks come fortified with vitamin D. Pregnant women who don't regularly spend time in the sun, who live in northern latitudes, or who have darker skin will want to be sure to include fortified foods in their diet. Many prenatal vitamins contain vitamin D as well.

Zinc: Zinc needs increase during pregnancy. The DRI for women ages 19-50 is 8 mg/day and increases to 11 mg/day during pregnancy.³ Needs for women following a vegetarian diet may be higher because of lower absorption of zinc on a plant-based diet.¹² Prenatal vitamins often include zinc. You can also find zinc in legumes, nuts, whole grains, and cereals. Zinc absorption from plant-based sources is increased from sprouted grains, beans, seeds, and yeast-raised breads in the diet, as well as soaking and cooking legumes and combining zinc sources with acidic ingredients such as lemon juice or tomato sauce.

Iodine: Iodine is critical to fetal brain development early in pregnancy. Getting enough iodine is important, especially during the first few months while the baby's brain is rapidly growing. Iodized table salt (but not sea salt or Himalayan salt) and some fruits and vegetables contain iodine. However, the iodine content of fruits and vegetables varies depending on the soil in which they are grown.

Women who are pregnant, lactating, or planning a pregnancy should consume a supplement of 150 µg/day in the form of potassium iodide.²⁰ Prenatal vitamins may not provide iodine, so it is important to take an additional supplement if this is the case.

Choline: Choline is important for fetal brain development and may help prevent neural tube defects. The recommended intake for pregnant women is 450 mg/day.¹ Focus on choline-rich foods like tofu, soy milk, quinoa, beans, peanut butter, cabbage-family vegetables, and mushrooms. Consider supplementing with 250 mg choline during both pregnancy and breastfeeding, or as recommended by your obstetrician.

A note about dietary supplements: Your clinician may recommend a supplement to ensure you meet your vitamin/mineral needs. Most prenatal vitamins will cover your needs. If you are interested in taking any additional dietary supplements, including herbal or botanical supplements, talk to your clinician. Many herbal supplements have not been adequately tested for safety in pregnancy.



Sample Menu for Pregnant Women

Breakfast

- 1 cup ready-to-eat cereal topped with 1/4 cup berries and 1 cup fortified nondairy milk
- 2 slices whole-wheat toast with 2 tablespoons almond butter
- 3/4 cup calcium-fortified fruit juice

Lunch

- Sandwich with 1/2 cup baked tofu, 2 slices whole-grain bread, and lettuce
- 2 cups tossed salad with herbs and lemon juice
- 1 piece fruit

Dinner

- 1 cup red beans and 1/2 cup brown rice
- 1/2 cup cooked broccoli topped with nutritional yeast
- 1 cup spinach salad with 1/2 sliced bell pepper
- 1 cup fortified soy milk

Snacks

- 2 tablespoons nuts
- 1 cup mixed fruit
- 4 whole-wheat crackers
- 2 tablespoons hummus

*Be sure to include a reliable source of vitamin B12, vitamin D, and iodine, such as a prenatal vitamin, fortified nondairy milk, fortified cereal, or an additional supplement.

Menu Ideas

- Plan meals around nutritious whole grains, beans, fruits, and vegetables. Add sesame seeds, wheat germ, or nutritional yeast for flavor and nutrition.
- Cooked leafy green vegetables are a powerhouse of nutrition. Add them to soups and casseroles.
- Snack on dried fruits and nuts to boost your intake of iron and other important trace nutrients.

Guidelines for Good Health During Pregnancy

- Begin a healthful diet before you become pregnant. Your body stores of nutrients support the early growth and development of your baby.
- Maintain a steady rate of weight gain. Aim for about 2-4 pounds total during the first trimester and then about 1 pound per week during the second and third trimesters. If you were at a normal weight before you became pregnant, the recommended weight gain overall is 23-35 pounds. However, if you were underweight before pregnancy, you should gain 28-40 pounds, and if you were overweight, you should gain 15-25 pounds. Women carrying twins should gain 37-54 pounds.^{2,3}
- See your health care professional regularly.

- Do not consume alcohol or use tobacco products during pregnancy.
- Limit caffeine to < 200 mg per day (the amount in about 1 cup of coffee).^{21,22}
- Exercise during pregnancy benefits both mother and baby. Talk to your doctor about an appropriate exercise plan for you.
- Limit empty calories found in highly processed foods and sweets. Make your calories count!

Breastfeeding

The guidelines for breastfeeding mothers are similar to those for pregnant women. Milk production requires even more calories than pregnancy, so you will need to boost your food intake a little bit. During the first six months of breastfeeding, you need 500 calories more than you did before you became pregnant. This drops to 400 additional calories during the second six months of breastfeeding. Protein needs are the same as during pregnancy— an additional 25 grams per day over prepregnancy needs.¹

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