

Vegetarianism and Pregnancy

Are you a vegetarian? Do you wonder if you can follow a vegetarian diet while pregnant and still have a healthy baby?

Research shows that women who eat well-planned vegetarian diets during pregnancies can have healthy babies. Eat a wide variety of foods and enough daily servings as outlined in the *Vegetarian Food Guide for Pregnancy* (see back of sheet). It is easier to meet daily nutrient needs for *lacto-ovo-vegetarians* who eat milk products (lacto) like milk, cheese and yogurt and eggs (ovo), than *vegans* or strict vegetarians who avoid all animal products. The more foods avoided, the greater chance you won't get enough nutrients you and your baby need. Vegan women must also be sure they eat enough foods rich in vitamin B₁₂ and zinc.

Key nutrients needed for pregnancy

- **Protein** is needed for growth of new body tissues. Eating over the course of the day a variety of plant foods will help you to get all the amino acids (the "building blocks" of protein) that you and your baby need. Legumes (dried beans, peas and lentils) and nuts are protein-rich plant foods.
- **Folate (or Folic Acid)**, a B vitamin, reduces the risk of babies developing neural tube defects such as spina bifida during the first month of pregnancy. Since many pregnancies are unplanned, it is recommended that all women of childbearing age eat folate-rich foods and take a supplement of 400 µg folic acid daily.* You need to continue this during the pregnancy, as folate helps the body make new cells for tissue growth and blood. Examples of folate-rich foods are legumes, spinach, asparagus, romaine lettuce, oranges, canteloupe, nuts, seeds and enriched grain products.
- **Calcium** is needed for healthy bones and teeth. The best source of calcium is milk products. Vegans must take extra care in choosing a wide variety of calcium-rich foods such as broccoli, bok choy, kale, beans, almonds, sesame and sunflower seeds, fortified soymilk, calcium-set tofu (tofu made with calcium sulphate), and calcium enriched orange juice.
- **Vitamin D** helps the body to absorb more calcium from foods. In a lacto-ovo-vegetarian diet foods that contain vitamin D are milk, margarine, egg yolk and fortified soymilk. Vegans who do not eat enough vitamin D fortified foods may need to take a supplement providing 5 µg daily.* The skin with exposure to sunlight can make vitamin D, but because of sunscreens and Canada's northern latitude, the skin may not make enough.
- **Iron** is needed for healthy blood cells and to carry oxygen to body tissues. Iron from animal foods is better absorbed by the body than iron from plant foods. Legumes, enriched cereals and whole grains, dried fruit, nuts and seeds are plant sources of iron. Eating vitamin C-rich foods at the same meal will increase iron absorption from plant foods. Examples of vitamin C-rich foods are oranges and other citrus fruits and juices, red pepper, tomatoes or tomato sauce. Newer research suggests that vitamin A can help increase iron absorption from rice, wheat and corn. Some women may still need to take an iron supplement of 30 mg daily during the second and third trimester when iron needs are higher.* Drinking coffee or tea decreases iron absorption, so limit these beverages to between meals.
- **Essential Fatty Acids** such as Omega-3 Fatty Acids are needed for brain, nerve and eye development, growth and vision. Some examples of Omega-3 Fatty Acids are Omega-3 enriched eggs, flaxseed oil and walnuts.
- **Vitamin B₁₂** is needed for healthy blood cells, body tissues and the nervous system. The vitamin B₁₂ we need is only naturally found in animal foods. Vegans need to eat enough Vitamin B₁₂ fortified foods or take a supplement providing 2.6 µg daily.* Examples of foods with added vitamin B₁₂ are fortified soymilk, fortified vegetarian meat analogues (veggie "meats") and Red Star® Nutritional Yeast.
- **Zinc** is needed for cell growth and repair such as wound healing. Zinc is naturally found in milk, egg yolk, legumes, whole grains and nuts. It is added to veggie "meats" and fortified soymilk. Zinc from animal foods is better absorbed by the body than zinc from plant foods. Vegans need to eat more servings of zinc-rich plant foods to get enough zinc daily.

* Talk to your doctor about supplements.

Vegetarian Food Guide for Pregnancy

The range in number of servings for the food groups allows for differences in body size, activity levels and age. For example, smaller and less active women need the lower number of servings, while larger and more active women need the higher number of servings.

Food Group Servings Per Day	Examples of One Serving	Tips for Healthy Eating
Grains (Bread, Cereals, Rice Pasta and Other Grain Products) 6 - 11 Servings	1 slice bread 1/2 bun, bagel or English muffin 1 scone, pita bread, roti, or tortilla 1/2 cup (125 mL) cooked cereal, rice, grain or pasta 1 oz (28 g) dry cereal 1 oz (28 g) other grain products	Choose whole grains (e.g. 100% whole wheat, oats, brown rice) and enriched products more often. Whole grains are a source of zinc and iron. White flour, cornmeal and pasta products labelled "enriched" have added folic acid and iron.
Vegetables 3 - 5 Servings	1 cup (250 mL) chopped raw or leafy vegetable 1/2 cup (125 mL) cooked vegetable 3/4 cup (175 mL) vegetable juice	Choose dark green and orange vegetables more often for rich sources of vitamin A, C, folate and calcium.
Fruits 2 - 4 Servings	1 medium fresh fruit (apple, orange, pear, peach) 2 small fresh fruit (apricot, plum) 1/2 cup (125 mL) canned or cooked fruit 3/4 cup (175 mL) fruit juice	Choose orange fruit more often for rich sources of vitamin C (e.g. oranges, canteloupe, mango). Oranges and canteloupe are also good sources of folate. Dried fruit are good sources of iron (e.g. raisins, prunes, apricots).
Beans and Bean Alternatives (Beans, Lentils, Peas, Nuts, Seeds, Eggs, and Meat Substitutes) 3- 4 Servings	1 cup (250 mL) cooked beans, lentils or peas 1/2 cup (125 mL) tofu or tempeh 2 oz (55 g) vegetarian meat analogue or soy cheese 2 cups (500 mL) soymilk 1/4 cup (60 mL) nuts or seeds 3 tbsp (45 mL) nut or seed butters 2 eggs 4 egg whites	Choose protein-rich foods that are also iron and zinc-rich foods more often (e.g. beans, peas, lentils, nuts, seeds). Try soy products such as tofu and veggie "meats" (e.g. veggie burgers, ham, turkey). For those who are vegan, check the food label to make sure the veggie meat has added vitamin B ₁₂ .
Milk and Milk Alternatives <i>(Note: some foods also count as servings in the vegetable group or beans and beans alternative group e.g. 1 cup of cooked kidney beans can be used as a milk alternate and at the same time it provides one serving from the beans group.)</i> 8 Servings	1/2 cup (125 mL) milk, yogurt, or fortified soymilk 3/4 oz (21 g) natural cheese 1/2 to 1 cup (125-250 mL) cottage cheese 1/4 cup (60 mL) calcium-set tofu 1 cup (250 mL) cooked soy, white, navy, great northern, kidney or black turtle beans 1/4 cup (60 mL) almonds 3 tbsp (45 mL) sesame (tahini) or almond butter 1 cup (250 mL) cooked bok choy, chinese cabbage, broccoli, collards, kale, or okra 1/4 cup (10 g) dried hijiki seaweed 1 tbsp (15 mL) black-strap molasses 5 figs fortified foods or beverages providing 100-150 mg calcium per serving	Vitamin D is added to milk. Vitamin A is added is added to 2%, 1% and skim milk. Soymilk labelled "fortified" has added calcium in amounts similar to the calcium in an equal serving size of milk. Fortified soymilk also has added zinc, vitamins A, D, B ₁₂ , and riboflavin. Check the food label of tofu to be sure that it is made with calcium sulfate, to be a good source of calcium. Calcium enriched orange juice has added calcium in amounts similar to the calcium in an equal serving size of milk. But the juice does not have vitamin D.
Fats and Sweets 2 Servings of Omega-3 Fatty Acids Use Sparingly other fats and sweets	Examples of One Serving of Omega-3 Fatty Acids: 1 tsp flaxseed oil 3 tbsp walnuts 4 tsp canola or soybean oil 6 oz tofu other oils, margarine, mayonnaise, salad dressings soft drinks, candies	The best source of Omega-3 Fatty Acids for vegans is flaxseed oil. Flaxseed oil is very sensitive to heat, so use it in salad oil and added to prepared foods, but not for cooking oil. Sprinkle it on vegetables, potatoes and pasta. Store flaxseed oil in refrigerator. Limit eating low nutrient foods like soft drinks and candies.

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Food labels of homo, 2%, 1% and skim milks, enriched orange juices, soymilks, vegetarian meat analogues (veggie "meats") of products available in A&P grocery stores in Whitby and Oshawa ON; Nov and Dec 2001.