



Education

Vegetarian Diet

What is a vegetarian?

Vegetarians choose not to eat meat. This includes all animal meat, poultry, and fish. Many vegetarians also avoid other animal products such as gelatin, rennet (used in making cheese), and animal fats.

Vegetarians who eat eggs and dairy products are known as ovo-lacto vegetarians. People who do not eat any animal product (including honey) are called vegans.

Semi- or partial-vegetarians sometimes eat poultry or fish, but not beef or pork.

What are the pros and cons?

A well-planned vegetarian diet is very healthy. By not eating meat, your child eats less cholesterol and saturated fat. This may reduce the risk of heart disease, gallstones, stroke, and certain types of cancer. Teens do not need to worry about growth problems. They will reach a normal adult weight and height without meat.

Younger children sometimes "fill up" too quickly on the higher fiber vegetarian foods and have trouble getting enough calories for proper growth. A healthy vegetarian diet has to be carefully planned to make sure your child gets all the proper nutrients.

Will my child get all the proper nutrients?

If the meals are well-planned, a vegetarian diet is safe. If the diet is too restricted, or too high in sweets, sodas and snack foods, it may be unhealthy. Some nutrients may be missing. For example, if a child will only drink soda and eat potato chips, nutrients such as iron and calcium will be lacking. These nutrients could still be lacking even if they were eating some grains, fruits, and vegetables.

There are many foods available, such as soymilk, meat substitutes (such as veggie burgers and dogs), and frozen entrees. However, you still need to make a special effort to make sure your child gets enough calcium, iron, zinc, vitamin D, vitamin B-2, vitamin B-12 and healthy fats.

Younger children often have smaller appetites. High fiber plant foods typically have fewer calories and are more filling. Your child may get full before getting enough calories. Serve frequent meals and snacks and use some higher calorie refined foods (such as fortified cereals, breads, and noodles). Choosing foods with higher fat content (healthy unsaturated fats) can help your child with energy and nutrient needs.

- **Calcium:** Milk and dairy products are a great source of calcium. If your child is on a vegan diet and does not eat these products, however, it is harder to get calcium. Good non-dairy sources of calcium include: calcium fortified breakfast cereals, orange juice and soy beverages; tofu prepared with calcium (nigan); pink salmon with bones, bok choy, collard greens; blackstrap molasses; and legumes (peas, beans, lentils). Keep in mind that the calcium found in plant foods and even some fortified foods is not easily absorbed. It is best absorbed if your child eats calcium fortified foods in 2 or more separate small meals or snacks.
 - **Iron:** Typical vegetarian diets usually provide enough iron. The problem with iron is that it is not easy for the body to absorb. Iron in meat, poultry, and fish is absorbed much better than iron from plants. Eating foods containing Vitamin C (citrus fruits and tomatoes) along with foods that contain iron helps the body to absorb the iron better. Good non-meat iron sources include: fortified cereals; soybeans, legumes (peas, beans, lentils); potato baked with skin; spinach; blackstrap molasses; prunes, raisins and apricots. Breast-fed babies who are not yet getting solid food should have supplements of iron after the age of 4 to 6 months.
 - **Zinc:** Vegetarians may need as much as 50% more zinc than non-vegetarians. Zinc is not as easily absorbed from plant foods as it is from animal products. It is very important for vegetarians to include good sources of zinc in their diet. Plant foods that contain zinc include: fortified whole grains and cereals, legumes (peas,
-

beans, lentils, peanuts), nuts and seeds, and soy foods such as soybeans, milk, tofu, tempeh, and fortified veggie meats.

- **Vitamin B-6:** Also known as pyridoxine, vitamin B-6 is found in legumes (peas, beans, lentils), potatoes baked with skin, banana, and fortified breads and cereals.
- **Riboflavin B-2:** Vegans often have lower amounts of B-2. Good non-animal sources of this vitamin include: fortified cereals and soymilk, almonds, asparagus, bananas, legumes, sweet potatoes, tofu, wheat germ and enriched breads.
- **Vitamin B-12:** Vegans need extra vitamin B-12. B-12 is found naturally in dairy products and eggs. Vitamin B-12 is added to some fortified cereals, fortified soymilk, and some meat substitutes.
- **Vitamin D:** Vegans often have diets that have low amounts of vitamin D. Vitamin D is made in the skin when exposed to sunlight. Some vegetarians may need more outdoor activity or vitamin D supplements. Vitamin D is added to some fortified cereals and fortified soymilk. If your baby is only getting breastmilk, you need to give your baby a vitamin D supplement every day. You can give your baby multivitamin drops that contain vitamin D.
- **Omega-3 fatty acids:** Vegetarians should include good sources of linolenic acid (omega-3) in their diet. Foods high in linolenic acid include flaxseed and flaxseed oil, canola oil, walnuts, soybeans and soybean oil. Omega-3 are naturally found in fish and eggs.

See also:

Diet

How do I know if my child is eating healthfully?

One of the best ways to check if your child is eating well is to measure your child's weight and height. If your child is not getting enough calories, his or her weight will not follow the usual growth patterns for children. Your health care provider can check your child's growth on a growth chart.

If your child is not getting enough vitamins or minerals, he or she may have symptoms such as:

- skin rashes
- a painful, swollen tongue
- tiredness
- irritability
- pale skin
- mental slowness
- trouble breathing.

Check with your provider if you are worried about vitamin or mineral deficiency.

How can I help my child eat healthfully?

Infants and toddlers need many calories to grow at the normal rate. At about 7 to 8 months of age, babies are ready to start eating protein-rich foods. Instead of pureed meats, vegetarian babies should be given protein alternatives such as pureed legumes (peas, beans, lentils), cottage cheese, soft tofu, and yogurt. Also, make sure your toddler eats high-calorie foods such as nut butters and nuts (chopped in small pieces to prevent choking), veggie dips made with olive or canola oil, olives (chopped), dried fruits, and avocados so he will get enough calories. Most health care providers warn not to feed your child peanuts and tree nuts until age 2. If you have family history of allergies, some advise waiting until 3 years of age. Make sure your child eats a wide variety of foods.

Where can I get more information?

Additional information on vegetarian diets can be found at your local library. Some helpful Web sites include:

<http://www.VRG.org>

http://www.pcrm.org/health/Info_on_Veg_Diets/index.html (available in Spanish)

<http://www.eatright.org> (search "vegetarian")


When should I call my child's health care provider?

Call during office hours if:

- You are not sure if your child's diet is adequate.
- You would like more information about nutrition and being vegetarian.
- You have other questions or concerns.

Pediatric Advisor 2006.4; Copyright © 2006 McKesson Corporation and/or one of its subsidiaries. All Rights Reserved. Written by Robert Brayden, MD, Associate Professor of Pediatrics, University of Colorado School of Medicine. This content is reviewed periodically and is subject to change as new health information becomes available. The information is intended to inform and educate and is not a replacement for medical evaluation, advice, diagnosis or treatment by a healthcare professional.

Food Guidance System My Pyramid Plan




The My Pyramid Plan is based on your age, gender, and how much exercise you get each day. You can find out how many calories you should eat each day and the amount of the foods you should eat by going to www.mypyramid.gov. The example below is for a diet of 2000 calories per day.

	Amount per day
Grains	6 ounces
Vegetables	2 ½ cups
Fruits	2 cups
Milk	3 cups
Meat & Beans	5.5 ounces
Oils	6 teaspoons

Limit extra fats and sugars to less than 265 calories per day

Get 30 minutes (or more) of moderate to vigorous physical activity



Healthy Eating Tips

- Half of the grains you eat should be whole grains.
- Vary your veggie choices. Eat some dark green, orange, and starchy vegetables every week.
- Make most of your fruit choices whole or cut-up fruit rather than juice so you get more fiber.
- Choose fat-free or low-fat milk and yogurt.
- Choose lean cuts of meat. Also eat beans (such as black, soy, or pinto beans) for protein.
- Look for foods that are low in saturated fats, trans fats, and cholesterol to help reduce your risk of heart disease.

Adapted from USDA Food Guidance System.
Copyright © 2005 McKesson Corporation and/or one of its subsidiaries. All Rights Reserved.