



# Dietary Tips For Vegetarians

A vegetarian diet generally refers to a diet that omits meat, fish and poultry. A well planned vegetarian diet is usually nutritionally adequate and healthy, but during pregnancy and for breastfeeding specific concerns can arise. A poorly designed or implemented vegetarian diet can be low in several key nutrients required for optimal fetal growth or maternal milk production, including protein. In this section, we will answer some common questions about these diets and what "it takes" to develop a vegetarian diet that supports a healthy pregnancy and lactation.

First, let's review the specific types of vegetarian diets. The more restrictive the diet, the greater the risk of problems. Vegan diets require the most careful planning because all animal sources of protein and nutrients are omitted.

Vegetarian Diets	Description
Semi-Vegetarian Diets	Includes fish, poultry, eggs and dairy products.
Lacto-Ovo Vegetarian Diets	Includes dairy products and eggs.
Lacto Vegetarian Diets	Includes dairy products.
Ovo Vegetarian Diets	Includes eggs.
Vegan	Includes only plant foods. Omits animal products.

## ***What are the potential health benefits of following a vegetarian diet during pregnancy?***

Vegetarian diets tend to have more fiber than meat based diets, which can help pregnant women in two ways. First, fiber along with water helps to minimize constipation. As most experienced women can attest, this can be real challenge as the time of delivery approaches. Also, for several weeks after delivery, softer stools are desirable to avoid excessive strain in the tender vaginal area. The second benefit of a high fiber, well planned vegetarian diet is better weight control. Vegetarian diets tend to be less calorie dense when high fat dairy (whole milk, full fat cheeses, butter) and oils are not over-consumed.

## ***Do vegetarian diets provide enough protein?***

A **well planned** vegetarian diet that includes adequate variety easily provides enough protein. The recommended dietary allowances (RDA's) call for 10 % of total calories to come from protein. Milk, yogurt, cheese and eggs are all excellent sources of protein. An adequate supply of protein is possible in a strict vegetarian diet, but it requires proper selection. Remember, protein requirements of pregnancy are higher than for non-pregnant women, and higher still for women who are breastfeeding. If more than one baby is involved, protein needs are even greater. Protein needs may be significantly increased and the challenge to eat enough will be greatest for vegans. Vegans need to eat an adequate amount of high quality protein foods (soy) or complement beans with grains. If necessary, boost protein by adding soy based protein powder. Discuss your needs with your physician. A consultation with a registered dietitian is recommended if you need to plan a vegan diet to meet increased protein needs during pregnancy or lactation.

## ***Do vegetarian protein foods need to be eaten at the same meal to make a complete protein?***

The most important aspect of vegetarian diets for pregnancy and lactation is total, usable protein. All proteins are made of small building blocks called amino acids. There are 20 kinds of amino acids. Foods containing protein have varying amounts and different combinations of amino acids. Animal proteins are called "complete proteins" because they contain **ALL** of the amino acids human's requires. Soy protein (soybeans, tofu, soy milk) is also a "complete protein". Most plant foods contain "incomplete proteins", however, because they are low in one or more essential human amino acids. For example, legumes (dried beans and peas) have low levels of an amino acid called methionine. Cereals and grains have low levels of a different amino acid, lysine. Combining different vegetarian protein sources results in complete proteins with all the essential amino acids. Grains eaten with legumes results in a complete protein. Beans and rice are complementary proteins and combining these two foods provides a high quality protein. Complementary proteins can be eaten over the course of a day. They do not need to be eaten at the same meal. That is because the amino acids are available in the blood for some hours after a meal. When the next meal is eaten and provides the complimentary amino acids, then the body has all of the building blocks necessary to make important proteins like muscles, tissues, hormones and antibodies.

### ***Do vegetarian diets provide enough iron?***

There are two types of iron. Non-heme iron is the type of iron found in plant foods. It is not absorbed as well as heme iron, which is the type of iron found in meats. Absorption of non-heme iron in plant foods can be enhanced by eating a vitamin C rich food at the same meal. Vegetarian diets can provide a good supply of iron if the proper foods are eaten, but most pregnant women also require additional iron provided in a prenatal vitamin-mineral supplement beginning in the second trimester of pregnancy.

### ***Are there other vitamins or minerals that are difficult to obtain on a vegetarian diet?***

A vegetarian diet can provide all of the vitamins and minerals, as well as calories and protein that are needed by the body. The key to a healthy vegetarian diet requires careful planning to assure balance and nutritional adequacy. The following chart lists nutrients that are more likely to be at risk, why the nutrient is needed, and vegetarian food sources to choose.

<b>Nutrient</b>	<b>Purpose</b>	<b>Vegetarian Food Sources</b>
Iron	Used in red blood cells to deliver oxygen throughout body and to the developing fetus. Fetus stores iron for its own reserves in late pregnancy.	Fish and poultry are great sources of iron. Vegetarian sources include: dark green leafy vegetables, legumes, whole grains, seaweed, soy products and fortified cereals.
Zinc	Needed for cellular growth.	Fish and poultry are excellent sources of zinc. Strict vegetarians must plan carefully, or supplement this mineral. Vegetarian sources include nuts and seeds, legumes, hard cheeses, whole grains, soy products, wheat germ, and yeast.
Calcium	Needed for the developing bones and teeth of the fetus. Utilized for maternal milk production.	Milk, yogurt and cheese are by far the richest sources of calcium. Nondairy sources include: dark green leafy vegetables, broccoli, almonds, corn tortillas, legumes, calcium-fortified soy products/tofu, and fortified orange juice.
Vitamin D	Important for healthy bone development. This vitamin aids in mother's calcium absorption.	Milk is fortified with vitamin D. The body can produce its own vitamin D in the skin when there is adequate exposure to the sun's rays.
Vitamin B12	Needed for cellular growth and nervous system development.	Found in all animal products including milk products and eggs. Plants do not contain this vitamin. If milk products and/or eggs are not included in the diet, then this vitamin must be taken as a vitamin supplement.