



Oklahoma Cooperative Extension Service • Division of Agricultural Sciences and Natural Resources

## Red Meats and Vegetarianism

The choice or style of eating is up to each person. Let us take a look at the pros and cons of one style of eating known as “vegetarianism.”

Many people, especially young adults, are becoming vegetarians for religious, social, or health reasons. A vegetarian is one who does not eat meat, poultry, or fish. There are three types of vegetarian diets to consider.

**Pure or strict vegetarian:** does not eat any foods that come from animals, such as meat, eggs, and dairy products. This diet restricts the nutrients found in the meat and milk groups. Vitamin B<sub>12</sub> is found only in meat, fish, eggs, and dairy products, and strict vegetarians will miss this important nutrient unless they take supplements. The strict vegetarian diet, with no animal proteins may lack protein, essential amino acids, calcium, riboflavin, and zinc.

**Ovo-lacto vegetarian:** does not eat any meat, fish, or poultry, but does eat eggs and dairy products. (ovo= eggs, lacto= milk)

**Lacto-vegetarian:** does not eat any meat, poultry, fish, or eggs, but does eat dairy products.

The ovo-lacto and lacto vegetarian diets can be nutritionally complete. The strict vegetarian diet requires careful planning of foods, food preferences, and the person’s lifestyle.

### Certain Nutrients are Important for Vegetarians

**Protein.** Pure vegetarian meals require careful planning with the right amount and type of protein. There is a major difference between the way the body digests, absorbs, and uses animals versus plant proteins. In general, animal proteins (eggs, dairy products, and meats) have mixtures of the building blocks (amino acids) that are well-balanced. This means that none of the essential amino acids are lacking or eaten in deficient amounts. Plant proteins (dried peas, beans, and nuts) do not have all the essential amino acids or have them only in small amounts. Plant proteins eaten in certain combinations with other foods can provide the essential amino acids in amounts the body needs. Some combinations that complement each other are sesame seeds and legumes, soybeans and wheat, oats, corn, rice, or coconut. These combinations do not have to be in the same dish, but should be eaten at the same meal. For example, cornbread or rice should be eaten along with beans or peanut butter on wheat bread.

**Vitamins.** If red meats, milk, and eggs are not eaten, then special care should be given to be sure minerals and vitamins found in large amounts in meat and dairy products are included.

Vitamin B<sub>12</sub>, found only in animal products may be lacking in the diet of strict vegetarians unless extra B<sub>12</sub> is obtained in a vitamin supplement, fortified soybean milk, or other soy products.

Riboflavin may be lower than usual. Select legumes, (dried peas and beans), whole grains, and vegetables carefully.

**Minerals.** Minerals are of concern for the vegetarian because larger amounts of food are necessary to supply enough minerals for good health. Calcium, the mineral needed for strong bones and teeth, is found mainly in dairy products. It is also seen in small amounts in dark green leafy vegetables, almonds, filberts, and dried peas and beans. If milk group foods are restricted in the diet, it is difficult to get enough calcium to meet the body’s needs. Fortified soybean milk can be used as a calcium supplement for individuals during growth periods such as childhood, teenage years, pregnancy, and lactation.

Another mineral of concern to the vegetarian is iron. The body needs iron because it is an important part of hemoglobin. Hemoglobin carries oxygen in the blood. Iron is better absorbed in the presence of Vitamin C. Red meats are an excellent source of iron. So when meat is not eaten, care must be taken in selecting other good sources of iron such as legumes, dark green leafy vegetables, some nuts and dried fruits, enriched cereals, and whole grains. These should be eaten with good sources of Vitamin C such as citrus products (oranges, tangerines, or grapefruits).

Zinc, another mineral, is also often low in the pure vegetarian diet. Nuts and beans are sources of zinc. Larger amounts of vegetables provide more fiber, which may cause less zinc to be absorbed.

### Red Meats Versus Vegetarianism

The choice of style of eating is up to the individual. Remember that red meats are excellent nutritive product providing protein, iron, B vitamins including B<sub>6</sub> and B<sub>12</sub>, and some fat to keep you from becoming hungry throughout the day. Without red meat, many strict or pure vegetarians risk Vitamin B<sub>12</sub> deficiency and anemia. Pure or strict vegetarians should consult a nutrition expert such as a dietitian to assist them in the careful planning of the diet. The strict vegetarian diet could lead to a nutrient deficiency if poorly planned. Refer to Chapter 7, “Let’s

Eat Red Meats” of your [4-H Red Meats Member Guide](#) for more details about the nutritive value of red meats. Red meats are a valuable source of important nutrients in your diet.

### Activity 1

Plan a strict vegetarian, ovo-lacto vegetarian, lacto vegetarian, and a nonvegetarian menu for a teenager.

### Activity 2

Take the menus for each of the four menus you planned in Activity 1. Look up the nutritive values in the [USDA Home and Garden bulletin](#). (Some of the trace elements or minerals such as zinc or vitamin B<sub>12</sub> are not listed. However, there is a “Food Sources of Additional Nutrients” helps to determine if meats provide these trace elements.)

### Activity 3

After studying this fact sheet, what information would you give to a friend who told you to join the “in-group” and become a vegetarian? Why or why not would you become a vegetarian?

### Activity 4

Look in the encyclopedia or in nutrition books under “vegetarian” diet or “vegetarianism.” What religions practice it? In what countries of the world is it popular? What are some of the meat substitutes the vegetarian uses? What are meat analogs?

### Activity 5

Write a paragraph about vitamin B<sub>12</sub> and its role in the diet. Use reference materials or discuss it with a doctor, nurse, or dietitian. Present your findings to your 4-H project group.

### Additional References

- Food and Nutrition Board, National Research Council: Vegetarian Diets. National Academy of Sciences, Washington D.C., 1974.
- Meat and Health Series, Number 2, “Meat and the Vegetarian Concept,” National Livestock and Meat Board, 444 North Michigan Avenue, Chicago, Illinois 60611.
- Nutritive Value of Foods, United States Department of Agriculture, Home and Garden Bulletin No. 72.
- Contact local county Extension office or 4-H website at <http://agweb.okstate.edu/fourh/>.