

NUTRITION—THE BASICS

Nutrition education is the backbone of this project. All the lessons place a strong emphasis on the health-promoting benefits of a diet rich in vegetables.

Familiarize yourself with this section, which contains basic nutrition information from the 2005 Dietary Guidelines for Americans and MyPyramid. This would be a good starting point for beginners.

MyPyramid



What is My Pyramid?

My Pyramid is an outline of what to eat each day based on the 2005 Dietary Guidelines for Americans. It's not a rigid prescription, but a general guide that lets you choose a healthful diet that's right for you.

My Pyramid - Vegetable Group

Why is it important to eat vegetables?

Eating vegetables provides health benefits — people who eat more fruits and vegetables as part of an overall healthy diet are likely to have a reduced risk of some chronic diseases. Vegetables provide nutrients vital for health and maintenance of your body.

Health benefits

- Eating a diet rich in fruits and vegetables as part of an overall healthy diet may reduce risk for stroke and perhaps other cardiovascular diseases.
- Eating a diet rich in fruits and vegetables as part of an overall healthy diet may reduce risk for type 2 diabetes.

- Eating a diet rich in fruits and vegetables as part of an overall healthy diet may protect against certain cancers, such as mouth, stomach, and colon-rectum cancer.
- Diets rich in foods containing fiber, such as fruits and vegetables, may reduce the risk of coronary heart disease.
- Eating fruits and vegetables rich in potassium as part of an overall healthy diet may reduce the risk of developing kidney stones and may help to decrease bone loss.
- Eating foods such as vegetables that are low in calories per cup instead of some other higher-calorie food may be useful in helping to lower calorie intake.

Nutrients

- Most vegetables are naturally low in fat and calories. None have cholesterol. (Sauces or seasonings may add fat, calories, or cholesterol.)
- Vegetables are important sources of many nutrients, including potassium, dietary fiber, folate (folic acid), vitamin A, vitamin E, and vitamin C.
- Diets rich in potassium may help to maintain healthy blood pressure. Vegetable sources of potassium include sweet potatoes, white potatoes, white beans, tomato products (paste, sauce, and juice), beet greens, soybeans, lima beans, winter squash, spinach, lentils, kidney beans, and split peas.
- Dietary fiber from vegetables, as part of an overall healthy diet, helps reduce blood cholesterol levels and may lower risk of heart disease. Fiber is important for proper bowel function. It helps reduce constipation and diverticulosis. Fiber-containing foods such as vegetables help provide a feeling of fullness with fewer calories.
- Folate (folic acid) helps the body form red blood cells. Women of childbearing age who may become pregnant and those in the first trimester of pregnancy should consume adequate folate, including folic acid from fortified foods or supplements. This reduces the risk of neural tube defects, spina bifida, and anencephaly during fetal development.
- Vitamin A keeps eyes and skin healthy and helps to protect against infections.
- Vitamin E helps protect vitamin A and essential fatty acids from cell oxidation.
- Vitamin C helps heal cuts and wounds and keeps teeth and gums healthy. Vitamin C aids in iron absorption.

Phytochemicals

- Phytochemicals (pronounced fight-o-chemicals) are chemicals found naturally in plants, including fruits and vegetables
- Fruits and vegetables that are bright in color usually have the most phytochemicals and nutrients

- There are thousands of known phytochemicals, but only a few have been studied in detail
- Research has shown that some phytochemicals may help reduce the risk of diseases such as heart disease, diabetes, hypertension and cancer
- Some phytochemicals act as antioxidants – protecting against certain types of cancers and heart disease
- There are several common types of phytochemicals:
 - Flavonoids (found in a broad range of fruits, vegetables and grains) and isoflavones (found in soy)
 - Carotenoids (found in orange, red and yellow fruits and vegetables)
 - Lycopene (found in tomatoes)
 - Allyl Sulfides (found in garlic and onions)
- Eating a diet rich in fruits and vegetables is the easiest way to increase phytochemicals in the diet

Vegetables are organized into 5 subgroups, based on their nutrient content. Some commonly eaten vegetables in each subgroup are:

Dark green vegetables	Orange vegetables	Dry beans and peas	Starchy vegetables	Other vegetables
bok choy broccoli collard greens dark green leafy lettuce kale mesclun mustard greens romaine lettuce spinach turnip greens watercress	acorn squash butternut squash carrots hubbard squash pumpkin sweet potatoes	black beans black-eyed peas garbanzo beans (chickpeas) kidney beans lentils lima beans (mature) navy beans pinto beans soy beans split peas tofu (bean curd made from soybeans) white beans	corn green peas lima beans potatoes	artichokes asparagus bean sprouts beets Brussels sprouts cabbage cauliflower celery cucumbers eggplant green beans green or red peppers iceberg (head) lettuce mushrooms okra onions parsnips tomatoes tomato juice vegetable juice turnips wax beans zucchini

How many vegetables are needed daily?

The amount of vegetables you need to eat depends on your age, sex, and level of physical activity. Recommended total daily amounts are shown in the chart below. Recommended weekly amounts from each vegetable subgroup are shown in the second chart.

Recommendation*		
Children	2-3 years old	1 cup
	4-8 years old	1 ½ cups
Girls	9-13 years old	2 cups
	14-18 years old	2 ½ cups
Boys	9-13 years old	2 cups
	14-18 years old	2 ½ cups
Women	19-30 years old	2 ½ cups
	31-50 years old	2 ½ cups
	51+ years old	2 cups
Men	19-30 years old	3 cups
	31-50 years old	3 cups
	51+ years old	2 ½ cups

*These amounts are appropriate for individuals who get less than 30 minutes per day of moderate physical activity, beyond normal daily activities. Those who are more physically active may be able to consume more while staying within calorie needs.

Vegetable subgroup recommendations are given as amounts to eat WEEKLY. It is not necessary to eat vegetables from each subgroup daily. However, over a week, try to consume the amounts listed from each subgroup as a way to reach your daily intake recommendation.

		Dark Green Vegetables	Orange Vegetables	Dry Beans and Peas	Starchy Vegetables	Other Vegetables
Amount Per Week						
Children	2-3 yrs old	1 cup	½ cup	½ cup	1 ½ cup	4 cups
	4-8 yrs old	1 ½ cup	1 cup	1 cup	2 ½ cup	4 ½ cups
Girls	9-13 yrs old	2 cups	1 ½ cup	2 ½ cups	2 ½ cups	5 ½ cups
	14-18 yrs old	3 cups	2 cups	3 cups	3 cups	6 ½ cups
Boys	9-13 yrs old	3 cups	2 cups	3 cups	3 cups	6 ½ cups
	14-18 yrs old	3 cups	2 cups	3 cups	6 cups	7 cups
Women	19-30 yrs old	3 cups	2 cups	3 cups	3 cups	6 ½ cups
	31-50 yrs old	3 cups	2 cups	3 cups	3 cups	6 ½ cups
	51+ yrs old	2 cups	1 ½ cups	2 ½ cups	2 ½ cups	5 ½ cups
Men	19-30 yrs old	3 cups	2 cups	3 cups	6 cups	7 cups
	31-50 yrs old	3 cups	2 cups	3 cups	6 cups	7 cups
	51+ yrs old	3 cups	2 cups	3 cups	3 cups	6 ½ cups

What counts as a cup of vegetables?

In general, 1 cup of raw or cooked vegetables or vegetable juice, or 2 cups of raw leafy greens can be considered as 1 cup from the vegetable group.

The chart below lists specific amounts that count as 1 cup of vegetables towards daily recommended intake:

	Amount that counts as 1 cup of vegetables	Amount that counts as ½ cup of vegetables
Dark-green Vegetables		
Broccoli	1 cup chopped or florets 3 spears 5'' long raw or cooked	
Greens (collards, mustard greens, turnip greens, kale) Spinach	1 cup cooked 1 cup, cooked 2 cups raw is equivalent to 1 cup of vegetables	1 cup raw is equivalent to ½ cup of vegetables
Raw leafy greens: Spinach, romaine, watercress, dark green leafy lettuce, endive, escarole	2 cups raw is equivalent to 1 cup of vegetables	1 cup raw is equivalent to ½ cup of vegetables
Orange Vegetables		
Carrots	1 cup, strips, slices, or chopped, raw or cooked 2 medium carrots 1 cup baby carrots (about 12)	1 medium carrot About 6 baby carrots
Pumpkin	1 cup mashed, cooked	
Sweet Potato	1 large baked (2 ¼'' or more diameter) 1 cup sliced or mashed, cooked	
Winter squash (acorn, butternut, hubbard)	1 cup cubed, cooked	¼ acorn squash, baked = ¾ cup
Dry Beans and Peas		
Dry beans and peas (such as black, garbanzo, kidney, pinto or soy beans, or black eyed peas or split peas)	1 cup whole or mashed, cooked	
Tofu	1 cup ½'' cubes (about 8 oz)	1 piece 2 ½'' x 2 ¾'' x 1'' (about 4 oz)
Starchy Vegetables		
Corn, yellow or white	1 cup 1 large ear (8'' to 9'' long)	1 small ear (about 6'' long)
Green peas	1 cup	
White potatoes	1 cup diced, mashed 1 medium boiled or baked potato (2 ½'' to 3'' diameter) French fried: 20 medium to long strips (2 ½'' to 4'' long) (contains discretionary calories)	
Other Vegetables		
Bean sprouts	1 cup cooked	
Cabbage, green	1 cup, chopped or shredded raw or cooked	
Cauliflower	1 cup pieces or florets raw or cooked	
Celery	1 cup, diced or sliced, raw or cooked 2 large stalks (11'' to 12'' long)	1 large stalk (11'' to 12'' long)
Cucumbers	1 cup raw, sliced or chopped	
Green or wax beans	1 cup cooked	

Green or red peppers	1 cup chopped, raw or cooked 1 large pepper (3'' diameter, 3 3/4'' long)	1 small pepper
Lettuce, iceberg or head	2 cups raw, shredded or chopped = equivalent to 1 cup of vegetables	1 cup raw, shredded or chopped = equivalent to 1/2 cup of vegetables
Mushrooms	1 cup raw or cooked	
Onions	1 cup chopped, raw or cooked	
Tomatoes	1 large raw whole (3'') 1 cup chopped or sliced, raw, canned, or cooked	1 small raw whole (2 1/4'') 1 medium canned
Tomato or mixed vegetable juice	1 cup	1/2 cup
Summer squash or zucchini	1 cup cooked, sliced or diced	

Source: My Pyramid, United States Department of Agriculture, Washington, DC. U.S. Department of Agriculture

For more information, visit www.mypyramid.gov.

Go easy on the fat you add to vegetables at the table or during cooking. Added spreads or toppings, such as butter, mayonnaise, and salad dressing, count as fat. Use low-fat salad dressing.

THE FOUR MOST POPULAR VEGETABLES IN AMERICA:

- Iceberg lettuce
- Potatoes
- Tomatoes
- Onions

HOW AMERICANS EAT THEM:

