

# Broccoli

## Grow

Broccoli is a cruciferous vegetable, which grows as florets (clusters of flower buds) on stalks (stems). It is a member of the cabbage family.<sup>1</sup>

Broccoli originated in the Mediterranean more than 2,000 years ago. It can still be seen growing wild along the coast. Italian seeds were planted in California in 1923 and sprouted broccoli cultivation in the United States. Today, broccoli is grown in every state. California is the leading producer.<sup>1,2</sup>

Broccoli is a cool season vegetable that must be grown in the spring or fall. Plant the first crop mid-February through mid-April and again early August through mid-September.<sup>3</sup>

Broccoli grows on a stem (which is also edible) with one large head that will grow in the center. Broccoli will continue to produce side shoots that can be harvested after the center head. Harvest broccoli before the green buds begin to open up into tiny yellow flowers.<sup>3</sup>

**Fun Fact:** When you are eating broccoli, you are eating hundreds of tiny flower buds.<sup>3</sup>

## Choose

### *Oh, Broccoli!*

Choose raw broccoli with firm, compact clusters of small flower buds, dark green, purplish or bluish green. Do not choose if yellow, dark green or sage green with purple cast are visible. Stalks should be firm and light green, about 5 inches long. Thick stems, open bud clusters, and yellow color are signs of poor quality.<sup>1,4</sup>

Broccoli is sold in frozen form as spears or stalks (3 to 6 inches), florets (1 to 3 inches), cut (½ to 2 inch pieces) chopped (¾ inch or less), and pieces.<sup>4</sup>

**Fun Fact:** The name broccoli comes from the Latin word *brachium*, which means branch or arm.<sup>1</sup>



## Store

Temperature fluctuations can cause rapid deterioration. Store fresh broccoli immediately in the coldest section of the refrigerator (32-36°F). Mist lightly with water. Do not wash or soak until ready to serve. Storage maximum is 5 days. Use on a first-in, first-out basis.

Bags of broccoli florets should be kept sealed until ready to use. Handle carefully to maintain an air-tight seal to maximize storage time.<sup>4</sup>

**Fun Fact:** Did you know broccoli has calcium? Calcium helps us build strong bones and teeth, our muscles contract and heart beat, and our blood clot if we are bleeding.<sup>1,5</sup>

## Use

There are many varieties of broccoli. In the United States, the most common type of broccoli is the *Italian Green Sprouting* variety.<sup>1</sup>

Broccoli can be eaten raw or cooked. It can be offered by itself as a snack, with a dip of lowfat yogurt or dressing, or mixed into a salad. It can be steamed, stir fried or added to casseroles, soups, or stews.<sup>1</sup>

Trim the ends and stalks of raw broccoli. Cut florets into even sized pieces. Peel the broccoli stalks and cut into pieces. Wash broccoli under clean, running water.

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## Teach

### **Brocco Bunch**

Broccoli, broccolini, broccoli rabe, brocco flower....All are cruciferous vegetables from the cabbage family. What is the difference?

Broccolini, or baby broccoli, is a hybrid of broccoli and gai lan, also called Chinese broccoli, Chinese kale or kailaan. It has longer tender stalks, small florets and subtle sweet flavor with a peppery kick.<sup>6</sup>

Broccoli rabe, or rapini, has edible leaves, buds and stems. The buds partially resemble broccoli, but do not form a large head.<sup>7</sup>

Broccoflower can be used to describe two different, but similar, vegetables produced through cross-pollination of broccoli and cauliflower. One broccoflower has a head that looks like cauliflower but is lime green. The other is called Romanesco broccoli, which has a unique fractal pattern on top, resembling small trees.<sup>8</sup>

**Fun Fact:** Broccoli has lutein which may help maintain healthy vision.<sup>5</sup>

### **Class Activity**

#### **Materials Needed:**

- Broccoli
- Broccolini
- Broccoflower
- Romanesco broccoli

#### **Steps:**

1. Compare and contrast the vegetables. Explain the differences to students.
2. Discuss how students may have tried the vegetables.
3. Have students research the nutrients in and benefits of broccoli, in particular cancer fighting, and present their findings.

**Fun Fact:** Broccoli is a cruciferous vegetable. Its flowers have four petals that resemble a Greek cross.<sup>7</sup>

## Eat

Broccoli is free of cholesterol and low in fat and sodium. One cup provides over 100 percent of our daily vitamin C requirement. Vitamin C helps form collagen to hold muscles, bones and tissues together, protects us from infections and bruising, aids in healing, keeps our gums healthy, helps our body absorb iron and folate from plants, and acts as an antioxidant to prevent cell damage. Broccoli is rich in vitamin K, which is important for blood clotting. Vitamin K helps our body make proteins needed for our blood, bones and kidneys. Broccoli also has folate, beta carotene, vitamin A, manganese, potassium, and fiber. Pregnant women need to get enough folate every day. Our body needs folate for blood cell, DNA and genetic development. Our bodies can turn beta carotene into vitamin A. Vitamin A protects us from infection, helps regulate the immune system, promotes normal vision, and supports the growth and health of cells and tissue. Manganese plays an important role in forming bone and converting carbohydrate, protein and fat into energy. Potassium helps regulate fluids and mineral balance, maintain normal blood pressure, transmit nerve signals and contract muscles. Insoluble fiber helps with digestion. Soluble fiber helps lower blood cholesterol. Broccoli also has antioxidants, quercetin and sulforaphane.<sup>1,2,5</sup>

**Fun Fact:** Florets are richer in beta-carotene than stalks.<sup>1</sup>

## Find

For more broccoli info and resources, visit:

1. <http://lanaster.unl.edu/nep/fruitveggie.shtml>
2. [www.agmrc.org](http://www.agmrc.org)
3. [www.ces.ncsu.edu](http://www.ces.ncsu.edu)
4. [www.fns.usda.gov/tn/fruits-vegetables-galore-helping-kids-eat-more](http://www.fns.usda.gov/tn/fruits-vegetables-galore-helping-kids-eat-more)
5. [www.eatright.org](http://www.eatright.org)
6. <http://agsyst.wsu.edu/broccolini.html>
7. [www.usda.gov](http://www.usda.gov)
8. <http://farmersalmanac.com>