

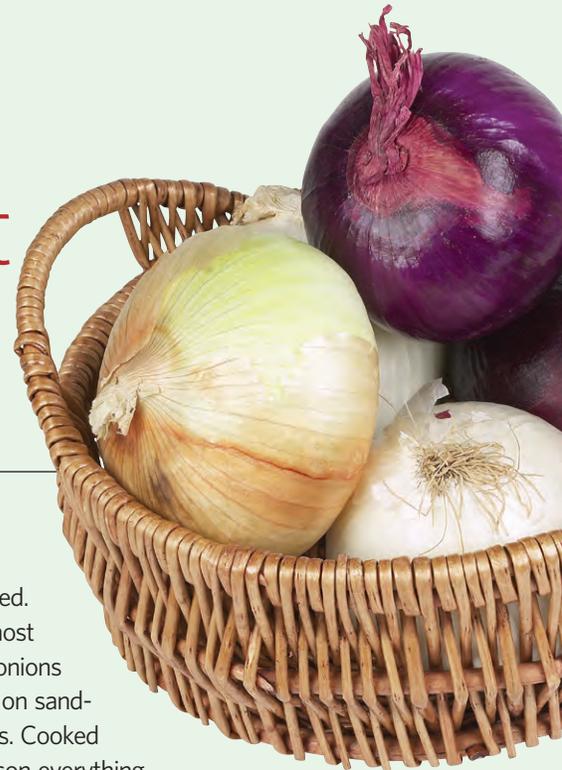
Onions

Volume 1 • Number 9

What's Inside

- ▷ What's So Great about Onions?
- ▷ Selecting and Storing Onions
- ▷ Varieties of Onions
- ▷ Fitting Onions into MyPyramid
- ▷ Recipe Collection
- ▷ Grow Your Own Onions
- ▷ Activity Alley

What's So Great about Onions?



Rich in Vitamins and Minerals

Onions are a source of vitamin C and dietary fiber. As a vegetable, onions are low in fat and calories. Onions are rich sources of a number of phytonutrients. These phytonutrients have been found to act as antioxidants to lower blood pressure and prevent some kinds of cancer.

Flavorful and Colorful

Onions can be red, yellow, green, or white. The taste of onions does not depend on the color. Onions can be sweet or savory.

Easy to Use

Onions can be sliced, chopped, diced, or grated. They mix well with almost any type of food. Raw onions are great in salads and on sandwiches and hamburgers. Cooked onions are used to season everything from soups, stews, meats, beans, potatoes to other vegetable dishes.

Selecting and Storing Onions

At the Market

Onions are available year-round. Buy them fresh, dried or frozen. Look for hard, firm onions. Onions should be dry and have small necks. The skin around the onions should be shiny and crackly in feel.



Avoid

Onions with wet or very soft necks. Also avoid onions with thick, hollow, woody centers in the neck or with fresh sprouts.

Storage

Store dried onions in a cool, dry place. Dry onions will last for 3 to 4 weeks. Store fresh onions in the refrigerator. Fresh onions will last for about a week.

Why is Vitamin C Important?

Vitamin C, also known as ascorbic acid, is needed for growth and repair of body tissue. Vitamin C helps to form collagen, a protein used to make skin, scar tissue, and blood vessels. Vitamin C is also needed for cartilage, bones, teeth and healing wounds. Onions are a good source of vitamin C.



Varieties of Onions

There are more than 500 varieties of onions. Onions can be put into two groups, dried and fresh. Dried or storage onions are good in cooked dishes. Dried onions are good in dishes that need strong flavors. Dried onions are added to many dishes. Casseroles, quiche, pasta sauces, soups, stews, and pizza are common uses. Fry, sauté, or bake dried onions. Dried onions can also be creamed or baked.

Yellow Onions >> An onion that has a golden brown, papery skin. Use in recipes that call for cooked onions. When sautéed, yellow onions turn a dark brown color. Yellow onions have a high sulfur content. The high sulfur content makes yellow onions too strong to eat raw. The sulfur is also what creates tears when chopping. This variety is good for caramelizing.

Red Onions >> An onion variety that has purple red skin and white rings of flesh. Red onions are medium to large in size. The flavor is mild and sweet. The texture is crisp. Red onions are good to eat raw. They are used to add color to dishes. They can also be grilled or lightly cooked with other foods.

White Onions >> A globe shaped onion. White onions have white flesh and white skin. White onions are sweeter than yellow onions. Yet, white onions can often be used in place of yellow onions in recipes. This variety has a clean, sharp flavor and firm texture. White onions can add a sweet flavor to other foods. They can be eaten raw. White onions are good in heated dishes, sautéed or as a side dish.

Vidalia >> Mildly sweet in flavor, vidalia onions have a yellow to tan outer skin and white flesh. They are available from April to June. If stored in a cool dry place, Vidalias can last up to 6 months. The Vidalia variety is from Vidalia, Georgia.

Pearl Onions >> A mild sweet-flavored onion with a crisp texture. Pearl onions are actually young onions. They are available as white, red, or yellow onions. This variety is often roasted with meat, or added to soups, stews, and vegetable dishes.

Shallots >> Pear-shaped bulbs that grow in a cluster. Shallots are like garlic except the bulbs are attached at the roots. The shallot has a light flesh with some purple or

green. Their flavor is mild. Shallots should not be browned. Browning causes them to become bitter. Grate shallots instead of mincing or finely dicing. Grating requires only half of the amount of minced shallot required for a recipe.

Garlic >> Many people don't know that garlic belongs to the onion family. Garlic can be found in white, pink or purple varieties. When used raw, garlic is slightly bitter. But when sautéed or baked, it becomes mild and sweet. Garlic powder can be substituted for fresh. An eighth of a teaspoon of garlic powder is equal to one medium fresh clove of common garlic.

Fresh onions contain more moisture than dried onions. Fresh onions are sweet and mild. They can be eaten raw. They are good when added to salads, hamburgers, and other sandwiches. They can also be used in dishes where they require light cooking. Fresh onions can be grilled or roasted.

Spring onions >> A young onion. Spring onions can be green, purple, or yellow. Its name refers to its freshness. They have a white base that has not yet grown into a bulb. Long, straight, green tubular leaves create its shape. It is also commonly referred to as salad onions, green onion, and scallions.

Scallions >> Scallions are different than green onions. Green onions can be any young variety of onions. Scallions have a milder flavor than spring onions. The bulb end of the scallion has straight sides and does not form a rounded bulb.



Preparation Tips

Peeling

Cut off the top (stem) and bottom (root). Peel the papery outer layers of skin with a knife. To remove the skin without a knife, place onions in boiling water for a minute. This will loosen the skin. To prevent crying while chopping, chill onions in the refrigerator for a few hours. Use fresh or cooked.

Sautéing and Caramelizing

Slice or chop onions. Place in oil or butter until soft. Keep the heat low. Stir constantly. If the onions begin to brown too quickly, reduce the heat. And add 1 to 2 tablespoons of water. To caramelize onions for a richer flavor, continue sautéing until the onions brown. Sautéing time is about 5 to 10 minutes. Caramelizing cooking time is about 30 minutes.

Microwaving

Peel onions. Cut into desired size. Put in a covered dish with a small amount of water or stock. Cooking time depends on size of onions. Cooking time is 5 to 10 minutes.

Baking

Use whole, unpeeled onions. Cut off the root ends. Prick with a fork. Place in a baking pan lightly coated with nonstick spray. Or, peel the onions, pierce them, and wrap in foil. Cook in a 350°F to 375°F oven. Test for doneness by pressing the onions. The onions should give without feeling mushy. Cooking times for medium-sized onions is 45 to 60 minutes.

Boiling

Boiling works best with whole and half onions. but also works for sliced onions. Depending on size, cooking time is 10 to 35 minutes.

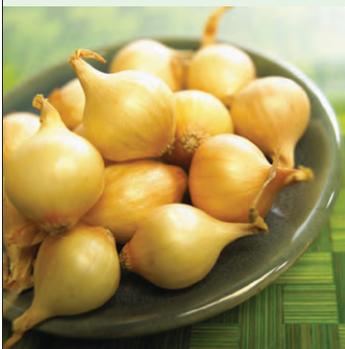


Why do onions make you cry?



When onions are cut, sulfur-containing gas called the lachrymatory factor, is released. The gas spreads in the air and comes into contact with your eyes. The lachrymatory factor activates the nerves in the eyes. The nerves send signals to your brain. Your brain activates your gland that releases tears, causing you to cry.

Fitting Onions into MyPyramid



The **GREEN** triangle of MyPyramid is the vegetable section. Vegetables may be raw or cooked; fresh, frozen, or canned. Age, gender, and level of physical activity determine the daily vegetable need. For a 2000 calorie diet, it is recommended having about 2 ½ cups of vegetables daily. For more information on vegetable serving sizes go to www.mypyramid.gov. Two slices of onion are equal to about ¼ cup of other vegetables.

Nutrition Facts

1 cup chopped Onion

Amount Per Serving		% Daily Value*	
Calories	20	Calories from Fat	2
Total Fat	0g		0%
Saturated Fat	0g		0%
Cholesterol	0mg		0%
Sodium	12mg		1%
Total Carbohydrate	4g		1%
Dietary Fiber	1g		5%
Sugars	2g		
Protein	2g		
Vitamin A	5%	Vitamin C	35%
Calcium	2%	Iron	2%

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs.

NutritionData.com

Recipe Collection

Pico de Gallo

Makes 6 servings

INGREDIENTS

- 1 pound chopped ripe tomatoes
- 1 1/2 cups chopped onion
- 1/3 cup chopped, fresh cilantro
- 3 seeded and chopped jalapeno peppers
- 2 Tablespoons lime juice
- 2 minced garlic cloves
- 1/4 teaspoon salt

Estimated cost: Per Recipe: \$2.34
Per Serving: \$0.39

INSTRUCTIONS

1. Combine all ingredients in a medium bowl.
2. Serve immediately or cover and refrigerate for up to 3 days.

Note: Use to season meals or serve with whole grain tortilla chips.

Beans and Rice

Makes 4 servings

INGREDIENTS

- 1 teaspoon olive oil
- 1 Tablespoon minced garlic
- 1 cup chopped onion
- 1 cup diced green bell pepper (frozen or fresh)
- 3 cups black beans, cooked or canned
- 2 cups chicken broth, low sodium
- 1 Tablespoon vinegar
- 1/2 teaspoon dried oregano
- black pepper to taste
- 3 cups brown rice, cooked

Estimated cost: Per Recipe: \$3.44
Per Serving: \$0.86

INSTRUCTIONS

1. Heat the olive oil in a large nonstick skillet
2. Sauté the garlic, onion, and green bell pepper in the olive oil until golden
3. Stir in the beans, broth, vinegar and seasoning
4. Bring to a boil. Then lower to a simmer
5. Cook covered for 5 minutes
6. Spoon over cooked rice.
7. Serve while hot

Hearty Vegetable Salad

Makes 6 servings

INGREDIENTS

- 1 1/2 cups brown rice, uncooked
- 3 cups water
- 1/2 cup lemon juice
- 3 green onions (or scallions)
- 1/4 cup minced parsley
- 1/2 teaspoon salt black pepper to taste
- 1/4 cup olive oil or other vegetable oil
- 1 1/2 cups of your favorite vegetables cut into small pieces

Estimated cost: Per Recipe: \$2.23
Per Serving: \$0.37

INSTRUCTIONS

1. Wash rice and put into a 2-quart pot with water. Bring to boil. Lower heat to simmer. Cook uncovered until all the water is absorbed. (about 45 minutes)
2. Pour rice into medium sized bowl. Allow to cool.
3. Pour lemon juice over rice and stir. When rice is cooled, add the other ingredients
4. Stir and chill at least 1 hour. This dish also can be served warm.

Nutrition Facts

1/2 cup Pico de Gallo

Serving Size (130g)		Servings Per Container	
Amount Per Serving			
Calories 35	Calories from Fat 0		
	% Daily Value*		
Total Fat 0g			0%
Saturated Fat 0g			0%
Cholesterol 0mg			0%
Sodium 105mg			4%
Total Carbohydrate 8g			3%
Dietary Fiber 2g			8%
Sugars 4g			
Protein 1g			
Vitamin A 15%		Vitamin C 30%	
Calcium 2%		Iron 2%	
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:			
	Calories	2,000	2,500
Total Fat	Less Than	65g	80g
Saturated Fat	Less Than	20g	25g
Cholesterol	Less Than	300mg	300 mg
Sodium	Less Than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g
Calories per gram:			
	Fat 9	Carbohydrate 4	Protein 4

Nutrition Facts

1 1/2 cup Beans and Rice

Serving Size (456g)		Servings Per Container	
Amount Per Serving			
Calories 390	Calories from Fat 40		
	% Daily Value*		
Total Fat 4.5g			7%
Saturated Fat 1.0g			5%
Cholesterol 0mg			0%
Sodium 65mg			3%
Total Carbohydrate 72g			24%
Dietary Fiber 15g			60%
Sugars 4g			
Protein 17g			
Vitamin A 4%		Vitamin C 50%	
Calcium 8%		Iron 20%	
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:			
	Calories	2,000	2,500
Total Fat	Less Than	65g	80g
Saturated Fat	Less Than	20g	25g
Cholesterol	Less Than	300mg	300 mg
Sodium	Less Than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g
Calories per gram:			
	Fat 9	Carbohydrate 4	Protein 4

Nutrition Facts

3/4 cup Vegetable Salad

Serving Size (268g)		Servings Per Container	
Amount Per Serving			
Calories 300	Calories from Fat 90		
	% Daily Value*		
Total Fat 11g			17%
Saturated Fat 1.5g			8%
Cholesterol 0mg			0%
Sodium 230mg			10%
Total Carbohydrate 47g			16%
Dietary Fiber 4g			16%
Sugars 3g			
Protein 6g			
Vitamin A 90%		Vitamin C 30%	
Calcium 4%		Iron 8%	
*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:			
	Calories	2,000	2,500
Total Fat	Less Than	65g	80g
Saturated Fat	Less Than	20g	25g
Cholesterol	Less Than	300mg	300 mg
Sodium	Less Than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g
Calories per gram:			
	Fat 9	Carbohydrate 4	Protein 4

Grow Your Own Onions

Start seeds indoors. Plant seeds 8 to 10 weeks before the last frost. Keep the plants inside. Choose an area that gets at least 6 hours of sun a day. Onions need soil that is well-drained but holds moisture. Plant at least 8 inches deep. This allows the bulb enough space to grow. Move plants outside 2 to 3 weeks before the last frost. Plant onions deeper than they were growing in their pots. Space them 2 to 6 inches apart. Larger bulbs will need more space.

Weed often. Be careful not to pull out the onion roots. Cover bulbs lightly if they start pushing out of the ground.

The exposed tops are might get sun-burned. This will affect the taste of the onion. Provide about an inch of water a week. Do this until the tops begin to fall over or turn yellow. This is a sign that the bulbs are reaching maturity. Then stop watering. Start harvesting scallions, or green onions, when the tops are about 6 inches tall. The larger the plants grow, the stronger their flavor. Begin pulling onion bulbs as soon as they're large enough to use. For more information, contact your local Cooperative Extension Educator in the phone book or at <http://www.extension.psu.edu/>

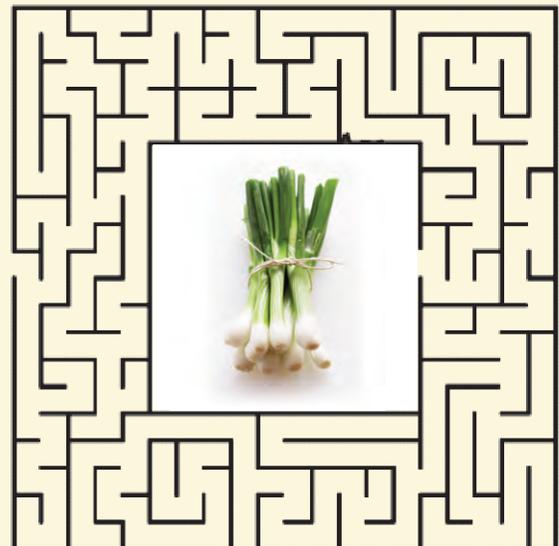


ACTIVITY ALLEY

Spring Onion Maze



Directions: Help the Spring Onion get safely to the plate.



ACTIVITY ALLEY

How Much Do You Know About Onions

Directions: Answer the clues to test how much you know about Onions.

1. Which is not a general "color" class that onions fall under?

- a. Blue
- b. Yellow
- c. White

2. Onions and garlic are good sources of

- a. Calcium
- b. Fat
- c. Phytonutrients

3. How much does an average American consume of fresh and processed onion a year?

- a. 21 pounds
- b. 7 pounds
- c. 35 pounds

4. If you sauté onions until they are a rich, dark brown color, you are

- a. Baking
- b. Caramelizing
- c. Braising

5. What is the name of the chemical that is released from a gaseous sulfur when you cut an onion, causing you to cry?

- a. Allieae
- b. Lachrymatory factor
- c. Oxygen

6. Varieties of onions need different amounts of light to grow. Varieties are grouped by day length: short, long and intermediate. Where do you find this information?

- a. On an onion at the market
- b. In the mail
- c. On the seed package

7. Which section of MyPyramid is for vegetables?

- a. Green
- b. Orange
- c. Red

8. When purchasing onions, look for

- a. Discoloration
- b. Shiny and crackly skin
- c. Watery spots

9. Allicin is an antioxidant. It is formed when

- a. You cook onions
- b. Garlic bulbs are crushed chopped or chewed
- c. While onions are growing

10. Do you eat garlic?

- a. Often
- b. Once in a while
- c. Never



Your Score

0-3 correct

Onions and Garlic are great sources of vitamins and minerals and low in calories. Onions and Garlic are easy to use. Onions and Garlic add great flavor to any dish. If you scored 0-3, try to include onions in a dish. If you scored 0-3, try to include onions in a dish this week. Top a hamburger with onions, or use them to add flavor to a steak dinner.

4-6 correct

Good job! Onions are one of the highest used vegetables in the U.S. Onions are low in fat. Garlic comes in a variety of flavors. If you scored 4-6, try to include garlic in your dish tonight. You can even sauté your garlic and your onions. Or you could chop up some raw onions to add them to a salad.

7-10 correct

Wonderful! You scored 7-10. Onions are a good source of vitamin C. Whether you like sweet or spicy, onions can fit into almost any dish. Try new things, and try to add onions and garlic more often to your meals.

References

Pennsylvania Nutrition Education Tracks, Pennsylvania State University, Cooperative Extension, State College, Pennsylvania, 2007.

P. Basiotis, A. Carlson, S. Gerrior, W. Juan, and M. Lino, The Healthy Eating Index 1999-2000, CNPP-12, Center for Nutrition Policy and Promotion, USDA, December 2002.

Prior, R. L. Fruits and Vegetables in the Prevention of Cellular Oxidative Damage, American Journal of Clinical Nutrition, 2003; 78, (Supplement) 570S-8S.

Nutrition for Everyone: Eat Your Fruits and Vegetables, Division of Nutrition , Physical Activity and Obesity, National Center for Chronic Disease Prevention and Health Promotion, Center for Disease Control and Prevention: May 2008.

2005 Dietary Guidelines for Americans, Center for Nutrition Policy and Promotion , US Department of Agriculture.

Krebs-Smith, S. M. and others. Fruits and Vegetable Intakes of Children and Adolescents in the United States, Archives of Pediatrics and Adolescent Medicine. Volume 50, Number 1, January 1996.

Krebs-Smith, S.M. and others. Choose a Variety of Fruits and Vegetables Daily: Understanding the Complexities, Journal of Nutrition. 2001; 131; 487S-501.

Gillman, H. Enjoy Your Fruits and Vegetables, British Medical Journal. 1966; 313, 765-766.

Hung, H.C. and others. Fruits and vegetables Intake and Risk of Major Chronic Disease, Journal of National Cancer Institute. 2004; 96: 1577-84.

Krinsky, N.I. Biologic Mechanisms of the Protective Roll of Lutein and Zeaxanthin in the Eyes, Annual Review of Nutrition. 2003; 23: 171-201.

Christen, W. G. and others. Fruit and Vegetable Intake and the Risk of Cataracts in Women, American Journal of Clinical Nutrition. 2005; 81: 1417-22.



**Center for Nutrition,
Diet and Health**

Cooperative Extension Service
University of the District of Columbia
4200 Connecticut Ave. NW
Washington, DC 20008
(202) 274-7115



DC Supplemental Nutrition Assistance Program-Education. This material was funded by USDA's Supplemental Nutrition Assistance Program (SNAP). SNAP provides nutrition assistance to people with low income. It can help buy nutritious foods for a better diet. To find out more contact the Income Maintenance Administration at 202-724-5506 to help identify how to get services.

In cooperation with the U.S. Department of Agriculture and District of Columbia Government, Cooperative Extension Service and Agricultural Experiment Station programs and employment opportunities are available to all people regardless of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, marital status or family status. In accordance with Federal law and U.S. Department of Agriculture's policy, this institution is prohibited from discriminating on the basis of race, color, national origin, sex, age, religion, political beliefs or disability.

To file a complaint of discrimination, write USDA, Director of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue, SW, Washington, D.C. 20250 or call (202) 720-5694 (voice and TDD). USDA is an equal opportunity provider and employer.