MUSHROOMS

Ingredient of the Month

Presented by ACFEF Chef & Child Foundation and Clemson University
Mushrooms have long been revered as a powerful source of nutrients. Often grouped with vegetables, mushrooms provide many of the nutritional attributes found in produce, as well as those found in meat, beans and grains. Mushrooms are low in calories, are fat-free, cholesterol-free and are low in sodium, yet they provide important nutrients such as selenium, potassium, riboflavin, niacin and vitamin D. Mushrooms are also low in calories. It’s because of this, combined with their high nutritional content, that they are a great, healthy food to eat.

Found in nature, mushrooms are a spore-forming fungus. These fungi are used throughout all manners of cooking and give dishes a “meaty” taste due to their high amino acid content. Early Greeks and Romans are thought to be among the original mushroom cultivators. Today, China is said to be the largest producer of safe-to-eat mushrooms. There are thousands of varieties of cultivated and wild mushrooms all over the world, with more than 3,000 in North America alone. They can be found in fresh, dried, and even powdered form. Due to the fact that mushrooms are not photosynthetic, they can grow on farms year-round. However, fall and winter are considered peak seasons.

Healthy ingredient contribution

B VITAMINS play an important role in the nervous system. Unlike most other vegetables, mushrooms are a good source of B vitamins, including riboflavin, niacin and pantothenic acid, which helps provide energy by breaking down proteins, fats and carbohydrates.

SELENIUM is a mineral that works as an antioxidant to protect body cells from damage that might lead to heart disease, some cancers and other diseases of aging. Many foods of animal origin and grains are good sources of selenium, but mushrooms are among the richest sources of selenium in the produce aisle, making them an especially valuable source of selenium for vegetarians.

ERGOTHIONEINE is a naturally occurring antioxidant that may help protect the body’s cells.

COPPER is an important mineral because of its heart protection properties. It helps make red blood cells that carry oxygen throughout the body. Copper also helps keep bones and nerves healthy.

POTASSIUM is an important mineral used in the maintenance of normal fluid and mineral balance, which helps control blood pressure. It also plays a role in making sure nerves and muscles, including the heart, function properly.

BETA-GLUCANS, found in numerous mushroom species, have shown marked immunity-stimulating effects, contribute to resistance against allergies and may also participate in physiological processes related to the metabolism of fats and sugars in the human body. Beta-glucans contained in oyster, shiitake and split gill mushrooms are considered to be the most effective.

VITAMIN D helps build and maintain strong bones by helping the body absorb calcium. It is available through diet, supplements and sunlight, which is why it is also referred to as the “sunshine vitamin.” Mushrooms are the only natural source of vitamin D in the produce aisle and one of the few non-fortified food sources.

Varieties and uses

There are many types of mushrooms. Here’s a look at the most common varieties used in the food industry:

- **Beech**: Beech mushrooms are petite, with either white or light-brown caps. They offer a crunchy texture, and have a mild, sweet and nutty flavor that complements chicken and fish dishes.
- **Crimini**: Crimini mushrooms, also known as “baby bellas,” are similar in appearance to white button mushrooms, but have a tan cap coloring. They have a firmer texture and hearty taste that pairs well with beef, gamey meats and vegetables.
- **Enoki**: Enoki are small mushrooms with long, spindly stems that are frequently used raw in salads and sandwiches.
- **Maitake**: Maitake, or “hen of the woods” mushrooms, appear rippled and fan-shaped, without caps. They have a distinct aroma and woody taste that adds a rich mushroom flavor to any dish.
- **Oyster**: Oyster mushrooms are velvety in texture and can be gray, pale yellow or even blue. They have a light, meaty flavor that pairs well with meats, primarily steak or beef.
- **Portobello**: Portobello mushrooms are a larger relative of crimini, with brown caps that can measure up to six inches in diameter. They can be grilled, broiled or roasted. Due to their large size and meat-like flavor and texture, they can be used as a vegetarian alternative to meat.
- **Shiitake**: Shiitake mushrooms have brownish, broad, umbrella-shaped caps with tan gills and curved stems. They have a meaty texture that turns to a woody flavor when cooked. These mushrooms add a meaty flavor to whatever ingredients they are paired with.
- **White button**: White button mushrooms represent about 90 percent of the mushrooms consumed in the U.S. Eaten alone, they have a mild taste, but this variety blends well with just about any food.
- **Wild**: Morels, truffles and chanterelles are prized wild varieties of mushrooms; however, there are also thousands of inedible and poisonous mushrooms that often resemble non-poisonous ones. Therefore, it is important to only purchase wild varieties from a trusted retailer.
MASHED POTATO-STUFFED MUSHROOMS WITH MUSHROOM SAUCE

Yield: 6 servings (serving size: 2 stuffed mushrooms)

Ingredients:

Cooking spray, as needed
1 (16-oz.) package large white mushrooms, stemmed
1 lb. small white potatoes
¼ cup buttermilk
2 garlic cloves, minced
1 T. chopped chives
¼ t. salt
1 T. unsalted butter
1 T. olive oil

1 (8-oz.) packaged baby portabella mushrooms, sliced
1 cup low-sodium beef broth
2 T. cold water
1 T. all-purpose flour
1 T. red wine vinegar
¼ t. salt (optional)
¼ t. freshly ground black pepper

Method:

Preheat oven to 400°F. Coat 11x7-inch baking dish with cooking spray. Arrange white mushrooms in dish, cap sides down. Bake mushrooms for 15 minutes. Remove from oven; set aside. Bring large pot of water to a boil over high heat. Add potatoes; boil for 10-15 minutes or until tender. Drain; mash in large bowl. Mix mashed potatoes with buttermilk, garlic, chives and salt until smooth. Spoon into mushroom caps. Bake for 15 minutes or until mushrooms are tender. Make sauce: Melt butter and olive oil in sauté pan over medium-high heat. Add portabella mushrooms; cook 3-5 minutes, stirring occasionally until softened. Add beef broth; simmer until slightly reduced, about 5 minutes. In small mixing bowl, combine cold water and flour; whisk until smooth. Stir in flour mixture. Add vinegar; season with salt and pepper. Simmer until thickened, about 1 minute. Pour sauce over mashed potato-stuffed mushroom caps. Serve immediately.

Nutrition Information

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Calories:</td>
<td>140</td>
<td>Fiber:</td>
</tr>
<tr>
<td>Fat:</td>
<td>5g</td>
<td>Protein:</td>
</tr>
<tr>
<td>Sat. Fat:</td>
<td>2g</td>
<td>Vitamin A:</td>
</tr>
<tr>
<td>Carbs:</td>
<td>19g</td>
<td>Vitamin C:</td>
</tr>
</tbody>
</table>

Contributions to this article were made by Darrin Sorenson.

INGREDIENT OF THE MONTH

Serving size

Although the breakdown may fluctuate slightly according to the variety, in general, a half cup of raw white mushroom pieces consists of 8 calories, 1.8 grams of protein, 0.1 gram of fat, 2 milligrams of sodium and no cholesterol.

This recipe was tested by Clemson University’s Culinary Nutrition Undergraduate Student Research Group.