

EGGS

Ingredient of the Month

Presented by ACFEF Chef & Child Foundation
and Clemson University



Some age-old questions will remain unanswered. For example, which came first—the chicken or the egg? Regardless, eggs have long been an important food source in many cultures. Egyptian and Chinese records show that domesticated fowl were laying eggs for man in 1400 B.C. Europe has had domesticated hens since 600 B.C. While there is some evidence of native fowl in the Americas prior to Columbus' arrival, it is believed that, on his second trip to the New World in 1493, Columbus' ships carried the first chickens related to those now in egg production. These strains originated in Asia.

Chicken eggs are the most widely consumed eggs of any bird worldwide, though those from other fowl—including duck, goose and quail—are also available. Although nearly 200 breeds and varieties of chickens have been established worldwide, only a few breeds are used as egg producers for economic purposes. Most laying hens in the United States are Single-Comb White Leghorns. The U.S. produces about 75 billion eggs a year, which is about 10 percent of the world supply.

Because of their high protein content, low cost and ready availability, eggs, particularly chicken eggs, are an excellent food source. They are also loaded with vitamins and minerals and do not contain as much cholesterol as was once feared. In fact, the United States Department of Agriculture (USDA) recently reviewed the nutrient composition of standard large eggs and discovered the average amount of cholesterol in one large egg is 185 milligrams (mg), a 14 percent decrease from previous estimates.

Besides being exceptionally nutritious, eggs are also extremely versatile and can be served alone or as ingredients in a prepared dish. Eggs are used to provide texture, flavor, structure, moisture and nutrition in everything from soups and salads to sauces and baked goods. They can also thicken, bind, coat, glaze, garnish, emulsify and enrich a wide variety of sweet and savory dishes. The real question is: What can't an egg do?

Healthy ingredient contribution

ANTIOXIDANTS: Egg yolks contain lutein and zeaxanthin, carotenoid compounds that help prevent macular degeneration, a leading cause of age-related blindness. Though eggs contain a small amount of these two nutrients, research shows that lutein from eggs may be more bioavailable than lutein from other food sources.

CHOLINE: Eggs are also an excellent source of choline, a nutrient important in fetal brain development. Choline also helps with brain function of adults by maintaining the brain cell membrane structure.

PHOSPHORUS: As an essential or major mineral, phosphorus is needed for growth and development, bone health and cellular metabolism in our bodies. One egg provides 10 percent of the recommended daily value.

PROTEIN: Each egg only has about 70 calories and 6.3 grams of protein, 12 percent of the recommended daily value. Eggs provide the highest quality protein found in any food because they contain every essential amino acid we need, in the best pattern possible for our bodies. The high-quality protein in eggs helps you feel fuller longer and stay energized, which contributes to maintaining a healthy weight.

RIBOFLAVIN: Riboflavin, also known as vitamin B2, is a coenzyme for carbohydrate and fat metabolism, which helps convert food into energy. Eggs provide 10 percent of the recommended daily value for riboflavin.

VITAMIN D: Eggs are one of the few foods that are a naturally good source of vitamin D, meaning that one egg provides at least 10 percent of the recommended daily value. Vitamin D plays an important role in calcium absorption, helping to form and maintain strong bones.

Varieties and uses

In descending order, egg grades are AA, A and B, the classification being determined by exterior and interior quality. Eggs come in the following sizes, based on their minimum weight per dozen: jumbo (30 oz. per dozen), extra large (27 oz.), large (24 oz.), medium (21 oz.), small (18 oz.) and peewee (15 oz.). An eggshell's color—white or brown—is determined by the breed of hen that laid it and has nothing to do with either taste or nutritive value. Furthermore, hens fed on alfalfa, grass and yellow corn lay eggs with lighter yolks than wheat-fed hens.

- **Whole eggs** are commonly poached, scrambled, soft-boiled, hard-boiled, fried, pickled and refrigerated.
- **Egg yolks** are an important emulsifier in cooking and baking. They can also be used as binders, coaters, thickeners, clarifiers or leavening agents.
- **Egg whites** are most often used in meringues and mousses. The proteins in egg whites allow it to make foams and aerate dishes.
- **Farm-fresh eggs** have been laid by birds kept indoors in large industrial units, with little space to move around.
- **Free-range eggs** refer to those that have been laid by birds that have an outside area to roam.
- **Organic eggs** mean that birds are fed an organic diet.

Storage

- **Fresh, uncooked eggs** should be stored in the carton in which they came or in a covered container to prevent exposure to odors and damage. Since eggs are porous, they easily absorb odors, so they should never be placed near odoriferous foods such as onions. For the best flavor and cooking quality, eggs should be used within a week. However, they can be refrigerated up to a month, providing the shells are intact.
- **Yolks** can be covered with cold water and refrigerated, tightly covered, for up to three days. They can also be frozen with the addition of a little salt or sugar before freezing in order to retain their texture.
- **Egg whites** can be refrigerated, tightly covered, for up to four days. An easy way to freeze egg whites is to place one in each section of an ice cube tray. After they are frozen, pop the egg-white cubes out into a freezer-weight bag. Both frozen egg yolks and whites should be thawed overnight in the refrigerator before being used.
- **Hard-cooked eggs** should be left in their shells and refrigerated no longer than a week.

Serving size

One serving size of eggs is considered one whole egg that is on average 50 grams. At a mere 70 calories, one egg has 6.3 grams of protein or 12 percent of your daily value (DV). One serving of eggs also contains 10 percent DV of vitamin D, 10 percent DV riboflavin, 10 percent DV phosphorous and 8 percent DV vitamin B-12.

Contributions to this article were made by Andi Musselwhite.

AMERICAN CULINARY FEDERATION

180 Center Place Way

St. Augustine, FL 32095

800.624.9458 | www.acfchefs.org



RECIPE

MINI MEXICAN FRITTATAS

Yield: 12 servings (serving size: 1 mini frittata)

Ingredients:

Cooking spray , as needed	¼ cup chopped green onion
1 can black beans , rinsed and drained	½ t. ground cumin
1 red bell pepper , diced	¼ t. chili powder
6 eggs	¼ t. salt
½ cup fat-free half and half	½ cup grated sharp cheddar cheese

Method:

Preheat oven to 350°F. Lightly coat one 12-cup muffin tin with cooking spray. Arrange beans and bell pepper evenly in each muffin tin. In medium mixing bowl, beat eggs, half and half, green onion, cumin, chili powder and salt. Ladle egg mixture into each tin, just even with rim; sprinkle with cheese. Bake for 20-25 minutes. Let stand for 5 minutes. Remove from muffin cups.



Nutrition Information

Calories: 90	Fiber: 2g	Calcium: 6%
Fat: 4g	Protein: 6g	Iron: 6%
Sat. Fat: 2g	Vitamin A: 10%	
Carbs: 8g	Vitamin C: 25%	

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