

An "Eggcellent" Food Source!

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Why Eggs?

Eggs are an excellent source of protein and are great for meeting protein guidelines. Nutritionally, a large egg has 80 calories and contains 6 grams of protein, 4.5 grams of fat (1.5 of which is saturated fat) and 213 milligrams of cholesterol. Egg whites are basically pure protein. One large egg white contains 17 calories, 4 grams of protein, zero fat, zero cholesterol and 55 milligrams of sodium. When large eggs cost \$1.90 a dozen, they are only \$1.26 per pound.



There are different kinds of egg substitutes available. Usually $\frac{1}{4}$ cup liquid egg substitute is equal to one whole fresh egg. Egg substitutes are made from real eggs, using only the whites. Vitamins and other nutrients are added that are lost when the yolk is removed. By eliminating the yolk, all of the fat and cholesterol and more than half of the calories are cut out. Egg substitutes are colored with beta carotene to make them yellow. Egg substitutes have a shelf life of up to 90 days from the time they leave the production line. With proper refrigeration, egg substitutes should be used within seven days of opening. The product can be frozen if unopened, but do not freeze part of an opened package. Also, once the product has been thawed, do not refreeze.

An egg is one of nature's most nutritious creations. Eggs are protein-rich, low in sodium, and contain vitamins and minerals. In addition, eggs are inexpensive, delicious, and easy to prepare.

Egg Tips - Keeping It Healthy!

- ◆ Use only properly refrigerated, clean, sound shelled, fresh grade AA or A eggs.
- ◆ Buy eggs from refrigerated cases and always check the expiration date on the carton. Always refrigerate eggs at home. Properly refrigerated raw eggs will keep without significant quality loss for about 3 weeks after you bring them home.
- ◆ Eggs are porous and will absorb odors from your refrigerator so it is important to store eggs in the carton, not the refrigerator egg tray.
- ◆ Egg shell and yolk color may vary, but color has nothing to do with egg quality, flavor, nutritional value, cooking characteristics, or shell thickness. Brown shelled eggs and white shelled eggs contain the same amount of nutrients.
- ◆ Poach eggs instead of frying to cut back on fat, or use non-stick pans or non-stick vegetable pan spray to reduce fat when preparing eggs.
- ◆ Prepare and serve eggs with low-fat foods such as vegetables, fruits, whole grain breads, and low-fat or skim-milk cheeses.
- ◆ Serve egg dishes promptly or keep them refrigerated. Leftover egg dishes should be eaten within 2-3 days of preparation.

Do Your Eggs Make the Grade??

USDA Grading System for Eggs:

Grade AA: The shell is clean, normal-shaped and unbroken. When first broken, the eggs spread remains compact; has a clear, thick albumen and a firm, centered yolk.

Grade A: The shell is clean, normal-shaped and unbroken. When first broken, the egg spreads slightly; has a clear, reasonably firm albumen and a firm, fairly high yolk.

Grade B: The shell may be slightly stained or misshaped. When first broken, the egg spreads over a wide area, has a clear, watery albumen and an enlarged, flattened yolk.



Free-Range Versus Organic Eggs - Is There Really A Difference?

True free-range eggs are those produced by hens raised outdoors or that have daily access to the outdoors. Due to seasonal conditions however, few hens are actually raised outdoors. Some egg farms are indoor floor operations and these are sometimes mistakenly referred to as free-range operations. Due to higher production costs and lower volume per farm, free-range eggs are generally more expensive. The nutrient content of eggs is not affected by whether hens are raised free-range, indoor floor or cage operations

Organic eggs come from hens which are fed food having ingredients grown without pesticides, fungicides, herbicides or commercial fertilizers. No commercial laying hen feed contains hormones. Due to higher production costs and lower volume per farm, organic eggs are more expensive than eggs from hens fed conventional feed. The nutrient content of eggs is not affected by whether or not the feed is organic.

Size Matters!

Although any size egg may be used for frying, scrambling, cooking in the shell, or poaching, most recipes are based on the use of large eggs.

- 4 jumbo eggs = 1 cup
- 6 jumbo egg whites = 1 cup
- 12 jumbo yolks = 1 cup

- 4 extra large eggs = 1 cup
- 6 extra large whites = 1 cup
- 12 extra large yolks = 1 cup

- 5 large eggs = 1 cup
- 7 large whites = 1 cup
- 14 large yolks = 1 cup

- 5 medium eggs = 1 cup
- 8 medium whites = 1 cup
- 16 medium yolks = 1 cup

- 6 small eggs = 1 cup
- 9 small whites = 1 cup
- 18 small yolks = 1 cup



The ABC's of Cooking Eggs

Cooking Methods:

The basic principle of egg cooking is to use a medium to low temperature and careful timing. When eggs are cooked at too high a temperature or for too long at a low temperature, the whites shrink and become tough and rubbery and the yolks become tough and their surface may turn gray-green.

Eggs, other than hard-cooked, should be cooked until the whites are completely coagulated and the yolks begin to thicken.

Cooking Functions:

While eggs are known as breakfast entrees, they also are utilized in many other ways. Their cooking properties are so diverse, in fact, that they have been called "the cement that holds the castle of cuisine together."

Eggs can bind ingredients as in meatloaves or croquettes. They can also leaven such baked high rises as soufflés and sponge cakes. Their thickening ability is seen in custards and sauces. They emulsify mayonnaise, salad dressings and Hollandaise Sauce and are frequently used to coat or glaze breads and cookies. They clarify soups. In boiled candies and frostings, they hinder crystallization. As a finishing touch, they can be cooked and used as a garnish.



**"Remember, people will judge you by your actions, not your intentions.
You may have a heart of gold, but so does a hard-boiled egg."**

- www.thinkexist.com



Yolk Versus Egg Whites

Yolk:

The yolk or yellow portion makes up about 33% of the liquid weight of the egg. It contains all of the fat in the egg and a little less than half the protein.

Albumen (Egg White):

Albumen is also known as egg white. Albumen accounts for most of an egg's liquid weight, about 67%. It contains more than half the egg's total protein, niacin, riboflavin, chlorine, magnesium, potassium, sodium and sulfur. The albumen consists of 4 alternating layers of thick and thin consistencies. From the yolk outward, they are designated as the inner thick or chalaziferous white, the inner thin white, the outer thick white, and the outer thin white. Egg white tends to thin out as an egg ages because its protein changes in character. That is why fresh eggs sit up tall and firm in the pan while older ones tend to spread out.

When egg whites are beaten vigorously, they foam and increase in volume 6 - 8 times. Egg foams are essential for making soufflés, meringues, puffy omelets, and angel food or sponge cakes.

Resources:

Iowa Egg Council / Incredible Edible Egg

Did You Know?

- ◆ A hen requires 24 to 26 hours to produce an egg. Thirty minutes later, she starts all over again.
- ◆ The egg shell may have as many as 17,000 tiny pores over its surface. Through them, the egg can absorb flavors and odors. Storing them in their cartons helps keep them fresh.
- ◆ Eggs age more in one day at room temperature than in one week in the refrigerator.
- ◆ About 240 million laying hens produce approximately 5.5 billion dozen eggs per year in the United States.
- ◆ White shelled eggs are produced by hens with white feathers and white ear lobes. Brown shelled eggs are produced by hens with red feathers and red ear lobes.
- ◆ To tell if an egg is raw or hard-cooked, spin it! If the egg spins easily, it is hard-cooked but if it wobbles, it is raw.
- ◆ If an egg is accidentally dropped on the floor, sprinkle it heavily with salt for an easy clean up.
- ◆ Egg yolks are one of the few foods that naturally contain vitamin D.
- ◆ Yolk color depends on the diet of the hen. Natural yellow-orange substances such as marigold petals may be added to light-colored feeds to enhance colors. Artificial color additives are not permitted.
- ◆ Occasionally, a hen will produce double-yoked eggs throughout her egg-laying career. It is rare, but not unusual, for a young hen to produce an egg with no yolk at all!

Greek Frittata

Servings: 8

Ingredients:

6 large eggs
1 tablespoon fresh parsley, minced
1 teaspoon fresh oregano, minced
2 tablespoons green onion, minced
Dash of black pepper
1 cup reduced fat feta cheese, crumbled
1 tablespoon olive oil
2 cups fresh spinach, packed, stems removed
1 cup tomatoes, diced

Directions:

1. Preheat oven to 350.
2. Break the eggs into a medium-sized bowl; beat with a whisk until smooth.
3. Stir in parsley, oregano, green onions, black pepper to taste, and feta; set aside.
4. In a sauté pan over medium heat, add olive oil.
5. When olive oil is heated, add spinach and tomatoes. Saute for 2 - 3 minutes, or until the spinach has wilted and turned a deep green.
6. Pour spinach mixture into the egg mixture that was set aside and mix well.
7. Pour mixture into a greased casserole dish and bake for about 25 minutes, or until center is done.

Nutrition Information (Per Serving):

110 calories; 9g protein; 7g fat (2.5g saturated fat); 140mg cholesterol; 3g carbohydrate; 1g fiber; 300mg sodium



From Our Medical Director— Kent Sasse, MD, MPH, FACS, FACRS**



Curing Diabetes Epidemic with Weight Loss, Not Drugs

Diabetes mellitus has become one of the most common and devastating ailments of our time with more and more people dealing with this life-changing disease on a daily basis. The fact that weight gain causes diabetes is now indisputable. The current epidemic of the disease is inextricably linked to the epidemic of weight gain and obesity.

As we gain weight, our body's cells become resistant to the effects of insulin. Since insulin circulates in the bloodstream and facilitates the cells' uptake of circulating blood sugar, gaining weight results in a rise in the blood sugar. As most of us know by now, this elevated blood sugar is harmful to the body in many ways, and it represents other harmful abnormalities of cell activity. These effects, including rising levels of cholesterol and triglycerides, and elevated blood pressure, are all

linked and they are all caused or exacerbated by weight gain.

Studies show that even modest weight gain leads to an increased risk of diabetes. The normal Body Mass Index (BMI) is considered 18-25, but when the BMI climbs above 25, the rate of diabetes rises sharply. Gaining pounds leads to dangerous problems with our body's metabolism including "insulin resistance" in which the cells of the body no longer respond to the natural hormones insulin and leptin. As a result, the blood glucose rises and damage to the nerves and arteries sets in. Early strokes, heart attacks, blindness, and nerve damage are the result.

Most of the treatment recommendations for diabetes from our doctors and the pharmaceutical industry mention weight loss as a good idea, but focus mainly on the drugs that are prescribed to bring down the blood sugar. Discouragingly, some of the most common and effective treatments for diabetes actually cause more weight gain. Insulin, the primary treatment for diabetes, is known to cause weight gain in diabetic patients, in part because insulin acts on the fat storage cells to block the breakdown and promote more storage of these fats.

To lose weight effectively and cure or prevent diabetes, experts recommend the following:

- ◆ Commit to a medically-supervised weight loss program with a specialist
- ◆ Plan on at least 1-2 years to create the habits for long term success
- ◆ Reduce carbohydrate intake
- ◆ Emphasize plenty of water, fiber, and natural foods
- ◆ Consider weight loss surgery if a medically-supervised program is not successful

The right medically supervised program can cut calories, employ meal replacements, offer counseling and behavior tools, utilize appetite suppressing medications, perform weight loss surgery, and plan the transition to a successful maintenance program. With a dedication to making healthy lifestyle changes and a partnership with the right expert to offer guidance and advice for losing weight, diabetic patients can see positive health and wellness improvements in the future! For more information, talk to your physician.

***Kent C. Sasse, MD, is the Medical Director for Western Bariatric Institute and the International Metabolic Institute, also known as iMetabolic, based out of Reno, Nevada. Dr. Sasse's book, The Sasse Guide to Outpatient Weight Loss Surgery, will be released in the Spring of 2008 and is available for pre-order now. To learn more about the science and medicine of successful weight loss, please visit www.sasseguide.com.*

