

EGG 101

Safety and storage

The egg is definitely one of nature's marvels! But eggs must be stored properly to safely enjoy eating this versatile, nutritious, and delicious food.

Fresh and cooked egg storage

If buying eggs from a store, only buy refrigerated eggs with clean, unbroken shells. Washing is a routine part of commercial egg production, so eggs do not need re-washed when getting them home from the store.

Store eggs in a refrigerator. Some refrigerators have an egg storage compartment in the door, but unless you seldom open the refrigerator door, store eggs on an inside shelf at 41 degrees F or colder. Frequently opening and closing the refrigerator door causes temperature fluctuations around eggs stored in the door. Slamming the door can also cause shell breakage.

Store eggs in an egg carton or covered container, which helps keep them from absorbing unwanted odors

and flavors from other foods in the refrigerator. The egg carton also helps prevent moisture loss from the eggs and keeps them at their peak freshness. This is especially important in a frost-free refrigerator. Date the storage carton or container and use older eggs first.

If stored properly, fresh, uncooked eggs in their shells and in the carton can be kept refrigerated at least four to five weeks past the pack date stamped on the carton. Properly handled and stored eggs rarely spoil. If eggs are kept too long, they will simply just dry up.

Hard-cooked eggs can be cooled and then stored in their shells in a carton in the refrigerator. These eggs must be used within one week of cooking.

A sulphurous odor may be noticed in your refrigerator when storing hard-cooked eggs. This odor is caused by hydrogen sulfide, which forms when eggs are cooked. It is harmless and usually disappears within a few hours. For Easter eggs,



refrigerate hard-cooked eggs in their cartons if not coloring them right after cooking and cooling. Then refrigerate them again after you dye them and after you display them for less than two hours. Eggs displayed longer than two hours at room temperature should only be used for decorative purposes or for hiding, not for eating.

What about homegrown eggs?

There are several other important considerations to remember when raising chickens and using homegrown eggs:

- Eggs that spend more time in the nest have an increased chance of becoming dirty, broken, or lower in quality. Collect eggs at least twice a day, preferably before noon. Consider a third collection in late afternoon or early evening, especially in hot or cold weather. In the summer, the heat will deteriorate egg

quality. In the winter, the eggs could freeze causing the shells to crack and break. Coated wire baskets or plastic egg flats are good containers for collecting eggs. Discard eggs with broken or cracked shells.

- Dirty eggs can be a health hazard. Eggs with dirt and debris can be cleaned with fine sandpaper, a brush, or emery cloth. If eggs need to be washed, the temperature of the water should be at least 20 F warmer than the egg. This will prevent the egg contents from contracting and producing a vacuum, which could allow bacteria to be pulled through the pores of the egg. A mild, non-foaming, unscented detergent approved for washing eggs can be used. A dishwashing liquid free of scents and dyes is acceptable. Eggs can be sanitized before storage by dipping in

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a solution of 1 tablespoon household bleach to 1 gallon of water. Dry eggs before storing to prevent moisture from entering the shell pores as eggs cool during refrigeration. Cleaning eggs before storing them in a refrigerator is best, as egg shells do carry bacteria, which could then be passed onto other foods being stored in the refrigerator.

- If you buy or sell eggs at a farmers market or similar venue, make sure eggs are properly chilled. The FDA requires untreated shell eggs be stored and displayed at 45 F (whether graded or ungraded).

Using egg whites, yolks

If a recipe calls for only egg yolks, refrigerate leftover whites in a covered container for up to four days. If only egg whites are needed for a recipe, store leftover yolks in water in a covered container in the refrigerator and use within one to two days. If you can't use up the yolks quickly enough, hard cook them by carefully placing them in a single layer in a saucepan. Add enough water to be an inch over the yolks. Cover and quickly bring to just a boil. Remove from heat and let stand, covered in hot water for about 15 minutes. Remove the yolks from the water with a slotted spoon and store

in a tightly sealed container in the refrigerator for four to five days. It is best not to freeze hard-boiled whole eggs and hard-boiled egg whites as they become tough and watery when frozen.

Freezing yolks, whites

If there are more eggs than you can possibly use within a few weeks, they can be frozen, just not in the shell. Freeze only clean, fresh eggs. For egg whites, break and separate the eggs, one at a time, making sure no yolk gets into the whites. Pour the whites into freezer containers and seal tightly. Label each container with the number of whites and the date and freeze. For faster thawing and easier measuring, first freeze each white in an ice cube tray and then transfer them into a freezer container.

Egg yolks require special treatment before freezing. Yolks frozen as is will thicken or gel and be almost impossible to use. To avoid gelling, beat in $\frac{1}{8}$ teaspoon salt or $1\frac{1}{2}$ teaspoons sugar or corn syrup per $\frac{1}{4}$ cup yolks (4 yolks). Label the container with the number of yolks, the date, and whether salt or sweetener was added. Salted egg yolks work great for main dish recipes, and sweetened yolks can be used in baked recipes or desserts. One tablespoon thawed egg yolk equals one large fresh yolk.

If you want to freeze whole eggs, beat the whites and yolks together, pour into freezer containers, seal tightly, label as to number of eggs, and date. Freeze promptly. Frozen eggs are best used within one year. Substitute 3 tablespoons thawed whole egg for 1 large fresh egg.

Defrost frozen eggs, egg products, and cooked egg dishes overnight in the refrigerator or under cold running water. Cook thawed eggs thoroughly and serve them promptly.

Combination dishes containing eggs may or may not freeze well, depending upon the recipe's ingredients, the wrapping in the freezer, and other factors. Most egg-containing combination dishes should be frozen for no more than one to three months. Reheating a frozen egg dish can be done while still frozen, just make sure the center internal temperature reaches 165 degrees on a reliable kitchen thermometer. Promptly refrigerate egg-containing leftovers in small shallow containers. Then thoroughly reheat and eat the leftovers within two to three days. Discard any egg-containing leftovers after three days.



Other considerations

Some recipes, such as meringue, call for eggs to be at room temperature as the whites whip to greater volume when warm. Some cake recipes also call for eggs to be at room temperature before they are combined with creamed fat and sugar. Cold eggs could harden the fat and curdle the batter, which may affect the finished texture of the cake. For these recipes, remove the eggs from the refrigerator 20 to 30 minutes prior to using or put the eggs in a bowl of warm water while getting the other ingredients ready to use. Use eggs straight from the refrigerator unless a recipe specifically calls for room temperature eggs.

For outdoor eating occasions, eggs must be kept cold in a cooler with either ice or frozen coolant. Unless you can keep eggs in a cooler with constant cold temperatures, it is best to use dried eggs for such outdoor activities as hiking, camping, boating, and backpacking. Dried eggs can be purchased at most sporting goods stores and are quick and easy to use. Pickling and other forms of preservation are also possibilities.

Never eat eggs raw. Undercooked egg whites and yolks have been associated with outbreaks of *Salmonella enteritidis* infections. To prevent illness from bacteria, cook eggs until yolks are firm and cook foods containing eggs thoroughly to 145 F. Use a food thermometer to be sure. Do not keep cooked or raw eggs at room temperature for more than two hours.

By following these simple egg tips, you can safely enjoy eating incredible edible eggs.

Yes, **Denise Smith** knows egg-actly (sorry, we could not help it) how to store and cook eggs. She is the University of Wyoming Extension nutrition and food science educator based in Niobrara County, also serving Converse and Natrona counties. She can be reached at (307) 334-3534 or at desmith@uwyo.edu.