

Food Safety Facts



Food Safety
and Inspection
Service

Egg and Egg Product Safety

Information for Consumers

April 2001

Eggs can be part of a healthy diet. However, they are perishable just like raw meat, poultry, and fish. To be safe, they must be properly refrigerated and cooked.

The Importance of Egg Safety

Unbroken fresh shell eggs may contain certain bacteria that can cause foodborne illness. The bacteria are *Salmonella* Enteritidis (SE). While the number of eggs affected is quite small, there have been some scattered outbreaks. Currently the government, the egg industry, and the scientific community are working together to solve the problem.

What Part Carries Bacteria?

Researchers say that if present, the SE are usually in the yolk or "yellow." But they can't rule out the bacteria being in egg whites. So everyone is advised against eating raw or undercooked egg yolks, whites, or products containing them.

Who Should Be Extra Careful?

People with health problems, the very young, senior citizens, and pregnant women (the risk is to the unborn child) are particularly vulnerable to SE infections. A chronic illness weakens the immune system, making the person vulnerable to foodborne illnesses.

Taking Steps at Home

Proper refrigeration, cooking, and handling should prevent most egg safety problems. Persons can enjoy eggs and dishes containing eggs if these safe handling guidelines are followed.

1. Don't Eat Raw Eggs

This includes "health-food" milk shakes with raw eggs, Caesar salad, Hollandaise sauce, and any other foods like homemade mayonnaise, ice cream, or eggnog made from recipes in which the raw egg ingredients are not cooked.

2. Buy Clean Eggs

At the store, choose Grade A or AA eggs with clean, uncracked shells. Make sure they've been refrigerated in the store. Any bacteria present in an egg can multiply quickly at room temperature.

Don't wash eggs. At the plant, government regulations require that USDA-graded eggs be carefully washed and sanitized using special detergent. Then the eggs are coated with a tasteless, natural mineral oil to protect them.

3. Refrigerate Eggs

Take eggs straight home and store them immediately in the refrigerator set at 40 °F or slightly below. Store them in the grocery carton in the coldest part of the refrigerator and not in the door.

4. Use Eggs Within Recommended Times

Use raw shell eggs within 3 to 5 weeks. Hard-cooked eggs will keep refrigerated for 1 week. Use leftover yolks and whites within 4 days.

If eggs crack on the way home from the store, break them into a clean container, cover it tightly, and keep refrigerated for use within 2 days.

5. Freeze Eggs for Longer Storage

Eggs should not be frozen in their shells. To freeze whole eggs, beat yolks and whites together. Egg whites can be frozen by themselves. Use frozen eggs within a year.

If eggs freeze accidentally in their shells, keep them frozen until needed. Defrost them in the refrigerator. Discard any with cracked shells.

6. Handle Eggs Safely

Wash hands, utensils, equipment, and work areas with warm, soapy water before and after contact with eggs and dishes containing eggs.

Don't keep eggs -- including Easter eggs -- out of the refrigerator more than 2 hours.

Serve cooked eggs and dishes containing eggs immediately after cooking, or place in shallow containers for quick cooling and

refrigerate at once for later use. Use within 3 to 4 days.

7. Cook Eggs

Many cooking methods can be used to cook eggs safely including poaching, hard cooking, scrambling, frying, and baking. However, eggs must be cooked thoroughly until yolks are firm. Scrambled eggs should not be runny. Casseroles and other dishes containing eggs should be cooked to 160 °F as measured with a food thermometer.

8. Use Safe Egg Recipes

Egg mixtures are safe if they reach 160 °F, so homemade ice cream and eggnog can be made safely from a cooked base. Heat the egg-milk mixture gently. Use a food thermometer to check the temperature or use a metal spoon (the mixture should coat the spoon). If in-shell pasteurized eggs are available, they can be used safely in recipes that won't be cooked.

Dry meringue shells are safe. So are divinity candy and 7-minute frosting, made by combining hot sugar syrup with beaten egg whites.

Meringue-topped pies should be safe if baked at 350 °F for about 15 minutes. Chiffon pies and fruit whips made with raw, beaten egg whites cannot be guaranteed safe. Substitute whipped cream or whipped topping.

To make key lime pie safely, heat the lime (or lemon) juice with the raw egg yolks in a pan on the stove, stirring constantly, until the mixture reaches 160 °F. Then combine it with the sweetened condensed milk and pour it into a baked pie crust.

Cook egg dishes such as quiche and casseroles to 160 °F as measured with a food thermometer.

Egg Product Safety

The term "egg products" refers to eggs that have been removed from their shells for processing. Basic egg products include whole eggs, whites, yolks, and various blends, with or without non-egg ingredients, that are processed and pasteurized. They may be available in liquid, frozen, and dried forms.

Are Egg Products Pasteurized?

Yes. The 1970 Egg Products Inspection Act requires that all egg products distributed for consumption be pasteurized. They are rapidly heated and held at a minimum required temperature for a specified time. This destroys *Salmonella* but it does not cook the eggs or affect their color, flavor, nutritional value, or use. Dried whites are pasteurized by heating in the dried form.

Can Egg Products Be Used in Uncooked Foods?

Egg products can be used in baking or cooking (scrambled eggs, for example). They have been pasteurized, but are best used in a cooked product. Consumers should be sure that the internal temperature of the cooked dish reaches 160 °F. Egg products can be substituted in recipes typically made with raw eggs that won't be cooked to 160 °F, such as Caesar salad and homemade mayonnaise. Although pasteurized, for optimal safety, it is best to start with a cooked base, especially if serving high-risk persons: people with health problems, the very young, the elderly, and pregnant women.

What Are Some Buying Tips?

- Containers should be tightly sealed.
- Frozen products should show no sign of thawing.
- Purchase refrigerated products kept at 40 °F or below.
- Avoid hardened dried egg products.

Storage Times for Egg Products

- Frozen egg products - 1 year
- If the container for liquid products bears a "Use-By" date, observe it.
- For liquid products without an expiration date, store unopened cartons at 40 °F or below for up to 7 days (not over 3 days after opening).
- Don't freeze opened cartons or refreeze frozen cartons that have been thawed.
- Unopened dried egg products can be stored at room temperature as long as they are kept cool and dry. After opening, keep refrigerated.
- Use reconstituted products immediately or refrigerate and use that day.

Other Egg-type Items

Certain egg-type items are not presently considered egg products. These items, which are under the Food and Drug Administration (FDA) jurisdiction, include freeze-dried products, imitation egg products, and egg substitutes. Inspected, pasteurized egg products are used to make these items.

No-cholesterol egg substitutes consist of egg whites, artificial color, and other non-egg additives. Direct questions about egg substitutes to the manufacturer or to the FDA.

USDA Dried Egg Mix

USDA dried egg mix is a dried blend of whole eggs, nonfat dry milk, soybean oil, and a small amount of salt. (This is a government commodity product, not usually available commercially.) To reconstitute, blend 1/4 cup with 1/4 cup water to make one "egg." The reconstituted mix requires cooking.

- Store USDA Dried Egg Mix below 50 °F, preferably refrigerated. After opening, use within 7 to 10 days.
- Use reconstituted egg mix immediately or refrigerate; use within 1 hour.

For further information, contact:

USDA Meat and Poultry Hotline:

1-800-535-4555 (Toll-free Nationwide)

1-800-256-7072 (TTY)

FSIS Web site: www.fsis.usda.gov

FDA Food Information Line:

1-888-SAFEFOOD (Toll-free Nationwide)