

Egg and Egg Product Safety

Source: USDA Consumer Information, October 1996

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.

Concern for egg safety

Today some unbroken fresh shell eggs may contain certain bacteria that can cause foodborne illness. The bacteria are *Salmonella enteritidis*. While the number of eggs affected is quite small, there have been scattered outbreaks in the last few years. 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 salmonella bacteria 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 uncooked egg yolks, whites or products containing them.

Who should be extra careful?

People with health problems, the very young, the elderly and pregnant women (the risk is to the unborn child) are particularly vulnerable to *Salmonella enteritidis* 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.

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, not in the door. Don't wash eggs. That could increase the potential for bacteria on the shell to enter the egg.

4. Use Eggs Promptly

Use raw shell eggs within 3 to 5 weeks. Hard-cooked eggs will keep in the refrigerator for 1 week. Use leftover eggs 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.

Unopened cartons of egg substitutes can be frozen for 1 year.

6. Handle Eggs Safely

Wash hands, utensils, equipment and work areas with warm, soapy water before and after contact with eggs and egg-rich foods.

Don't keep eggs - including Easter Eggs - out of the refrigerator more than 2 hours. Serve cooked eggs and egg-rich foods 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. Cooked Eggs

Hard cooked eggs should be safe for everyone to eat. Those "at risk" for foodborne illness should avoid eating soft-cooked or "runny" eggs.

However, healthy persons may choose to eat eggs that are less than totally firm. Use the following cooking times:

*Fried eggs - cook 2 to 3 minutes on each side; 4 minutes in a covered pan.

*Scrambled eggs should be cooked until firm throughout.

*Poached eggs - 5 minutes over boiling water.

*Soft-cooked eggs - 7 minutes in the shell in boiling water.

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 thermometer or be sure the mixture coats a metal spoon.

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 bake pie crust. For meringue topping, bake as above.

For egg dishes such as quiche and casseroles, insert a knife in the center. It should come out clean.

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.

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.

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 egg white 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 a high-risk person.

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.
- 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 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

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and other non-egg additives. Direct questions about egg substitutes to the manufacturer or the FDA.