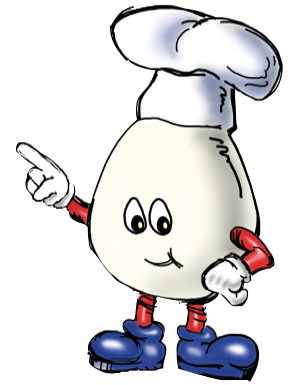


Safe Eggs Backgrounder



Egg Dangers - Salmonella Stats & Facts

- Eggs and egg-containing foods have been identified as the vehicle in roughly 80% of known source Salmonella enteritidis infections in the US.
- CDC data show 75% of Salmonella outbreaks are caused by consuming raw or inadequately cooked whole shell eggs.
- Other foods sometimes involved in outbreaks are raw meats, poultry, eggs, milk and dairy products, fish, shrimp, frog legs, yeast, coconut, sauces and salad dressing, cake mixes, cream-filled desserts and toppings, dried gelatin, peanut butter, cocoa, and chocolate.
- A foodborne illness outbreak is defined as two or more persons becoming ill after eating the same food.
- Each year in the US, the Centers for Disease Control (CDC) estimates that foodborne illness causes 76 million illnesses; 325,000 hospitalizations; and 5,000 deaths.
- Both local and federal health officials have systems in place for monitoring and investigating foodborne illness.
- Salmonella causes illnesses in a reported 1.4 million people each year.
- After exposure, symptoms develop in 6-48 hours.
- As few as 15-20 bacterial cells are enough to cause illness.
- Symptoms of Salmonellosis may include nausea, fever, diarrhea, and abdominal cramps.
- Illness may last 2-6 days. A few people experience long-term effects, such as arthritis.
- Where it comes from: Hens on the farm frequently harbor Salmonella bacteria and pass them to eggs.
- Controlling the risk of Salmonella through shell eggs is so important that the US Department of Agriculture (USDA), in cooperation with other federal agencies, established an Egg Safety Action Plan. Its goal is to eliminate Salmonella enteritidis illness in the US by the year 2010.

High-Risk Groups

- Certain groups are particularly susceptible to foodborne illness and its effects: young children (age 9 and under), and older adults. In addition, people whose immune systems are weak due to health conditions are also highly susceptible.
- Foodborne illness is 10-100 times more likely to cause death among the elderly than among the general population.
- For foodservice establishments, the Food and Drug Administration (FDA) Food Code defines special food safety precautions for serving these groups.
- The FDA Food Code is a model used by health agencies across the country in setting their own health regulations.
- Using pasteurized shell eggs is one of the major steps a foodservice operation can take to comply with FDA guidelines.

Pasteurization – What is it?

- This process was invented by French scientist Louis Pasteur approximately 140 years ago.
- Pasteurization means treating a product with heat to destroy bacteria, viruses, and molds.
- Pasteurization is an all-natural process, in that it does not use chemicals or radiation. There is nothing to leave a residue and no chemical change in the shell eggs.
- Pasteurization is used for milk to prevent the spread of tuberculosis (TB), typhoid, Listeria bacteria, many others.
- Pasteurization is also used for most cider and juices on the market. Federal legislation introduced in 2001 supports this. This was in response to foodborne illness outbreaks associated with juices.

Pasteurized Eggs

- Pasteurization makes raw shell eggs safe to eat.
- For shell eggs, the challenge is applying heat without cooking the egg. National Pasteurized Eggs, Inc. uses a patented process to achieve this. You can't pasteurize eggs at home.
- Pasteurized shell eggs look and perform like other shell eggs.
- They cook the same, and actually taste better than other eggs because there are no bacteria diminishing their original flavor.
- Pasteurization does not change the nutritional value of shell eggs.
- Pasteurized shell eggs are safe to use in foods such as raw cookie dough, beverages, sauces, salad dressings, soft-cooked eggs, and sunny side up eggs. All these foods – ordinarily a risk for Salmonella – become safe to eat.
- Nutrient value is the same.
- Heat pasteurization has been used for over 100 years, and pasteurized shell eggs are as safe as pasteurized milk.
- Shell eggs that are **not** pasteurized must bear a warning statement that reads, “SAFE HANDLING INSTRUCTIONS: To prevent illness from bacteria: Keep eggs refrigerated, cook eggs until yolks are firm, and cook foods containing eggs thoroughly.”

How Eggs “Make the Grade”

- Before being sold, shell eggs in the US are inspected by law. Inspection of food products such as meat, poultry, dairy foods, and eggs, focuses on food safety. (However, egg inspection does not involve testing eggs for Salmonella bacteria.)
- On a voluntary basis, eggs may also be graded. USDA grading addresses quality of food products such as meat, poultry, dairy foods, and eggs.
- Eggs can be Grade AA, A, or, B. Grade A is most common in stores.
- The highest grade, AA, is given to eggs that have thick, firm whites; high, round yolks; and clean, unbroken shells.
- Inspectors check eggs using a process called candling, which means examining the egg in front of a light source to determine quality. This is an automated process with mass-scanning equipment today.
- The USDA also provides standards for defining the size of eggs on carton labels, ranging from jumbo down to peewee. This is based on weight. For example, a dozen large eggs weigh 24 ounces; a dozen jumbo eggs weigh 30 ounces.

- Eggs that are USDA grade AA or A, as well as eggs that are free range, cage free, organic, vegetarian, etc., while all possessing attributes of value-added quality, offer no assurance of safety. Regardless of an egg's quality attributes, any egg could be harboring Salmonella bacteria inside.
- There is no taste, texture, or visual way to tell which eggs have the bacteria.
- Did you know? The average person in the US eats 256 eggs per year.

In Food Service

- The FDA Food Code defines eggs as a potentially hazardous food (PHF). This means eggs have the right chemistry to make bacteria grow. All potentially hazardous foods need temperature control for safety (TCS).
- However, pasteurized shell eggs are not hazardous! The FDA defines these as a notable exception because they are safe.
- In foodservice operations, the FDA Food Code recommends special restrictions on how unpasteurized shell eggs may be used in serving high-risk customers. The FDA lists pasteurized shell eggs as a safe and recommended alternative.
- Pasteurized shell eggs give foodservice establishments flexibility in menu planning. For example, you can offer and serve eggs sunny-side up.
- Pasteurized shell eggs also reduce the risk of cross contamination. Cross contamination means spreading harmful bacteria from one item to another. Pasteurized shell eggs do not contain Salmonella bacteria, so there is nothing to spread!
- Choosing pasteurized shell eggs is highly regarded in the foodservice industry as insurance against a devastating foodborne illness outbreak.

Food Safety Tips

- Keep cold foods cold (including eggs). See safe handling instructions on the carton.
- Keep hot foods hot.
- Pay attention to the sell-by date when purchasing eggs. (You can still use them for 3-5 weeks after that.)
- Wash hands before cracking, preparing, or serving an egg.
- Separate, don't contaminate; keep raw foods separate from cooked and ready-to-eat foods during all phases of food preparation.
- Leftovers – use a hard-boiled egg within a week; most leftover dishes within 3-4 days (package, chill, and refrigerate immediately).

Answers to Activity Sheets and Webisode Quizzes

Activity #1: OK 2 Eat?

1. Happy face
2. Happy face
3. Happy face
4. Happy face
5. Happy face
6. Sad face (because pasteurized shell eggs were not used in making this cookie dough)

Activity #2: Egg Mix-Up

Correct sequence: picture of hen laying egg; picture of eggs in bathtub; picture of rubber stamp; picture of grocery store; picture of eggs in frying pan; picture of egg on the plate

Activity #4: Eggstreme Safety Crossword

Across	Down
2. sunny	1. hands
5. Louis	3. yolk
6. dough	4. cold
10. milk	7. organic
11. hen	8. germs
	9. ill
	12. heat

Activity #6: Scrambled Eggs (PDF file)

1. illness
2. hen
3. cookie dough
4. pasteurize
5. Salmonella
6. inspected
7. cross contaminate

Salmonella: Who's At Risk? (quiz for webisode)

1. A
2. C
3. B
4. A
5. B
6. A
7. A

Can I Eat That Cookie Dough? (quiz for webisode)

1. B
2. A
3. B
4. C
5. C
6. A
7. B

Note: Answers to interactive Web quizzes are contained within the Web pages. As learners click answers, they receive immediate feedback.