

# Shell Egg Handling

## Guidelines for School Nutrition Operations

**While most shell eggs are not pasteurized, they are a safe food source when produced, processed and handled in accord with effective food safety practices.** If you choose to hand-break shell eggs in your kitchen, please follow your school's Hazard Analysis and Critical Control Point (HACCP) based standard operating procedures (SOP). Highlighted below are key safe food handling practices for shell eggs. Contact your local and/or state health departments for additional shell egg handling guidelines that may apply to your district or state.

## Source

Know your shell egg source



Federal Food and Drug Administration regulations require use of on-farm and transportation practices proven to reduce the possibility of contaminating shell eggs with certain harmful Salmonella bacteria. Egg farms must follow these stringent requirements. USDA also

administers a mandatory program that requires shell eggs be segregated from certain restricted eggs, for example checked and dirty eggs, loss and inedible. States may also impose additional requirements. Certain small farms are exempted from the requirements of these programs, but may still follow the practices set forth in the regulations. You should ask your supplier to provide documented assurance that their farms and packing operations follow the egg safety practices stated in these programs.

## Local Sourcing

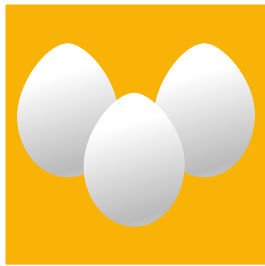
**More and more schools are using eggs in student meal programs from local farms or even from chickens raised on school grounds.**

There are no federal rules prohibiting this practice, although schools should check with their State Department of Agriculture, Education and/or Health to be sure programs are in compliance with State animal health standards and food quality rules.



## Environment

### Receipt and storage



It's important to follow good receiving and storage practices to ensure the safety and quality of shell eggs.

#### Temperature

- Eggs must be refrigerated at an ambient (air) temperature of 45° F immediately after packing

and during transport. Upon arrival, check the ambient temperature of the equipment used to deliver eggs. Do not accept eggs received in transport vehicles that do not maintain an ambient temperature of 45° F or below.

- Once received, shell eggs should be immediately placed and stored in refrigerated equipment that maintains an ambient temperature of 45° F or below.

#### Quality

- Examine shell eggs upon receipt to ensure there are no dirty or broken eggs.
- Eggshells should be clean and dry.
- Check expiration dates to ensure safety and quality.

#### Signs of Spoilage

- Unless you have egg candling equipment available for your use, you will probably not be able to detect signs of spoilage until you break a few eggs.
- Modern production, processing and handling practices (including refrigeration) mean you should not normally see any signs of spoilage or significant quality deterioration. Indications of poor quality or unacceptable shell eggs include:
  - Thin whites or weak yolk membranes indicated by whites and yolks that do not stand up when broken like eggs that are only a few days old.
  - Easily ruptured yolks.
  - Large blood or meat spots.
  - Embryos.
  - Off-odors or colors.

## Procedures

### How to break eggs



Handwashing is an important practice in any school nutrition program. School nutrition employees can improve the safety of the food they serve by washing their hands frequently, correctly and at the appropriate times.

As when handling other raw agricultural commodities, all individuals breaking eggs must wash their hands thoroughly with soap and hot water, and dry their hands each time they are in direct contact with raw eggs.

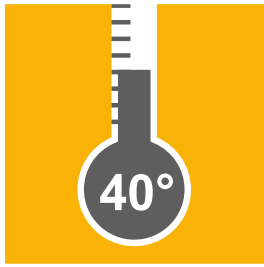
- Discard any eggs with broken or dirty shells.
- Do not break nest-run or ungraded shell eggs (*refer to Graded Shell Eggs term in Glossary*).
- Each shell egg should be individually broken into a small cup or vessel to minimize contact between the exterior shell surface and the egg meat (white and yolk). Shell particles, meat and blood spots and any foreign material accidentally falling into the breaking cup shall be removed with a clean spoon or another clean utensil.
- Egg contents should be examined for imperfections or off-odors prior to being emptied into the collection or storage container.
- Never use an electric mixer, colander, centrifuge or other means to collectively break shell eggs. These methods are dangerous food safety practices.



# Shell Egg Handling Guidelines for School Nutrition Operations (Continued)

## Handling

### How to use and store eggs



- Clean and sanitize utensils, equipment and work areas, before and after contact with raw shell eggs and liquid eggs.
- Liquid eggs (eggs removed from their shell and the interior contents mixed together) must be stored in closed containers

at 41° F or below. **Do not freeze.**

- Break eggs on a daily basis and break only enough to accommodate the day's menu needs. Clean the storage container promptly after each day's use.
- Monitor the cooking time and temperature of eggs during preparation.
- Eggs cooked for hot holding must be cooked/heated to a minimum temperature of 155° F for 15 seconds. Hold cooked eggs and egg dishes above 135° F.

## Resources

Reference material used for this document and resources available for reference.

**FDA's Model Food Code** - [www.fda.gov/Food/GuidanceRegulation/RetailFoodProtection/FoodCode/default.htm](http://www.fda.gov/Food/GuidanceRegulation/RetailFoodProtection/FoodCode/default.htm)

**FDA's Egg Safety Final Rule** - [www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/Eggs/ucm170615.htm](http://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/Eggs/ucm170615.htm)

**Shell Egg Grades and Standards** - [www.ams.usda.gov/grades-standards/shell-egg-grades-and-standards](http://www.ams.usda.gov/grades-standards/shell-egg-grades-and-standards)

**Voluntary Grading of Shell Eggs (7 CFR Part 56)** - [www.ecfr.gov/cgi-bin/text-idx?SID=b5593c0e2baeaf9d0f4b863f04ace825&mc=true&node=pt7.3.56&rgn=div5#se7.3.56\\_140](http://www.ecfr.gov/cgi-bin/text-idx?SID=b5593c0e2baeaf9d0f4b863f04ace825&mc=true&node=pt7.3.56&rgn=div5#se7.3.56_140)

**USDA Regulations Governing the Inspection of Eggs** - [www.ecfr.gov/cgi-bin/text-idx?SID=b5593c0e2baeaf9d0f4b863f04ace825&mc=true&node=pt7.3.57&rgn=div5#se7.3.57\\_1700](http://www.ecfr.gov/cgi-bin/text-idx?SID=b5593c0e2baeaf9d0f4b863f04ace825&mc=true&node=pt7.3.57&rgn=div5#se7.3.57_1700)

**The American Egg Board** - [www.AEB.org](http://www.AEB.org)

**Shell Eggs from Farm to Table** - [https://www.fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/get-answers/food-safety-fact-sheets/egg-products-preparation/shell-eggs-from-farm-to-table/CT\\_Index](https://www.fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/get-answers/food-safety-fact-sheets/egg-products-preparation/shell-eggs-from-farm-to-table/CT_Index)

**Safe Handling Tips for Eggs** - <https://www.cdc.gov/features/salmonellaeggs/index.html>

**NEW USDA guidance on shell eggs from chickens raised on school grounds for school meal programs** - [https://fns-prod.azureedge.net/sites/default/files/f2s/USDA\\_FactSheet\\_FactsAboutFoodSafety\\_Release\\_WEB.pdf](https://fns-prod.azureedge.net/sites/default/files/f2s/USDA_FactSheet_FactsAboutFoodSafety_Release_WEB.pdf)

## Glossary:

**Clean & Sound Shell Eggs** — Any egg with a shell free of adhering dirt or foreign material and that is not cracked or broken.

**Nest Run Eggs** — Eggs that are packed as they come from production facilities without having been washed, sized and examined to ensure the removal of eggs with quality defects. **Restricted Egg** — Any check, dirty egg, incubator reject, inedible, leaker, or loss as defined in 7 CFR 57.1

**Graded Shell Eggs** — Some egg packing plants use USDA's voluntary shell egg grading program to verify shell eggs meet requirements and specifications for quality. Approximately 40 percent of shell eggs available for purchase are processed under this program. They are identifiable by a USDA shield and grade on the container, for example USDA Grade A. Whether or not a USDA voluntary grading program is used, most shell egg packing plants have their own quality grading program. Farms packing eggs that do not have a grading program in place may want to follow the processing and segregation requirements of USDA's voluntary grading program. Improper shell egg washing practices can result in eggs contaminated with bacteria, rendering them unsafe. The USDA voluntary shell egg grading regulations detail washing and refrigeration requirements (see 7 CFR 56.76) that research has demonstrated to be safe egg handling practices.

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