How Restaurants Handle Tomatoes
EHS-Net Study Findings and Recommendations

In recent years, at least 12 *Salmonella* foodborne illness outbreaks have been linked with fresh tomatoes. Investigations suggest that the tomatoes probably got tainted early, such as at the farm or during processing. In most cases, the tomatoes that caused the outbreaks were eaten in restaurants.

Researchers have suggested that how restaurant workers handle tomatoes may lead to germ growth on tomatoes. It may also spread germs from tainted tomatoes to other tomatoes. To prevent foodborne illness caused by tainted tomatoes, we must find out how workers handle tomatoes.

The U.S. Food and Drug Administration (FDA) advises restaurants on how to prevent germs on produce. FDA advises

- Keeping fresh produce (including tomatoes) apart from other refrigerated foods.
- Washing whole tomatoes under running water before using them.
- Not soaking tomatoes in standing water.
- Keeping wash water temperature 10°F warmer than the tomatoes.
- Refrigerating cut tomatoes at 41°F or less.
- Holding unrefrigerated cut tomatoes for 4 hours or less.

FDA also gives general guidance to reduce the spread of germs in the kitchen. FDA advises restaurants to

- Use separate cutting boards for different types of foods such as meat and produce.
- Use gloves to handle ready-to-eat food such as tomatoes.

What the Study Described

The study described tomato-handling practices in restaurants. The study focused on receiving, storing, washing, cutting, and holding tomatoes.

EHS-Net found that many restaurants did not follow FDA advice when handling tomatoes. Restaurants

- Did not separate tomatoes from other foods during preparation.
- Did not wash tomatoes properly.
- Held cut tomatoes at temperatures that were too high.

This study was conducted by the Environmental Health Specialists Network (EHS-Net). EHS-Net is a federally funded collaboration of federal, state, and local environmental health specialists and epidemiologists working to better understand the environmental causes of foodborne and waterborne illness. Visit EHS-Net at http://www.cdc.gov/nceh/ehs/EHSNet.

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What the Study Found

Some restaurants did not meet FDA guidelines for tomato washing. They

- Used the wrong type of sink.
- Soaked the tomatoes.
- Did not use proper water temperatures.

Many restaurants did not meet FDA guidelines to stop the spread of germs. They

- Did not have separate cutting boards for meat and produce.
- Did not use gloves when cutting tomatoes.

Many restaurants did not meet FDA guidelines for holding cut tomatoes.

- About half the cut tomato batches in holding were above 41°F.
- Holding time for most batches held above 41°F was longer than the 4-hour limit.

Many tomato batches were above 41°F in receiving, storage, and cutting. These all occur before holding. When tomatoes are above 41°F before holding, it is hard to quickly cool them to 41°F.

EHS-Net Recommends

The restaurant industry may need to focus on controlling the temperature of tomatoes before holding. For example, tomatoes could be refrigerated in all stages. Or time control could be used to keep cut tomatoes safe.

Educational programs could be created to improve tomato handling in restaurants. Such programs could lead to fewer outbreaks linked to tomatoes.

During inspections, environmental health specialists could look for poor tomato-handling practices. Then they could help managers and workers fix them.

Key Terms

Environmental health specialists: public health workers who enforce health and safety standards related to food and other consumer products.
Foodborne illness: an illness caused by germs in food.
Foodborne illness outbreak: when two or more people have the same sickness after eating food from the same place.
Holding time: amount of time food is kept at a set temperature.
Time control: amount of time food should be kept to limit foodborne illness risk.