

How Restaurants Cool Food

EHS-Net Study Findings and Recommendations

Hot food needs to be cooled quickly to stop germ growth and foodborne illness outbreaks caused by germs. From 1998 to 2008, hot food cooled too slowly led to 504 outbreaks of foodborne illness in restaurants. We don't know much about how restaurants cool food. If we learn more, we can improve how restaurants cool food. And we can lower the number of foodborne illness outbreaks.

The U.S. Food and Drug Administration (FDA) Food Code includes advice on how to cool food safely and quickly. This advice includes cooling food

- In the refrigerator at or below 41°F,
- In shallow pans ("shallow" was defined as 3 inches or less), and
- In a way that air can flow around and in the pans (ventilated). Food can be ventilated by
 - Keeping it loosely covered.
 - Not stacking pans of cooling food on top of each other.
 - Providing open air space around pans of cooling food.

FDA's advice also focuses on using processes tested and proven to cool food safely.

What the Study Described

The purpose of this study was to describe how restaurants cool food and whether they follow FDA advice.

What the Study Found

EHS-Net found many restaurants did not follow FDA's cooling advice:

- Temperatures in cooling units were above 41° 16% of the time.
- Hot food was not put in shallow pans more than a third of the time.
- Hot food was not ventilated about a third of the time.
- Many restaurant cooling processes were not tested and proven.

Many restaurants do not follow FDA advice about cooling practices and processes.

- Often, restaurants did not cool foods in shallow pans and did not ventilate pans of cooling food.
- Many restaurants' cooling processes were not tested and proven to work and did not include keeping track of food cooling time and temperature.



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>.

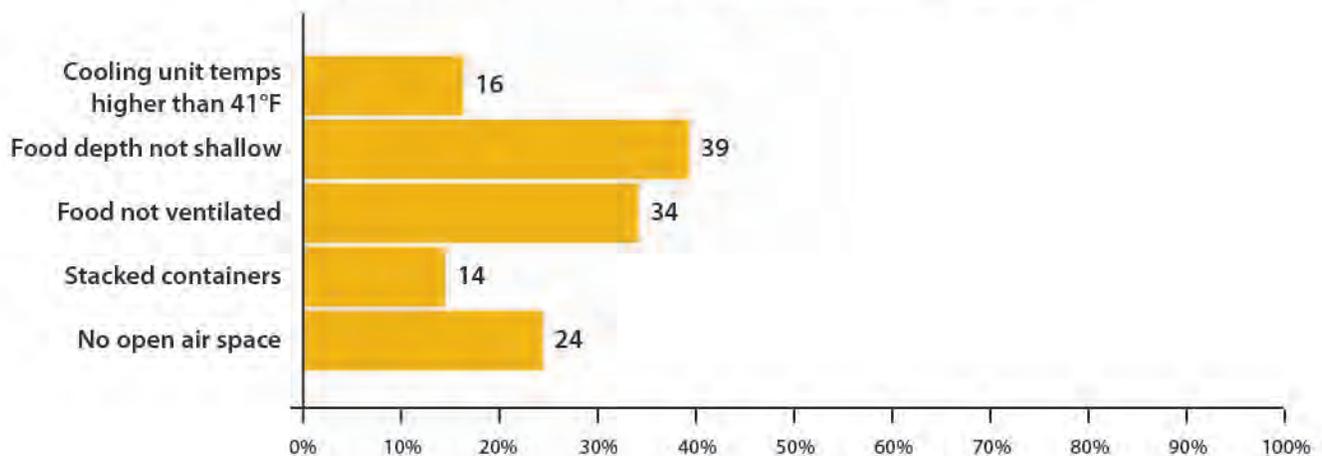
EHS-Net Recommends

Restaurant managers and food safety programs should work to improve restaurant cooling practices. These efforts should focus on

- Improving poor cooling practices and processes, as found in this study.
- Tackling barriers to proper cooling.



Poor Cooling Practices Seen in Restaurants



Key Terms

Environmental health specialists: public health workers who enforce health and safety standards related to food and other consumer products.

Food Code: guide developed by the FDA on how to store, prepare, and cook food safely. Most state local rules and laws about food safety are based on the Food Code.

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.

Ventilated: a way that air can flow around and in pans of cooling food (for example, loosely covered or uncovered, pans not stacked, space around the pans).