



Multistate *E. coli* O157:H7 Outbreak Possibly Associated with Beef

After-Action Review Report 2022-05

Highlights

- The Food Safety and Inspection Service (FSIS), the Centers for Disease Control and Prevention (CDC), and public health partners in three states investigated beef as the possible source of illnesses in this outbreak. However, the investigation did not identify a common source of beef for the illnesses.
- This investigation highlights the need for continued outreach to food retail stores and preparers about best practices for beef that will be ground.

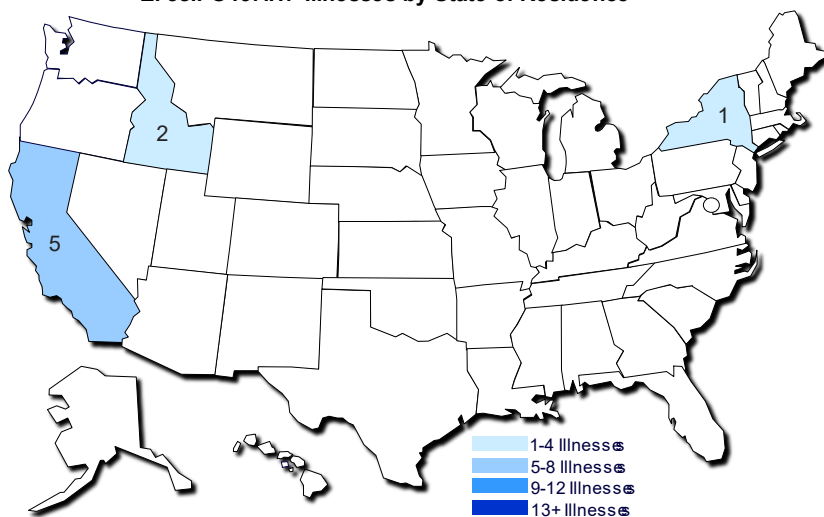
Outbreak at a Glance

Illnesses	8
States included	3
Hospitalizations	1
Deaths	0

Process improvements

- FSIS continues to promote best practices for grinding beef and is working on developing and distributing targeted educational materials for retailers and consumers.
 - FSIS will create a blogpost for consumers to address the risks of eating undercooked or raw ground beef.
- FSIS recommended that the Conference for Food Protection (CFP) revise its Beef Grinding Log Guideline to provide additional information about grinding record-keeping requirements and considering the intended use of beef prior to grinding the product.

E. coli O157:H7 Illnesses by State of Residence



What happened?

From May through June 2022, public health officials in California, Idaho, and New York, and the CDC and FSIS investigated an outbreak of eight *E. coli* O157:H7 illnesses. No follow-up information was available for two of the cases. Eighty-three percent (5 of 6) of the ill people reported beef consumption, including raw beef and ground beef. Four ill people reported eating traditional Middle Eastern foods. Detailed beef exposure information was available for three ill people. One ill person reported eating a raw beef dish at a restaurant. A second ill person reported eating ground beef kabobs at a different restaurant. A third ill person reported possibly eating beef at a family event where ground beef kabobs and a raw beef dish were served. Detailed purchase information about the raw beef dish was not available. FSIS traced back the beef served at the two restaurants and the beef used to make kabobs at the family event, which was purchased cooked at a market. The traceback investigation did not identify a common beef supplier among the two restaurants and store.

What we learned from this outbreak



Grinding Records

One market visited as part of the investigation did not maintain grinding records. Adequate recordkeeping throughout the beef supply chain provides investigators information to trace ground beef during a foodborne outbreak investigation. Outreach concerning grinding best practices continues to be important.



Communication

County public health officials notified FSIS when they identified raw beef and ground beef as exposures of interest in the investigation. This early communication helped FSIS investigators coordinate visits to the restaurants and market which enabled investigators to complete their investigation more quickly.



Consumer Education

In this outbreak, at least one person reported eating raw beef in a traditional Middle Eastern dish. Outreach to groups who consume these dishes should emphasize the risks associated with consuming raw or not-fully-cooked ground beef. Consumers should be encouraged to consider alternative preparations of traditional dishes that involve fully cooked beef and reminded of safe cooking and handling practices.

What can you do to prevent or solve the next outbreak due to *E. coli* O157:H7?

Retailers

For retail stores that grind raw beef products, [FSIS requires](#) the maintenance of the following records: complete and accurate records, including the source of raw beef (lot codes, establishment number, production dates), date and times when the ground beef is produced, and when the grinding equipment and other related food-contact surfaces are cleaned and sanitized. These grinding records aid investigators to trace ground beef back to the producing establishment during an outbreak.

Public Health Partners

Public health partners should encourage outreach to commercial food preparers about the importance of safe handling and cooking of raw beef.

They should also continue to work closely with local, state, and federal partners to detect and investigate outbreaks. Public health partners should email FoodborneDiseaseReports@usda.gov to notify FSIS if FSIS-regulated products may be involved in an outbreak.

Consumers

Consumers should not eat raw beef. They should handle ground beef safely and cook to an internal temperature of 160 °F. The best and only way to make sure that any bacteria have been killed and food is safe to eat is by cooking to the correct internal temperature as measured by a food thermometer. Please see [Ground Beef and Food Safety](#) for more information.

Helpful links

- [Ground Beef and Food Safety](#)
- [Safe Minimum Internal Temperature Chart](#)
- [USDA Encourages the Use of Food Thermometers to be Food Safe this Summer](#)
- [FSIS Report a Problem with Food](#)
- [FSIS Retail Guidance](#)
- [Records to be Kept by Official Establishments and Retail Stores that Grind Raw Beef Products](#)
- [Resources for Public Health Partners](#)
- [Food Poisoning Symptoms](#)
- Find more information about FSIS' response to foodborne outbreaks on the [FSIS Outbreak Page](#)

- Subscribe [here](#) to get email updates from FSIS about food safety, including actions consumers can take when specific products are linked to illness outbreaks.