

Outbreak of *Salmonella* Infections Linked to Ground Beef

Final Update

[Español \(Spanish\)](#)



Food Safety Alert

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This outbreak appears to be over. Consumers and restaurants should always handle and cook ground beef safely to help prevent foodborne illness.

CDC, public health and regulatory officials in several states, and the U.S. Department of Agriculture's Food Safety and Inspection Service (USDA-FSIS) investigated a multistate outbreak of *Salmonella* Dublin infections linked to ground beef.

Recall and Advice to Consumers, Restaurants, and Retailers

At A Glance

- [Reported Cases](#): 13
- [States](#): 8
- Hospitalizations: 9
- Deaths: 1
- Recall: Yes

Recall

- On November 15, 2019, Central Valley Meat Co. in Hanford, Calif., recalled 34,222 pounds of ground beef that may be contaminated with *Salmonella* Dublin.
- Recalled beef was produced on July 23, 2019, and shipped to retail locations in California.
 - Products were as Stater Bros Ground Beef brand with the establishment number "EST. 6063A."
- Do not eat, sell, or serve recalled Stater Bros Ground Beef products.

- Retailers and restaurants should not use recalled ground beef products. Throw the product out and sanitize any surfaces that may have come in contact with recalled ground beef or products made with recalled ground beef.

Advice

- Always [handle and cook ground meats](#) safely to avoid foodborne illness. Thoroughly cook ground beef and any food that contains ground beef to an internal temperature of 160°F to kill germs.
- Wash hands with soap and water after touching raw ground beef. Use hot, soapy water or a bleach solution to wash items that came in contact with raw meat or its juices.
- Do not eat or try to cook recalled ground beef. Check your home for it, including your freezer. Return it to the store or throw it away.
 - If you don't know if the ground beef you have at home was recalled, contact the store where it was purchased to find out if it was recalled.
 - Restaurants and retailers should not serve or sell recalled beef and should check food storage and freezers for it.
 - If possible, retailers who received recalled beef should contact their customers to alert them of the recall.

Final Outbreak Information

- As of December 30, 2019, this outbreak appears to be over.
- Thirteen people infected with the outbreak strain of *Salmonella* Dublin were reported from eight states.
 - Illnesses started on dates ranging from August 8, 2019, to October 22, 2019.
 - Nine hospitalizations were reported, including one death reported from California.
- [Epidemiologic, traceback, and laboratory evidence](#) indicated that contaminated ground beef was the likely source of this outbreak.
- On November 15, 2019, Central Valley Meat Co. in Hanford, Calif., recalled 34,222 pounds of ground beef products that may have been contaminated with *Salmonella* Dublin.
 - A single, common supplier of ground beef that accounts for all of the illnesses was not identified.

Symptoms of *Salmonella* Infection

- Most people infected with *Salmonella* develop diarrhea, fever, and stomach cramps 6 hours to 6 days after being exposed to the bacteria.
- The illness usually lasts 4 to 7 days, and most people recover without treatment.
- In some people, the illness may be so severe that the patient needs to be hospitalized. *Salmonella* infection may spread from the intestines to the bloodstream and then to other places in the body.
- Children younger than 5 years, adults 65 years and older, and people with weakened immune systems are more likely to have a severe illness.

Final Investigation Details

December 30, 2019

CDC, public health and regulatory officials in several states, and the U.S. Department of Agriculture's Food Safety and Inspection Service (USDA-FSIS) investigated a multistate outbreak of *Salmonella* Dublin infections linked to ground beef.

Since the last update on November 18, 2019, two additional ill people were reported from Colorado and New Mexico. A total of 13 people infected with the outbreak strain of *Salmonella* Dublin were reported from eight states. A list of the states and the number of cases in each can be found on the [Map of Reported Cases](#) page.

Illnesses started on dates ranging from [August 8, 2019, to October 22, 2019](#). Ill people ranged in age from 39 to 74 years, with a median age of 66. Sixty-two percent of ill people were male. Of 11 ill people with information available, 9 (82%) were hospitalized. One death was reported from California. In six (46%) ill people, *Salmonella* was found in samples of blood, which indicates their illnesses may have been more severe. *Salmonella* Dublin is known to commonly cause more severe illnesses than other *Salmonella* strains, particularly in older people.

Whole genome sequencing analysis did not identify any antibiotic resistance in 20 bacterial isolates from 13 ill people and seven food specimens. Testing of two clinical isolates using standard [antibiotic susceptibility testing](#) methods by CDC's [National Antimicrobial Resistance Monitoring System \(NARMS\)](#) confirmed these results.

Investigation of the Outbreak

[Epidemiologic, traceback, and laboratory evidence](#) indicated that ground beef was the likely source of this outbreak.

In interviews, ill people answered [questions about the foods they ate and other exposures](#) in the week before they became ill. Of nine people interviewed, eight (89%) reported eating ground beef at home. This percentage was significantly higher than results from a survey of healthy people in which 40% of respondents reported eating any ground beef at home in the week before they were interviewed. Ill people reported buying ground beef from various stores.

Laboratory testing identified the outbreak strain of *Salmonella* Dublin in repackaged leftover ground beef collected from an ill person's home in California. The outbreak strain of *Salmonella* Dublin was also identified in six samples of raw beef products from slaughter and processing establishments. Samples from slaughter and processing establishments were collected as part of FSIS's routine testing under the *Salmonella* performance standards. WGS showed that the *Salmonella* strain from these samples was closely related genetically to the *Salmonella* from ill people. These results provided more evidence that people in this outbreak got sick from eating ground beef.

USDA-FSIS and state partners traced the source of some of the ground beef eaten by one ill person in this outbreak to Central Valley Meat Co., Inc. On November 15, 2019, Central Valley Meat Co., Inc., recalled 34,222 pounds of ground beef produced that may be contaminated with *Salmonella* Dublin.

A single supplier, distributor, or brand of ground beef was not identified that could account for all the illnesses in this outbreak.

As of December 30, 2019, this outbreak appears to be over.