

Salmonella Outbreak Linked to Cucumbers



Food Safety Alert

Posted August 22, 2024

This outbreak is over. Learn what you can do to [protect yourself from getting sick from Salmonella](#).

Fast Facts

- - Illnesses: 551
 - Hospitalizations: 155
 - Deaths: 0
 - [States](#): 34 states and the District of Columbia
 - Recall: Yes
 - Investigation status: Closed (first posted on June 5, 2024)



Outbreak Investigation Summary

This outbreak is over. Epidemiologic, traceback, and laboratory data showed that cucumbers were contaminated with *Salmonella* and made people sick. Testing identified the *Salmonella* Braenderup outbreak strain in untreated canal water used by a grower in Florida. An additional grower was identified as a likely source of illnesses in this outbreak. Cucumbers from both of these growers are no longer in season and products are no longer on shelves.

Recalled Food

Fresh Start Produce Sales Inc. issued a [recall](#) of whole cucumbers due to the potential of being contaminated with *Salmonella*. Recalled cucumbers did not account for all the illnesses in this outbreak.

What You Should Do

Follow these [four food safety steps](#) to prevent getting sick from *Salmonella*.

- **Clean:** Wash your hands, utensils, and surfaces often. Rinse fruits and vegetables under running water before eating, cutting, or peeling.
- **Separate:** Keep food that won't be cooked separate from raw meat, poultry, and seafood.
- **Cook:** Use a food thermometer to make sure you have cooked your food to a [temperature high enough to kill germs](#).
- **Chill:** Refrigerate perishable food (food that goes bad) within 2 hours. If the outside temperature is hotter than 90°F, refrigerate within 1 hour. Thaw food in the refrigerator, not on the counter.

Symptoms of *Salmonella*

- Most people infected with *Salmonella* experience diarrhea, fever, and stomach cramps.
 - Symptoms usually start 6 hours to 6 days after swallowing the bacteria.
 - Most people recover without treatment after 4 to 7 days.
- Some people—especially children younger than 5 years, adults 65 years and older, and people with weakened immune systems—may experience more severe illnesses that require medical treatment or hospitalization.

Investigation Details

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CDC, public health and regulatory officials in several states, and the U.S. Food and Drug Administration (FDA) collected [different types of data](#) to investigate a multistate outbreak of *Salmonella* Africana and *Salmonella* Braenderup infections. Epidemiologic, traceback and laboratory data showed that cucumbers were contaminated with *Salmonella* and made people sick.

CDC and FDA combined two outbreak investigations of *Salmonella* Africana and *Salmonella* Braenderup infections as they shared several similarities, including where and when illnesses occurred, the demographics of ill people and the foods they reported eating before they became sick.

Epidemiologic Data

As of August 22, 2024, a total of 551 people infected with one of the outbreak strains of *Salmonella* Africana or *Salmonella* Braenderup were reported from 34 states and the District of Columbia (see [map](#)). Of these illnesses, 269 people were infected with the *Salmonella* Braenderup strain and 282 people were infected with the *Salmonella* Africana strain. Illnesses started on dates ranging from March 11, 2024, to July 26, 2024 (see [timeline](#)). Of 456 people with information available, 155 were hospitalized and no deaths were reported.

The true number of sick people in this outbreak was likely much higher than the number reported, and the outbreak may not have been limited to the states with known illnesses. This is because many people recover without medical care and are not tested for *Salmonella*. In addition, recent illnesses may not yet be reported as it usually takes 3 to 4 weeks to determine if a sick person is part of an outbreak.

Public health officials collect many different types of information from sick people, including their age, race, ethnicity, other demographics, and the foods they ate in the week before they got sick. This information provides clues to help investigators identify the source of the outbreak.

The table below has information about sick people in this outbreak (“n” is the number of people with information available for each demographic).

Table of demographic information (n is the number of people with information available)

Demographics	Information
Age (n=549)	Range from <1 to 94 years Median age of 48

Table of demographic information (n is the number of people with information available)

Demographics	Information
Sex (n=548)	68% female 32% male
Race (n=452)	84% White 12% African American/Black <1% Native American or Alaska Native 3% Asian 0% Native Hawaiian or other Pacific Islander <1% Middle Eastern/North African <1% reported more than one race
Ethnicity (n=451)	90% non-Hispanic 10% Hispanic

State and local public health officials interviewed people about the foods they ate in the week before they got sick. Of the 226 people interviewed, 155 (69%) reported eating cucumbers. This percentage was significantly higher than the 50% of respondents who reported eating cucumbers in the [FoodNet Population Survey](#)—a survey that helps estimate how often people eat various foods linked to diarrheal illness. This difference suggests that people in this outbreak got sick from eating cucumbers.

Laboratory and Traceback Data

Public health investigators used the [PulseNet](#) system to identify illnesses that may have been part of this outbreak. CDC PulseNet manages a national database of DNA fingerprints of bacteria that cause foodborne illnesses. DNA fingerprinting is performed on bacteria using a method called [whole genome sequencing \(WGS\)](#). WGS showed that bacteria from sick people's samples are closely related genetically. This means that people in this outbreak likely got sick from the same type of food.

[WGS analysis](#) of bacteria from 268 people's samples and six environmental samples had no predicted resistance to antibiotics and bacteria from 275 people's samples predicted resistance to fosfomycin only. Eight people's samples predicted resistance to two or more of the following antibiotics: amoxicillin-clavulanic acid, ampicillin, azithromycin, cefoxitin, ceftiofur,

ceftriaxone, ciprofloxacin, fosfomycin, and tetracycline. More information is available at the [National Antimicrobial Resistance Monitoring System \(NARMS\)](#) site. Most people with *Salmonella* illness recover without antibiotics. However, if antibiotics are needed, some illnesses in this outbreak may be difficult to treat with some commonly recommended antibiotics and may require a different antibiotic choice.

Epidemiologic, traceback, and laboratory data determined that cucumbers from Bedner Growers, Inc. of Boynton Beach, Florida and Thomas Produce Company of Boca Raton, Florida were likely sources of illnesses in this outbreak; however, these growers did not account for all the illnesses in this outbreak.

As part of the investigation, FDA conducted an onsite inspection at Bedner Growers, Inc. and Thomas Produce Company, and collected samples. *Salmonella* Braenderup was identified in canal water at both farms. WGS determined that the *Salmonella* found in canal water matched two of the strains of *Salmonella* Braenderup that made some of the people in this outbreak sick. Additional types of *Salmonella* were detected in both soil and water samples collected at both Bedner Growers, Inc. and Thomas Produce Company. Bedner Growers, Inc.'s and Thomas Produce Company's cucumber growing and harvesting season is over. There is no product from these farms on the market and no ongoing risk to the public.

Public Health Actions

Fresh Start Produce Sales Inc. issued a [recall](#) of whole cucumbers due to the potential of being contaminated with *Salmonella*. Bedner Growers, Inc. and Thomas Produce Company in Florida are no longer growing and harvesting cucumbers for the season. There is no product from these farms on the market and no ongoing risk to the public.