

Salmonella Outbreak Linked to Seafood



Food Safety Alert

Posted December 6, 2021

This outbreak is over. Stay up to date on food recalls and outbreaks to avoid getting sick from eating contaminated food.

Fast Facts

- Illnesses: 115
- Hospitalizations: 20
- Deaths: 0
- [States](#): 15
- Recall: Yes
- Investigation status: Closed

Seafood distributed by Northeast Seafood Products of Denver, Colorado

- Distributed to restaurants and grocery stores in Colorado through October 7, 2021
- Seafood types include haddock, monkfish, bone-in trout, grouper, red snapper, red rock cod, ocean perch, Pacific cod, halibut, coho salmon, Atlantic salmon portions, lane snapper, tilapia, all natural salmon fillet, Pacific sole, and farm raised striped bass

Sick people reported eating a variety of raw and cooked seafood from restaurants and grocery stores. Investigators identified Northeast Seafood Products as a common supplier and found the outbreak strain in the company's production facility.

What You Should Do

- Stay up to date on food recalls and outbreaks to avoid getting sick from eating contaminated food.
- Always follow these four food safety steps:

- **Clean:** Wash your hands, utensils, and surfaces often.
- **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 food is exposed to temperatures above 90°F (like a hot car or picnic), refrigerate within 1 hour. Thaw food in the refrigerator, not on the counter

Investigation Details

Posted December 6, 2021

This outbreak is over. Stay up to date on food recalls and outbreaks to avoid getting sick from eating contaminated food.

December 6, 2021

CDC, public health and regulatory officials in several states, and the U.S. Food and Drug Administration (FDA) investigated a multistate outbreak of *Salmonella* Thompson infections.

Epidemiologic, traceback, and laboratory data showed that seafood distributed by Northeast Seafood Products of Denver, Colorado, made people sick.

As of December 6, 2021, this outbreak is over.

Epidemiologic Data

A total of 115 people infected with the outbreak strain of *Salmonella* Thompson were reported from 15 states. The true number of sick people in an outbreak is likely much higher than the number reported. This is because many people recover without medical care and are not tested for *Salmonella*.

Most of the sick people were either Colorado residents (93 people) or reported traveling to Colorado in the week before they got sick (14 people). Illnesses started on dates ranging from May 11, 2021, to October 16, 2021. Sick people ranged in age from less than 1 to 85 years, with a median age of 39, and 53% were female. Of 111 people with information available, 20 were hospitalized and no deaths were reported.

State and local public health officials interviewed people about the foods they ate in the week before they got sick. Among 81 people interviewed, 67 (83%) reported eating seafood, including raw seafood in sushi and cooked seafood. This percentage was significantly higher than the 35% of respondents from the FoodNet Population Survey who reported eating seafood in the prior week. This comparison suggests that people in this outbreak got sick from eating seafood.

Traceback Data

Sick people reported eating seafood served at restaurants and sold at grocery stores in Colorado. Colorado state health officials and FDA traced the source of seafood, and FDA determined that Northeast Seafood Products was the supplier of seafood to most of these restaurants and grocery stores.

Laboratory Data

Public health investigators used the PulseNet system to identify illnesses that were 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 were closely related genetically. This suggests that people in this outbreak got sick from the same food.

FDA inspected the Northeast Seafood Products facility and collected environmental samples for testing. On October 7, 2021, laboratory results identified the outbreak strain in the environmental samples.

Testing of three sick people's samples using standard antibiotic susceptibility testing methods by CDC's National Antimicrobial Resistance Monitoring System (NARMS) laboratory showed no resistance. WGS analysis of bacteria from 111 sick people's samples and 13 environmental samples did not predict resistance to any antibiotics. One person's sample was predicted to be resistant to tetracycline. Most people with *Salmonella* illness recover without antibiotics. However, if antibiotics were needed, this resistance was unlikely to affect the choice of antibiotic used to treat most people.

Public Health Actions

On October 8, 2021, Northeast Seafood Products recalled several types of seafood processed at their facility.

Previous Updates

[October 8, 2021](#)

CDC, public health and regulatory officials in several states, and the U.S. Food and Drug Administration (FDA) are collecting different types of data to investigate a multistate outbreak of *Salmonella* Thompson infections linked to seafood.

Epidemiologic, laboratory, and traceback data show that this outbreak is linked to seafood distributed by Northeast Seafood Products of Denver, Colorado.

Epidemiologic Data

As of October 7, 2021, 102 people infected with the outbreak strain of *Salmonella* Thompson have been reported from 14 states. The majority of sick people are

either Colorado residents or reported traveling to Colorado in the week before they got sick. Only two people did not report travel to Colorado in the week before they got sick. Illnesses started on dates ranging from May 11, 2021, to September 7, 2021.

Sick people range in age from less than 1 to 85 years, with a median age of 39, and 53% are female. Of 89 people with information available, 19 have been hospitalized, and no deaths have been reported.

The true number of sick people in an outbreak is likely much higher than the number reported, and the outbreak may not be 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.

State and local public health officials are interviewing people about the foods they ate in the week before they got sick. Among 62 people interviewed, 51 (82%) reported eating seafood. This percentage is significantly higher than the 35% of respondents from the FoodNet Population Survey who reported eating seafood in the prior week. Sick people reported eating a variety of seafood both raw as sushi and cooked.

Laboratory and Traceback Data

Public health investigators are using the PulseNet system to identify illnesses that may be 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). For this outbreak, WGS showed that bacteria from sick people's samples are closely related genetically. This suggests that people in this outbreak got sick from eating the same food.

Colorado state health officials and FDA traced the source of seafood served at restaurants and sold at grocery stores in Colorado where sick people ate or shopped. FDA determined that Northeast Seafood Products of Denver, Colorado, was the supplier of seafood to most of these locations.

During an FDA inspection of the Northeast Seafood Products facility, FDA collected environmental samples and identified the outbreak strain of *Salmonella* Thompson in the facility.

Testing of three sick people's samples using standard antibiotic susceptibility testing methods by CDC's National Antimicrobial Resistance Monitoring System (NARMS) laboratory showed no resistance. WGS analysis of bacteria from 92 sick people's samples did not predict resistance to any antibiotics. One person's sample was predicted to be resistant to tetracycline. Most people with *Salmonella* illness recover without antibiotics. However, if antibiotics are needed, this resistance is unlikely to affect the choice of antibiotic used to treat most people.

Public Health Actions

On October 8, 2021, Northeast Seafood Products of Denver, Colorado, recalled certain types of seafood processed at their facility since October 7, 2021, including Haddock, Monkfish, Bone-in Trout, Grouper, Red Snapper, Red Rock Cod, Ocean Perch, Pacific Cod, Halibut, Coho Salmon, Atlantic Salmon Portions, Lane Snapper, Tilapia, All Natural Salmon Fillet, Pacific Sole, and Farm Raised Striped Bass.