

Outbreak of *E. coli* Infections Linked to Ground Bison Produced by Northfork Bison Distributions, Inc.

Final Update



Food Safety Alert

Posted September 13, 2019 at 4:00 PM ET

This outbreak appears to be over. Shiga toxin-producing *Escherichia coli* (STEC) is an important cause of illness in the United States. Find more information about steps you can take to reduce your risk of infection on the [E. coli and Food Safety web page](#).

CDC, several states, the U.S. Food and Drug Administration, and the Canadian Food Inspection Agency investigated a multistate outbreak of *E. Coli* O103 and *E. Coli* O121 infections linked to ground bison.

Recall and Advice to Consumers, Restaurants, and Retailers

At A Glance

- [Reported Cases](#): 33
- [States](#): 8
- Hospitalizations: 18
- Deaths: 0
- Recall: Yes

Advice

Always [handle and cook ground meats safely](#) to avoid foodborne illness. Thoroughly cook ground bison and any food that contains ground bison to an internal temperature of 160°F to kill germs. Never eat, serve, or sell recalled ground bison.

Wash hands with soap and water after touching raw ground bison. Use hot, soapy water or a [bleach solution](#) to wash items that came in contact with raw meat or its juices.

- If you have recalled ground bison burger n your home, do not eat them. Throw them away or return them to the store for a refund. Even if some of the recalled patties were eaten and no one got sick, do not eat them.
 - Wash and sanitize places where recalled ground bison products were stored, including refrigerator or freezer drawers and shelves.
 - When ordering at a restaurant, ask that ground bison burgers be cooked to an internal temperature of at least 160°F.
- Restaurants and retailers should not serve or sell recalled ground bison and should check freezers and storage for recalled products. Restaurants and retailers should check with their supplier to determine if their ground bison has been recalled.
- In general, always [handle and cook ground bison safely](#) to avoid foodborne illness. Thoroughly cook ground bison and any food that contains ground bison to an internal temperature of 160°F to kill germs.

Recall

On July 16, 2019, Northfork Bison Distributions, Inc., in Saint-Leonard, Quebec, Canada, recalled ground bison produced between February 22, 2019, and April 30, 2019. Recalled ground bison was sold to distributors as ground bison and bison patties, referred to as Bison Burgers and/or Buffalo Burgers. Recalled ground bison was also sold to retailers in 4-ounce burger patties.

- Do not eat, sell, or serve recalled Northfork Bison products.
- Retailers and restaurants should not use recalled ground bison products. Throw the product out and sanitize any surfaces that may have come in contact with recalled ground bison or products made with recalled ground bison.

Final Outbreak Information

- As of September 13, 2019, this outbreak appears to be over.
- A total of 33 people infected with the outbreak strain of STEC O103 and STEC O121 were reported from eight states.
 - Eighteen people were hospitalized. No cases of hemolytic uremic syndrome, a type of kidney failure, were reported. No deaths were reported.

- [Epidemiologic, traceback, and laboratory evidence](#) indicated that ground bison produced by Northfork Bison Distributions, Inc., was the likely source of this outbreak.
- On July 16, 2019, Northfork Bison Distributions, Inc., in Saint-Leonard, Quebec, Canada, recalled ground bison and bison patties (referred to as Bison Burgers and/or Buffalo Burgers) produced between February 22, 2019, and April 30, 2019.
- Restaurants, retailers, and institutions should not sell or serve recalled ground bison.
- Always handle ground bison safely and cook it to an internal temperature of 160°F to kill germs.

Symptoms of *E. coli* Infection

- People usually get sick from Shiga toxin-producing *E. coli* (STEC) 3 to 4 days after swallowing the germ.
- Symptoms often include severe stomach cramps, diarrhea (often bloody), and vomiting, and usually last 5 to 7 days.
- Some people with a STEC infection may get a type of kidney failure called hemolytic uremic syndrome.

Investigation Details

September 13, 2019

CDC, several states, the U.S. Food and Drug Administration (FDA), and the Canadian Food Inspection Agency investigated a multistate outbreak of *E. Coli* O103 and *E. Coli* O121 infections linked to ground bison from Northfork Bison Distributions, Inc.

Public health investigators used the [PulseNet](#) system to identify illnesses that may have been part of this outbreak. PulseNet is the national subtyping network of public health and food regulatory agency laboratories coordinated by CDC. DNA fingerprinting is performed on *E. coli* bacteria isolated from ill people by using a standardized laboratory and data analysis method called [whole genome sequencing](#) (WGS). CDC PulseNet manages a national database of these sequences that are used to identify possible outbreaks. WGS gives investigators detailed information about the bacteria causing illness. In this investigation, WGS showed that bacteria isolated from ill people were closely related genetically. This

means that people in this outbreak were more likely to share a common source of infection.

A total of 33 people infected with the outbreak strain of STEC O103 (8 people), STEC O121 (21 people), or both (4 people) were reported from 8 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 [March 18, 2019, to August 11, 2019](#). Ill people ranged in age from 6 to 80 years, with a median age of 27. Fifty-two percent of ill people were female. Of 31 ill people with information available, 18 hospitalizations were reported. No deaths were reported, and no cases of hemolytic uremic syndrome, a type of kidney failure, have been reported.

[WGS analysis](#) of isolates from 26 ill people was performed; isolates from 10 ill people predicted [antibiotic resistance](#) to streptomycin, sulfisoxazole, tetracycline, and trimethoprim-sulfamethoxazole, and 16 isolates from ill people did not show evidence of antibiotic resistance. Standard [antibiotic susceptibility testing](#) by CDC's [National Antimicrobial Resistance Monitoring System \(NARMS\)](#) laboratory is currently underway. These findings do not affect treatment guidance since antibiotics are not recommended for patients with STEC O121 or STEC O103 infections.

Investigation of the Outbreak

This investigation began on June 10, 2019, when PulseNet notified CDC of this outbreak. [Epidemiologic, traceback, and laboratory evidence](#) indicated that ground bison produced by Northfork Bison Distributions, Inc., 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 the 23 people who were asked, 13 (57%) reported that they ate or maybe ate ground bison. Ill people ate ground bison in burgers from several different restaurants or prepared ground bison at home.

Federal, state, and local officials collected records from the restaurants where ill people ate ground bison. These records showed that the ground bison produced by Northfork Bison Distributions, Inc., was sold in several restaurants where ill

people ate ground bison. The outbreak strain of STEC O121 was isolated from bison burgers manufactured by the Canadian firm.

On July 16, 2019, Northfork Bison Distributions, Inc., in Saint-Leonard, Quebec, Canada, recalled ground bison and bison patties (referred to as Bison Burgers and/or Buffalo Burgers) produced between February 22, 2019, and April 30, 2019. Consumers should not eat, and restaurants and retailers should not serve or sell, recalled ground bison products.

As of September 13, 2019, this outbreak appears to be over.