



# Salmonella Typhimurium Outbreaks Associated with Ground Beef

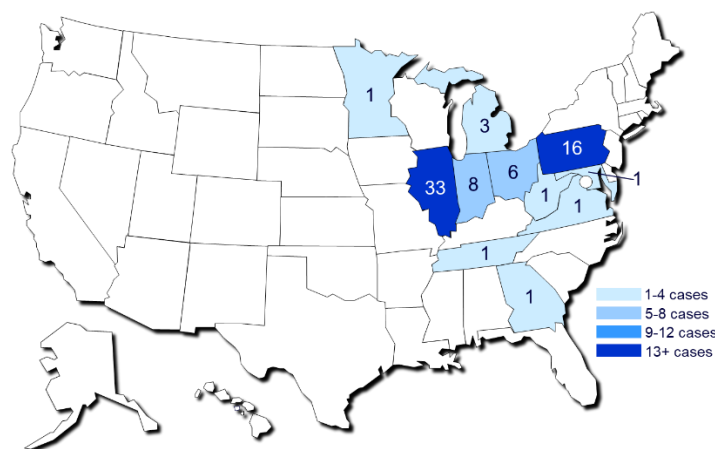
After-Action Review Reports 2023-03, 2024-03

## Highlights

- The Food Safety and Inspection Service (FSIS) and public health partners investigated two genetically related outbreaks of *Salmonella* Typhimurium illnesses in consecutive years (2023 and 2024).
- Both investigations focused on ground beef as the exposure of interest, but evidence did not support a link between a specific production date, production lot, or source material and human illnesses. Incomplete and/or inaccurate retail grinding records continue to be a concern that hinders FSIS' ability to trace ground beef processed and packaged at retail stores back to the supplier(s).

Outbreaks at a Glance	Outbreak 1	Outbreak 2
Illnesses	44	28
States included	7	8
Hospitalizations	16	14
Deaths	0	0
Response at a Glance		
Recall or Public Health Alert	No	No

State of residence of people infected with *Salmonella* Typhimurium



## What Happened?

From May to July 2023, and from September to October 2024, public health officials in multiple States, the Centers for Disease Control and Prevention (CDC), and FSIS investigated two genetically related outbreaks of *Salmonella* Typhimurium illnesses associated with ground beef. In addition to the human illnesses included in these two outbreaks, the outbreak strain of *Salmonella* was identified in a 2022 FSIS routine ground beef sample, in leftover ground beef collected from a consumer's freezer during the 2023 investigation (but no packaging was available to identify the source), and in swine cecal (intestinal) contents from a sample collected as part of the [National Antimicrobial Resistance Monitoring System](#) in 2024.



FSIS used purchase records to trace back ground beef during both investigations. Many ill people had purchased ground beef that was further processed and packaged at retail stores. Multiple retail locations did not maintain adequate grinding records, which required FSIS to increase the scope of potential materials that could have been associated with the purchases of interest. Evidence gathered did not support a link between a specific production date, production lot, or source material and human illnesses.

## What we Learned from these Outbreaks

### One Health Collaboration



While this *Salmonella* Typhimurium strain has not been designated as a [reoccurring, emerging, or persisting strain](#) by the CDC at this time, it is noteworthy that two outbreaks caused by this strain occurred in similar geographic areas in consecutive years. FSIS shared information on these outbreaks with industry representatives and continues to work with public health partners to use a [One Health](#) approach to better understand the potential source(s) of strains that cause outbreaks. Following these investigations, FSIS continues to monitor whole genome sequencing data for additional information that may provide clues into possible reservoirs of this strain.

## Retail Grinding Log Issues



Incomplete and/or inaccurate retail grinding records hindered FSIS' traceback investigations. Retailers that grind beef must be aware of, and compliant with, [grinding recordkeeping requirements](#). These records can provide key evidence that investigators need to solve an outbreak, take action, and prevent additional people from getting sick. FSIS will continue to proactively engage with retailers to provide resources on grinding log requirements.

## What Can You Do to Prevent or Solve the Next Outbreak?

Industry	Public Health Partners	Consumers
<p>Maintain complete and accurate grinding logs for all retail processed and packaged ground beef, as required by <a href="#">9 CFR 320.1 (b)(4)</a>. These records are required and can be an essential piece of evidence to solve an outbreak and prevent additional illnesses.</p>	<p>Continue to work closely with local, State, and Federal partners to detect and investigate outbreaks. Email <a href="mailto:FoodborneDiseaseReports@usda.gov">FoodborneDiseaseReports@usda.gov</a> to notify FSIS if FSIS-regulated products may be involved in an outbreak.</p> <p>Understand and help promote <a href="#">grinding record requirements</a> at retail stores that process and package ground beef.</p>	<p>If you think you have a foodborne illness, see a health care provider for treatment. Your health care provider can test you and if the tests show you have a reportable foodborne illness, your State or local public health officials should be notified. If contacted by public health officials, provide information on foods you ate and associated purchase records. This information can provide key evidence to investigators to solve an outbreak.</p> <p>If you suspect a food product made you sick, <a href="#">report the problem</a> to FSIS or the appropriate public health agency.</p>

## Helpful Links

- [Public Health Officials Warn about a \*Salmonella\* Outbreak Affecting NE Illinois, June 7, 2023](#)
- [Records to be Kept by Official Establishments and Retail Stores that Grind Raw Beef Products](#)
- [Report a Problem with Food](#)
- [FSIS Outbreak Investigations: Response](#)
- [One Health \(USDA\)](#)