Food Safety and Inspection Service
U.S. DEPARTMENT OF AGRICULTURE

Clostridium botulinum (Botulism) Illness Potentially Associated with Commercially Canned Soup

After-Action Review Report 2022-03

Highlights

- The Food Safety and Inspection Service (FSIS) and the Centers for Disease Control and Prevention (CDC) investigated a *Clostridium botulinum* (Botulism) illness possibly linked to a commercially canned soup product. Botulism is a rare but serious illness that attacks the body's nerves.
- CDC confirmed botulinum toxin was present in the patient's blood and an empty soup can.
- The can was made in a dual jurisdiction establishment that produces and ships products regulated by FSIS and the Food and Drug Administration (FDA).
- FSIS gathered records to identify and obtain cans from the same production lot in commerce. The cans were tested by FSIS laboratories and the contents were found to be negative for the bacterium (*C. botulinum*) and the botulism toxin.

Investigation at a Glance

Illnesses	1
States included	1
Hospitalizations	1
Deaths	0

Response at a Glance

Investigative samples tested by FSIS	37
Recall or Public Health Alert	No

Process Improvements

FSIS will reemphasize the need for consumers to not buy or use damaged cans by incorporating messaging on this topic into its regular social media postings targeted towards consumers. These social media postings include both the English and Spanish Twitter accounts as well as the FoodSafety.gov Facebook page.

What happened?

On December 7, 2021, CDC informed FSIS of a suspect botulism illness in one state (Arizona). Botulism is a rare but serious illness caused by toxins that attack the body's nerves. The Arizona Department of Health Services (AZDHS) collected samples from the patient's home, including an empty can of chicken rice with vegetables soup that was recovered from the kitchen trash, and sent the samples to CDC for botulinum toxin testing. On December 10, 2021, CDC notified FSIS that botulinum toxin type A was identified in both the patient and the empty soup can. AZDHS staff noted that the can was dented but not leaking or bulging. The soup reportedly had an abnormal odor when opened. A microwave was used to heat the soup. No other cans of this product were available at the home for testing.

FSIS investigated the federally inspected establishment that manufactured the soup and did not find anything of concern. No cans remained at the establishment from the same lot as the can that was tested. The FSIS collected 37 cans of product in commerce with the same lot code and time of production, between 401 minutes before and 179 minutes after the timestamp on the CDC-tested can. These cans were tested as a joint laboratory investigation between the FSIS laboratory system and the Food Emergency Response Network (FERN). No leaks or defects were found in the cans collected from commerce and testing for C. botulinum and botulism toxins was negative.

Based on investigation of the establishment and laboratory, this appears to have been an isolated incident. The can could have been damaged at some point after production, and this may have led to the contamination of the contents of the can. For this reason, FSIS and public health partners recommend consumers examine cans and discard cans that are damaged or bulging, and do not consume contents that have an abnormal smell.

What we learned from this outbreak

Consumer education

This illness underscores the importance of consumer education regarding hazards associated with eating food from damaged or dented cans. Continued work by FSIS and public health partners is encouraged to educate consumers on the risks of consuming spoiled or dented canned food.

Good communication

This investigation highlights the importance of a quick response and good collaboration between state and federal public health partners involving an uncommon bacteria (C. botulinum). Open lines of communication facilitated the timely collection of samples, locating cans in commerce, and relaying laboratory results. Continuing to foster relationships with public health partners will enable FSIS to continue to quickly respond to future outbreaks.

What can you do to prevent or solve the next outbreak?

Retailers

Retailers should examine cans during the stocking process and set aside cans that are damaged or bulging. Retailers should not sell cans that appear to be damaged, bulging or leaking.

Public Health Partners

Continue to work closely with local, state, and federal partners to build partnerships to detect and investigate outbreaks. Public health partners should let FSIS know (FoodborneDiseaseReports@usda.gov) if FSIS-regulated products may be suspected in an outbreak.

Please visit the FERN website for information on becoming a FERN laboratory member.

Consumers

Botulism, while rare, is often linked to canned foods. FSIS encourages consumers to discard cans and not to eat foods from containers that are leaking, bulging or swollen, look damaged or cracked, or seem abnormal in appearance. For more information on how to prevent foodborne botulism, please visit the FSIS website, the CDC website, and download the FSIS fact sheet.

Helpful Links

- Clostridium botulinum (usda.gov)
- Clostridium botulinum & Botulism | Food Safety and Inspection Service (usda.gov)
- Shelf-Stable Food Safety Food Safety and Inspection Service (usda.gov)
- CDC Botulism page
- Food Poisoning Symptoms
- Food Emergency Response Network (FERN)
- Resources for Public Health Partners
- Microbiology Laboratory Guide for Examination of Canned and Aseptically Processed, Hermetically Sealed Meat and Poultry Products
- Report a Problem with Food | Food Safety and Inspection Service (usda.gov)
- Find more information about FSIS' response to foodborne outbreaks on the FSIS Outbreaks page.
- Subscribe to get email updates from FSIS about food safety, including actions consumers can take when specific products are linked to illness outbreaks.