



Centers for Disease Control and Prevention
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E. coli

Multistate Outbreak of Shiga Toxin-producing *Escherichia coli* O145 Infections

Posted June 10, 2012 01:00 AM ET

At a Glance:

- **Case Count: 14** (</ecoli/2012/O145-06-12/epi.html>)
- **States: 6** (</ecoli/2012/O145-06-12/map.html>)
- **Deaths: 1**
- **Hospitalizations: 3**

More Information:

- Advice to Consumers (</ecoli/2012/O145-06-12/advice-consumers.html>)
- Signs & Symptoms (</ecoli/2012/O145-06-12/signs-symptoms.html>)
- Key Resources (</ecoli/2012/O145-06-12/key-resources.html>)

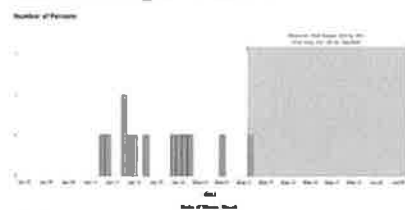
Latest Case Count Map



(</ecoli/2012/O145-06-12/map.html>)

Click map to view case count map. (</ecoli/2012/O145-06-12/map.html>)

Latest Epi Curve



(</ecoli/2012/O145-06-12/epi.html>)

Click graph to view epi curve graph. (</ecoli/2012/O145-06-12/epi.html>)

Highlights

- **Read the Advice to Consumers »** (</ecoli/2012/O145-06-12/advice-consumers.html>)
- A total of 14 persons infected with the outbreak strain of STEC O145 infection have been identified in 6 states.
 - The number of ill persons identified in each state is as follows: Alabama (2), California (1), Florida (1), Georgia (5), Louisiana (4), and Tennessee (1).
 - Three ill persons have been hospitalized; one death has been reported in Louisiana.

- Based on interviews conducted to date, a source for these infections has not been identified. If a specific source is identified, public health officials will advise the public and take steps to prevent additional illnesses.
- Dates for patients' onset of illness range from April 15 to May 12, 2012. It has been approximately 4 weeks since the last illness onset among reported cases. Although this indicates that this outbreak could be over, CDC continues to work with state public health officials to identify additional cases and the source of these STEC O145 infections.

Initial Announcement

June 10, 2012

CDC is collaborating with public health officials in multiple states to investigate a multistate outbreak of Shiga toxin-producing *Escherichia coli* serogroup O145 (STEC O145) infections. Public health investigators are using DNA "fingerprints" of *E. coli* bacteria obtained through diagnostic testing with pulsed-field gel electrophoresis, or PFGE, to identify cases of illness that may be part of this outbreak. They are using data from PulseNet ([/pulsenet/](http://pulsenet/)), the national subtyping network made up of state and local public health laboratories and federal food regulatory laboratories that performs molecular surveillance of foodborne infections.

The type of bacteria responsible for this outbreak is among those referred to as Shiga toxin-producing *E. coli* or STEC. STEC bacteria are grouped by serogroups (e.g., O157 or O145). The STEC serogroup found most commonly in U.S. patients is *E. coli* O157. Other *E. coli* serogroups in the STEC group, including O145, are sometimes called "non-O157 STECs." Some types of STEC frequently cause severe disease, including bloody diarrhea and hemolytic uremic syndrome (HUS) which is a type of kidney failure. Currently, there are limited public health surveillance data on the occurrence of non-O157 STECs, including STEC O145; many STEC O145 infections may go undiagnosed or unreported. Compared with STEC O157 infections, identification of non-O157 STEC infections is more complex. First, clinical laboratories must test stool samples for the presence of Shiga toxins. Then, the positive samples must be sent to public health laboratories to look for non-O157 STEC. Clinical laboratories typically cannot identify non-O157 STEC. The STEC O145 PFGE pattern in this outbreak has not been seen in PulseNet before.

Case Count

A total of 14 persons infected with the outbreak strain of STEC O145 infection have been identified in 6 states: Alabama (2), California (1), Florida (1), Georgia (5), Louisiana (4), and Tennessee (1). Among persons for whom information is available, illness onset dates range from April 15, 2012 to May 12, 2012. The time from the beginning of a patient's illness to the confirmation that he or she was part of an outbreak is typically about 2-3 weeks. Please see the [E. coli Outbreak Investigations: Timeline for Reporting Cases \(/ecoli/reportingtimeline.htm\)](http://ecoli.reportingtimeline.htm) for more details. Ill persons range in age from 1 year to 79 years old, with a median age of 33 years old; 79% are female. Three ill persons have been hospitalized; one death has been reported in Louisiana.

Initial Investigation Information

CDC initiated an investigation into this cluster of illnesses on May 14, 2012. At that time, six ill persons had been reported to CDC PulseNet from two states during May 3, 2012 to May 9, 2012. Although the most recent report of an illness to CDC was on June 4, 2012, their onset of illness occurred before May 10, 2012 and was during same period as other ill persons in this outbreak.

It has been approximately 4 weeks since the last illness onset among reported cases. Although this indicates that the outbreak could be over, CDC continues to work with state public health officials to identify additional cases and the source of these STEC O145 infections.

State public health officials have been interviewing ill persons to obtain information regarding foods they might have eaten and other exposures in the week before illness. Based on interviews of 10 ill persons to date, a source for these infections has not been identified.

Initial Laboratory Testing Information

Preliminary results indicate that this strain of *E. coli* produces Shiga toxin type 2 and is susceptible to all antibiotics tested.

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Content source: Centers for Disease Control and Prevention

National Center for Emerging and Zoonotic Infectious Diseases (NCEZID)

Division of Foodborne, Waterborne, and Environmental Diseases (DFWED)

Centers for Disease Control and Prevention 1600 Clifton Rd. Atlanta, GA
30333, USA
800-CDC-INFO (800-232-4636) TTY: (888) 232-6348 - cdcinfo@cdc.gov

