



*E. coli (Escherichia coli)*

Multistate Outbreak of Shiga Toxin-producing *Escherichia coli* O157:H7 Infections Linked to Organic Spinach and Spring Mix Blend

Posted November 17, 2012 1:30 PM ET

At a Glance:

- **Case Count: 28** (</ecoli/2012/O157H7-11-12/epi.html>)
- **States: 5** (</ecoli/2012/O157H7-11-12/map.html>)
- **Deaths: 0**
- **Hospitalizations: 10**
- **Recall: Yes** (</ecoli/2012/O157H7-11-12/advice-consumers.html>)

More Information:

- [Advice to Consumers](/ecoli/2012/O157H7-11-12/advice-consumers.html) (</ecoli/2012/O157H7-11-12/advice-consumers.html>)
- [Signs & Symptoms](/ecoli/2012/O157H7-11-12/signs-symptoms.html) (</ecoli/2012/O157H7-11-12/signs-symptoms.html>)
- [Key Resources](/ecoli/2012/O157H7-11-12/key-resources.html) (</ecoli/2012/O157H7-11-12/key-resources.html>)

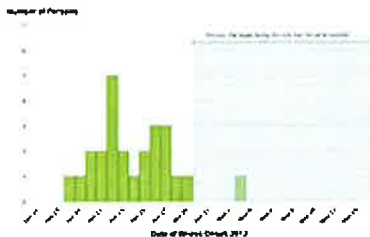
Latest Case Count Map



[\(/ecoli/2012/O157H7-11-12/map.html\)](/ecoli/2012/O157H7-11-12/map.html)

[Click map to view case count map. \(/ecoli/2012/O157H7-11-12/map.html\)](/ecoli/2012/O157H7-11-12/map.html)

Latest Epi Curve




[\(/ecoli/2012/O157H7-11-12/epi.html\)](/ecoli/2012/O157H7-11-12/epi.html)

[Click graph to view epi curve graph. \(/ecoli/2012/O157H7-11-12/epi.html\)](/ecoli/2012/O157H7-11-12/epi.html)

Highlights

- **Read the Advice to Consumers »** (</ecoli/2012/O157H7-11-12/advice-consumers.html>)

- A total of 28 persons infected with the outbreak strain of Shiga toxin-producing *Escherichia coli* O157:H7 (STEC O157:H7) have been reported from five states, with most cases in New York.
  - 42% of ill persons have been hospitalized. Two ill persons have developed hemolytic uremic syndrome (HUS), a type of kidney failure, and no deaths have been reported.
- The outbreak was initially in New York. More recently, more ill persons in other states have been reported, and the investigation has expanded.
- Collaborative investigation efforts of state, local, and federal public health and regulatory agencies indicate that Wegmans brand Organic Spinach and Spring Mix blend produced by State Garden of Chelsea, Massachusetts, is one likely source of this outbreak.
  - Four leftover packages of Wegmans brand Organic Spinach and Spring Mix blend collected from four ill persons' homes yielded the outbreak strain of STEC O157:H7.
  - On November 2, 2012, Wegmans recalled 5-ounce and 11-ounce packages of Organic Spinach and Spring Mix blend (<http://www.wegmans.com/webapp/wcs/stores/servlet/ProductRecallDetailView?storeId=10052&catalogId=10002&langId=-1&productId=750760>)  (<http://www.cdc.gov/Other/disclaimer.html>), produced by State Garden, because they may be contaminated with STEC O157:H7. The products were withdrawn from the market, and shoppers were notified.
- CDC recommends that consumers do not eat recalled Wegmans brand Organic Spinach and Spring Mix blend and that they dispose of any remaining product in the home or return the product to a Wegmans store location.
  - This is especially important for children under the age of 5 years, older adults, and people with weak immune systems because these people are at a higher risk for serious illness.
- Other brands of pre-packaged leafy greens have been reported by ill persons outside of New York. Investigations are ongoing to determine if other contaminated leafy greens are also a source of illness in this outbreak.

## Initial Announcement

November 17, 2012

CDC is collaborating with public health officials in several states and the U.S. Food and Drug Administration (FDA) to investigate a multistate outbreak of Shiga toxin-producing *Escherichia coli* O157 (STEC O157) infections. Preliminary results from this ongoing investigation indicate that Wegmans brand Organic Spinach and Spring Mix blend produced by State Garden of Chelsea, Massachusetts, is one likely source of this outbreak.

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 \(/pulsenet/\)](#), 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.

A total of 28 ill persons infected with the outbreak strain of STEC O157:H7 have been reported from five states. The number of ill people identified in each state with the outbreak strain is as follows: Connecticut (2), Massachusetts (2), New York (22), Pennsylvania (1), and Virginia (1).

Among persons for whom information is available, illness onset dates range from October 18, 2012 to November 3, 2012. Ill persons range in age from 4 years to 66 years, with a median age of 24 years. Sixty-eight percent of ill persons are female. Among 24 ill persons with available information, 10 (42%) reported being hospitalized. Two ill persons have developed hemolytic uremic syndrome, a type of kidney failure. No deaths have been reported.

This PFGE pattern has very rarely been seen before in PulseNet. It has been seen only 7 times prior to this outbreak. Illnesses that occurred after October 30, 2012 might not be reported yet due to the time it takes between when a person becomes ill and when the illness is reported. This outbreak can be visually described with a chart showing the number of persons who became ill each day. This chart is called an epi curve. [Please see the Timeline for Reporting of E. coli Cases for more details on the reporting process \(/ecoli/reporting-timeline.html\)](#).

## Investigation of the Outbreak

State public health officials are interviewing ill persons to obtain information regarding foods they might have eaten and other exposures in the week before illness. The outbreak was initially confined to New York, where preliminary information indicated that Wegmans brand Organic Spinach and Spring Mix blend was one likely source for illnesses, leading to a recall of this product on November 2, 2012. Since that time, more ill persons in other states have been reported, and the investigation has expanded.

Twenty-four (100%) of 24 ill persons reported eating pre-packaged leafy greens. In New York, 13 (81%) of 16 ill persons for whom we have information report eating Wegmans brand Organic Spinach and Spring Mix blend in the week before becoming ill. Outside of New York, all five (100%) of the ill persons interviewed in other states report eating several different brands of pre-packaged leafy greens that did not come from Wegmans. Investigations are ongoing to determine if other contaminated foods are also a source of illness in this outbreak.

Testing conducted by the New York Department Health Wadsworth Center Laboratories isolated the outbreak strain of STEC O157:H7 from four leftover packages of Wegmans brand Organic Spinach and Spring Mix blend collected from four ill persons' homes.

CDC and state and local public health partners are continuing laboratory surveillance through PulseNet to identify additional ill persons and to interview ill persons about foods eaten before becoming ill. FDA is continuing to work closely with CDC and state partners during this investigation. CDC will update the public on the progress of this investigation as information becomes available.

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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 \(DFWED\)](#)

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