



**LAC DPH Health Alert:
Local Cases of Shiga Toxin-Producing
E. Coli Linked to Romaine Lettuce**
November 26, 2018



*This message is intended for all primary care, emergency medicine, urgent care, and infectious disease providers as well as clinical laboratorians.
Please distribute as appropriate.*

Key Messages

- Nine Los Angeles County residents have been infected, to date, with the *Escherichia coli* strain associated with a multi-state outbreak of Shiga toxin-producing *E. coli* O157:H7 (STEC O157) linked to romaine lettuce.
- It is important that clinicians follow laboratory guidance to promptly detect STEC O157. In particular, clinicians must **specifically request** testing for STEC; specimens without a specific request are NOT tested for *E. coli* O157:H7. See Actions Requested for Clinicians.
- Laboratories must perform a reflex culture for all PCR tests positive for STEC. If unable to culture, the broth should be submitted to the Public Health Laboratory (PHL) for culture and identification. Send all suspect and culture confirmed STEC (including *E. coli* O157:H7) isolates to PHL. See Actions Requested for Laboratorians.

Situation

The Los Angeles County Department of Public Health (LAC DPH) is working with the California Department of Public Health (CDPH) and the Centers for Disease Control and Prevention (CDC) to investigate a national outbreak of Shiga toxin-producing *E. coli* O157 (STEC O157) likely associated with romaine lettuce.

To date, 50 people have been infected with the current outbreak strain in 11 states and in Canada. No deaths have been reported. Of the 32 U.S. patients, 9 are LA County residents. This represents a significant proportion (28%) of ill patients coming from our jurisdiction.

This is the second outbreak of food-borne illness associated with romaine lettuce this year. The majority of romaine lettuce is currently coming from end-of-season harvests in California. The Food and Drug Association (FDA) and CDC are advising that consumers do not eat any romaine lettuce because no common grower, supplier, distributor, or brand of romaine lettuce has yet been identified. This investigation is ongoing and the CDC will provide more information as it becomes available.

Actions Requested

Clinicians

- **Suspect STEC O157** in patients presenting with bloody diarrhea or hemolytic uremic syndrome (HUS).
- **Do not treat suspected STEC infections with antibiotics** as they may increase the risk of developing HUS and there is no clear evidence of benefit.
- **Specifically request testing for STEC culture and Shiga toxin testing if STEC O157 is suspected.** Stool specimens sent for culture and sensitivity without a specific request for STEC testing are **NOT** routinely tested for this pathogen type in most clinical settings. The medium of choice for culture isolation is sorbitol-MacConkey (SMAC) agar. Options for STEC laboratory testing may include stool culture, stool antigen testing, and molecular methods to detect STEC. Some laboratories perform multiplex PCR panels for gastrointestinal pathogens. These multiplex panels often include Shiga toxin gene or STEC. Providers should confirm STEC detection methods with their laboratories.
- **Report cases of STEC O157 to the local health jurisdiction for which the patient resides as soon as possible and within 24 hours after diagnosis.** Cases of STEC include those based on culture isolation, Shiga toxin antigen detection, or detection of the Shiga toxin gene. Case reports must include patient name, patient address, patient phone number, healthcare provider contact information, and laboratory test results.

Laboratorians

- **Attempt reflex to stool culture for STEC isolate recovery if a molecular or antigen-based test is positive for STEC.** This is required by law of laboratories (California Code of Regulations Title 17). If unable to culture, the primary specimen and/or enrichment broth must be submitted as soon as possible to PHL for further work-up.
- **Send suspect and culture-confirmed STEC (including *E. coli* O157:H7) isolates and specimens to the PHL** for confirmation, serotyping, and molecular epidemiologic characterization.

Symptoms and Treatment of STEC Infections

Symptomatic onset of STEC O157 is usually 2–8 days (average of 3–4 days) after exposure. Clinical manifestations may include history of severe abdominal pain, bloody diarrhea, no reported fever, a peripheral white blood cell count above 10,000/microL, and abdominal tenderness. Hemolytic uremic syndrome (HUS) complicates 6 to 9 percent of all STEC infections.

Antibiotics **are not recommended** for patients with suspected STEC infections until diagnostic testing can be performed and STEC infection is ruled out. Some studies have shown that administering antibiotics to patients with STEC infections might increase

their risk of developing HUS, and a benefit of treatment has not been clearly demonstrated.

Reporting

Los Angeles County DPH Acute Communicable Disease Control:

- Fax a CMR to 888-397-3778 or 213-482-5508 AND call 888-397-3993. For consultation call 213-240-7941.

Long Beach Health and Human Services:

Fax a CMR to 562-570-4374 or call 562-570-4302.

Pasadena Public Health Department:

- Fax a CMR to 626-744-6115 or call 626-744-6089.

Additional Information

- Outbreak investigation: <https://www.cdc.gov/ecoli/2018/o157h7-11-18/index.html>
- For clinicians and laboratories: <https://www.cdc.gov/ecoli/clinicians.html>
- For the public: <https://www.cdc.gov/ecoli/index.html>

This Health Alert was sent by Dr. Sharon Balter, Director, Division of Communicable Disease Control and Prevention, Los Angeles County Department of Public Health.

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