

Government of Canada

Public Health Agency of Canada

Public Health Notice – Outbreak of E. coli infections linked to romaine lettuce

June 22, 2018 - Final Update

This is the final update for this outbreak. This notice has been updated to advise that the outbreak appears to be over and the outbreak investigation has been closed.

Why should you take note?

The United States Centers for Disease Control and Prevention (U.S. CDC) and the United States Food and Drug Administration (U.S. FDA) are investigating an outbreak of Escherichia coli O157, commonly called E. coli, linked to romaine lettuce from the Yuma growing regions in the United States (U.S.). E. coli can cause a serious, life-threatening illness.

In Canada, there were eight Canadian illnesses of E. coli O157 with a similar genetic fingerprint to illnesses reported in the U.S. investigation. The Public Health Agency of Canada collaborated with federal and provincial public health partners to investigate these illnesses. Based on the evidence from the U.S. outbreak investigation, and the information provided by individuals who became sick, the likely source of the outbreak in Canada was identified as contaminated romaine lettuce, but the source of contamination was not identified.

Given that there have not been any new illnesses reported in the investigation since late April 2018, the Canadian outbreak appears to be over and the outbreak investigation has been closed. Although the outbreak appears to be over, the Public Health Agency of Canada advises Canadians to always follow safe food handling tips for preparing lettuce to avoid food-related illnesses.

Investigation summary

In total, there were eight Canadian cases of E. coli O157 that were genetically similar to the U.S. outbreak linked to romaine lettuce coming from the Yuma growing region in the U.S. The eight Canadian illnesses were reported in five provinces: British Columbia (1), Alberta (1), Saskatchewan (2), Ontario (3), and Quebec (1). Individuals became sick between March and April 2018. One of the Canadian cases was hospitalized and no deaths were reported in Canada. Individuals who became ill were between 11 and 76 years of age. The majority of cases (75%) were female.

In the Canadian investigation, among the eight cases, all of the individuals who became sick reported having eaten romaine lettuce at home, or in prepared salads purchased at grocery stores, restaurants and fast food chains, before their illnesses occurred. Two Canadians did report travelling to the U.S. before getting sick and eating romaine lettuce while they were there.

There were no Food Recall Warnings associated with this outbreak.

Who is most at risk?

Although anyone can get an E. coli infection, pregnant women, those with weakened immune systems, young children, and older adults are most at risk for developing serious complications. This is especially true for this outbreak strain of E. coli (O157), which is more likely to cause severe illness than other E. coli strains in Canada.

Most people with an E. coli infection will become ill for a few days and then recover fully. Some E. coli infections can be life-threatening, though this is rare.

How does lettuce become contaminated with E. coli?

E. coli are bacteria that live naturally in the intestines of cattle, poultry and other animals. A common source of E. coli illness is raw fruits and vegetables that have come in contact with feces from infected animals. Leafy greens, such as lettuce, can become contaminated in the field by soil, contaminated water, animals or improperly composted manure. Lettuce can also be contaminated by bacteria during and after harvest from handling, storing and transporting the produce. Contamination in lettuce is also possible at the grocery store, in the refrigerator, or from counters and cutting boards through cross-contamination with harmful bacteria from raw meat, poultry or seafood. Most E. coli strains are harmless to humans, but some varieties cause illness.

What should you do to protect your health?

In general, it is difficult to know whether a product is contaminated with E. coli because you can't see, smell or taste it. Although the outbreak appears to be over, the best way to protect your health is to practice safe food-handling on a daily basis. The following food safety tips for lettuce can help to reduce the risk of an E. coli infection, but they will not fully eliminate the risk of illness.

Wash your hands thoroughly with warm water and soap for at least 20 seconds, before and after handling lettuce.

Unwashed lettuce, including whole heads of lettuce sold in sealed bags, should be handled and washed using these steps:

Discard outer leaves of fresh lettuce.

Wash unpackaged lettuce under fresh, cool running water. There is no need to use anything other than water to wash lettuce. Washing it gently with water is as effective as using produce cleansers.

Keep rinsing your lettuce until all of the dirt has been washed away.

Don't soak lettuce in a sink full of water. It can become contaminated by bacteria in the sink.

Store lettuce in the refrigerator for up to seven days. Discard when leaves become wilted or brown.

Use warm water and soap to thoroughly wash all utensils, countertops, cutting boards and storage containers before and after handling lettuce to avoid cross-contamination.

Ready-to-eat lettuce products sold in sealed packages and labelled as washed, pre-washed or triple washed do not need to be washed again. These products should also be refrigerated and used before the expiration date.

What are the symptoms?

People infected with E. coli can have a wide range of symptoms. Some do not get sick at all, though they can still spread the infection to others. Others may feel as though they have a bad case of upset stomach. In some cases, individuals become seriously ill and must be hospitalized.

The following symptoms can appear within one to ten days after contact with the bacteria:

nausea

vomiting

headache

mild fever

severe stomach cramps

watery or bloody diarrhea

Most symptoms end within five to ten days. While most people recover completely on their own, some people may have a more serious illness that requires hospital care, or may lead to long-lasting health effects. In rare cases, some individuals may develop life-threatening symptoms, including stroke, kidney failure and seizures, which could result in death.

There is no real treatment for E. coli infections, other than monitoring the illness, providing comfort, and preventing dehydration through proper hydration and nutrition. People who develop complications may need further treatment, like dialysis for kidney failure. You should contact your health care provider if symptoms persist.

What is the Government of Canada doing?

The Government of Canada is committed to food safety. The Public Health Agency of Canada leads the human health investigation into an outbreak and is in regular contact with its federal and provincial partners to monitor the situation and to collaborate on steps to address outbreaks.

Health Canada undertakes food-related health risk assessments to determine whether the presence of a certain substance or microorganism poses a health risk to consumers.

The Canadian Food Inspection Agency conducts food safety investigations into the possible food source of an outbreak.

The Government of Canada will continue to update Canadians if new information related to this investigation becomes available.