



FACTSHEET

Non-O1 and non-O139 *Vibrio cholerae*

What are non-O1 and non-O139 *Vibrio cholerae* bacteria?

Vibrio cholerae is a species of bacteria. Some strains of *Vibrio cholerae* cause cholera, a severe diarrheal illness. *Vibrio cholerae* has many different types or serogroups, only two of which can cause epidemic cholera. Those two serogroups are called serogroup O1 and serogroup O139 (O139 is found only in Asia) and can cause epidemic cholera if they produce the cholera toxin. The other serogroups are known collectively as non-O1 and non-O139 *Vibrio cholerae*. These serogroups can cause a diarrheal disease which is less severe than cholera and does not have epidemic potential.

Non-O1 and non-O139 *Vibrio cholerae* are the third most commonly reported group of *Vibrio* bacteria. On the average, 44 cases of non-O1 and non-O139 *Vibrio cholerae* were reported to the CDC each year since 2000. Infections are seasonal with a peak in the late summer and early fall, coinciding with the warmest water temperatures.

Symptoms of infection with non-O1 and non-O139 *Vibrio cholerae*

- People with gastroenteritis caused by non-O1, non-O139 *Vibrio cholerae* can have symptoms of differing severity ranging from mild diarrhea to severe watery diarrhea. Fever and bloody diarrhea are not typically seen in gastroenteritis due to non-O1, non-O139 *Vibrio cholerae*.
- Sepsis due to non-O1 and non-O139 *Vibrio cholerae* is seen in immunocompromised people and in people with liver disease. Its symptoms include fevers, chills, and decreased blood pressure (shock).
- Non-O1 and non-O139 *Vibrio cholerae* has rarely been reported to cause wound infections with redness and swelling at the site of infection.

How people become infected with non-O1 and non-O139 *Vibrio cholerae*

The non-O1 and non-O139 *Vibrio cholerae* bacteria have a natural reservoir in sea and coastal waters. In the US, transmission of *Vibrio* infections is primarily through consumption of raw or undercooked seafood, particularly oysters. Casual contact with an infected person is not a risk for becoming ill. Rarely, wounds exposed to water containing *Vibrio cholerae* may become infected.

Concerns in hurricane-affected areas

- All people should avoid consuming undercooked fish or shellfish.
- All people should eat only foods that have been thoroughly cooked and fruits that they have peeled themselves.
- Follow the standard precautions for safe food and water (<http://www.bt.cdc.gov/disasters/foodwater.asp>).

- If the safety of the local water supply is in doubt, people should drink only bottled water or water that has been boiled or treated with chlorine or iodine.

After a coastal flood disaster, large numbers of persons with illnesses that decrease their resistance to infection may be exposed to seawater. Injury prevention is especially important in high risk persons and exposure of open wounds or broken skin to warm salt or brackish water should be avoided. Wounds exposed to seawater should be washed with soap and clean water as soon as possible, and infected wounds should be seen by a health care provider. More information on caring for wounds may be found in the Emergency Wound Management document available at the CDC hurricane response web site (<http://www.bt.cdc.gov/disasters/wound.asp>) and the Emergency Wound Management for Health Care Providers (<http://www.bt.cdc.gov/disasters/emergwoundhpc.asp>).

Diagnosis

Persons with profuse watery diarrhea should see a health care provider. If the health care provider suspects that the diarrheal illness is due to a *Vibrio* bacteria, he or she may request a stool sample for culture. The laboratory will then be able to determine if *Vibrio cholerae* is present and the serogroup to which it belongs.

Treatment

Diarrhea caused by *Vibrio cholerae* is treatable, primarily by rehydration, and antibiotic therapy. The most important treatment is to replace the fluids and electrolytes that have been lost due to diarrhea. This is done either through oral fluid rehydration or, in severe cases, intravenous fluid rehydration. In many cases, antibiotics are used to hasten the recovery, but they do not take the place of early and appropriate rehydration therapy. Wounds exposed to seawater should be washed with soap and water as soon as possible, and infected wounds should be evaluated by a health care provider. Wounds that become infected and sepsis should be treated with antibiotics.

Recovery

Infections with non-O1 and non-O139 *Vibrio cholerae* are acute illnesses, and those who recover should not expect long-term consequences.

Is there a vaccine for non-O1 and non-O139 *Vibrio cholerae*?

At this time no vaccine exists for infections with non-O1 and non-O139 *Vibrio cholerae*.

More information about *Vibrio* surveillance may be found at:

- [Vibrio Outbreak Summaries](http://www.cdc.gov/foodborneoutbreaks/vibrio_sum.htm) (http://www.cdc.gov/foodborneoutbreaks/vibrio_sum.htm)

For more information, visit www.bt.cdc.gov/disasters,
or call CDC at 800-CDC-INFO (English and Spanish) or 888-232-6348 (TTY).