

FactSheet

Para Su Información

Vibrio Vulnificus

What is Vibrio vulnificus?

Vibrio vulnificus is a bacterium in the same family as those that cause cholera. It normally lives in warm seawater and is part of a group of vibrios that are called “halophilic” because they require salt.

What type of illness does V. vulnificus cause?

V. vulnificus can cause disease in those who eat contaminated seafood or have an open wound that is exposed to seawater. Among healthy people, ingestion of V. vulnificus can cause vomiting, diarrhea, and abdominal pain. In immunocompromised persons, particularly those with chronic liver disease, V. vulnificus can infect the bloodstream, causing a severe and life-threatening illness characterized by fever and chills, decreased blood pressure (septic shock), and blistering skin lesions. V. vulnificus bloodstream infections are fatal about 50 percent of the time.

V. vulnificus can also cause an infection of the skin when open wounds are exposed to warm seawater; these infections may lead to skin breakdown and ulceration. Persons who are immunocompromised are at higher risk for invasion of the organism into the bloodstream and potentially fatal complications.

How common is V. vulnificus infection?

V. vulnificus is a rare cause of disease, but it is also underreported. Between 1988 and 1995, CDC received reports of over 300 V. vulnificus infections from the Gulf Coast states, where the majority of cases occur. There is no national surveillance system for V. vulnificus, but CDC collaborates with the states of Alabama, Florida, Louisiana, Texas and Mississippi to monitor the number of cases of V. vulnificus infection in the Gulf Coast region.

How do persons get infected with V. vulnificus?

Persons who are immunocompromised, especially those with chronic liver disease, are at risk for V. vulnificus when they eat raw seafood, particularly oysters. A recent study showed that people with these pre-existing medical conditions were 80 times more likely to develop V. vulnificus bloodstream infections than were healthy people. The bacterium is frequently isolated from oysters and other shellfish in warm coastal waters during the summer months. Since it is naturally found in warm marine waters, people with open wounds can be exposed to V. vulnificus through direct contact with seawater. There is no evidence for person-to-person transmission of V. vulnificus.

How can V. vulnificus infection be diagnosed?

V. vulnificus infection is diagnosed by routine stool, wound, or blood cultures; the laboratory should be notified when this infection is suspected by the physician, since a special growth medium can be used to increase the diagnostic yield. Doctors should have a high suspicion for this organism when patients present with gastrointestinal illness, fever, or shock following the ingestion of raw seafood, especially oysters, or with a wound infection after exposure to seawater.

How is V. vulnificus infection treated?

V. vulnificus infection is treated with antibiotics. Doxycycline or a third-generation cephalosporin (e.g., ceftazidime) is appropriate.

(continued)

Are there long-term consequences of *V. vulnificus* infection?

V. vulnificus infection is an acute illness, and those who recover should not expect any long-term consequences.

What can be done to improve the safety of oysters?

Although oysters can be harvested legally only from waters free from fecal contamination, even legally harvested oysters can be contaminated with *V. vulnificus* because the bacterium is naturally present in marine environments. *V. vulnificus* does not alter the appearance, taste, or odor of oysters. Timely, voluntary reporting of *V. vulnificus* infections to CDC and to regional offices of the Food and Drug Administration (FDA) will help collaborative efforts to improve investigation of these infections. Regional FDA specialists with expert knowledge about shellfish assist state officials with tracebacks of shellfish and, when notified rapidly about cases, are able to sample harvest waters to discover possible sources of infection and to close oyster beds when problems are identified. Ongoing research may help us to predict environmental or other factors that increase the chance that oysters carry pathogens.

How can I learn more about *V. vulnificus*?

You can discuss your medical concerns with your doctor or other health care provider. Your local city or county health department can provide information about this and other public health problems that are occurring in your area. Information about the potential dangers of raw oyster consumption is available 24 hours a day from the FDA's Seafood Hotline (1-800-332-4010); FDA

public affairs specialists are available at this number between 12 and 4 p.m. Monday through Friday. Information is also available on Web at <http://vm.cfsan.fda.gov>.

Some tips for preventing *V. vulnificus* infections, particularly among immunocompromised patients, including those with underlying liver disease:

- Do not eat raw oysters or other raw shellfish.
- Cook shellfish (oysters, clams, mussels) thoroughly:
- For shellfish in the shell, either a) boil until the shells open and continue boiling for 5 more minutes, or b) steam until the shells open and then continue cooking for 9 more minutes. Do not eat those shellfish that do not open during cooking. Boil shucked oysters at least 3 minutes, or fry them in oil at least 10 minutes at 375°F.
- Avoid cross-contamination of cooked seafood and other foods with raw seafood and juices from raw seafood.
- Eat shellfish promptly after cooking and refrigerate leftovers.
- Avoid exposure of open wounds or broken skin to warm salt or brackish water, or to raw shellfish harvested from such waters.
- Wear protective clothing (e.g., gloves) when handling raw shellfish.



625 Shadow Lane | P.O. Box 3902
Las Vegas, NV 89127 | 702.759.1000
www.southernnevadahealthdistrict.org

Updated 8-06