

VIBRIOSIS

REPORTING INFORMATION

- Class A(3)
- Report by close of work week
- [Confidential Case Report Card](#) (3812.11 rev 12/81), [lab report](#) (3833.11), or telephone
- The [Cholera and Other Vibrio Illness Surveillance Report](#) (CDC 52.79 rev. 11/98) is to be completed and sent by the local health department to ODH, Bureau of Infectious Disease Control, 246 N. High Street, PO Box 118, Columbus, OH 43266-0118.
- The [Enteric Case Report](#) may be useful in follow-up of cases. Do not send this report to ODH. It is for local health department use only.

AGENTS

Vibrio parahaemolyticus; *Vibrio cholerae* non-O1 (does not agglutinate in O group-1 sera), strains other than O139; and *Vibrio vulnificus*. Some vibrios have been found to be of lesser medical importance (*V. damsela*, *V. fluvialis*, *V. furnissii*, *V. hollisae*, and *V. mimicus*), and others have been implicated in human disease but their significance is not established (*V. alginolyticus*, *V. metschnikovii*).

Infectious Dose

The usual infective dose is $\geq 10^6$ organisms. That dose can be lowered in the presence of antacids, and can be as low as 10^2 of *V. vulnificus* in predisposed persons.

CASE DEFINITION

There is no CDC case definition for vibriosis. In Ohio, a *confirmed* case is a person from whom non-cholera vibrio is isolated from any site on the body. The organism is usually cultured from stool but is also retrievable from wound or blood. Symptomatic, as well as asymptomatic, cases are reportable. **Illness caused by toxigenic *V. cholerae* O1 or O139 should be reported as a case of cholera.**

SIGNS AND SYMPTOMS

The spectrum of clinical illness is varied. Infections presenting as gastroenteritis usually include explosive watery diarrhea; abdominal cramps, nausea, vomiting, and headache are common; and fever and chills may occur. The duration of illness is generally short (median three days, with a range of two hours to 10 days). *V. cholerae* non-O1 can occasionally cause symptoms similar to those of *V. cholerae* O1. *V. vulnificus* can cause gastroenteritis; wound infection; or, especially in persons with liver disease or immunosuppression, septicemia, which is up to 50% fatal.

DIAGNOSIS

Diagnosis of vibriosis is made by isolating the organism from stool or other site. A fresh stool is the best specimen in cases of gastroenteritis. The ODHL is able to identify all species of *Vibrio*. Specimens should be submitted using the Cary-Blair fecal kit.

EPIDEMIOLOGY

Source

- V. parahaemolyticus*, *V. vulnificus*: ubiquitous in salt waters.
- V. cholerae* non-O1: ubiquitous in fresh and salt waters.

Occurrence

Worldwide. Most infections occur sporadically, especially during the warmer months.

Mode of Transmission

Ingestion of raw, inadequately cooked, or improperly refrigerated seafood contaminated with the organisms, or ingestion of food cross-contaminated by raw seafood or rinsed with contaminated seawater. Possibly drinking fresh water containing *V. cholerae* non-O1. Wound infection with *V. vulnificus* occurs when an existing wound is exposed to contaminated seawater or when an injury penetrating the skin occurs in the presence of contaminated seawater. Septicemia with *V. vulnificus*

can occur subsequent to either ingestion of the organism or passage of the organism through a break in the skin.

Period of Communicability

Secondary spread has not been documented in the United States. *V. parahaemolyticus* has only rarely been cultured from asymptomatic persons. No carrier state has been identified.

Incubation Period

Ranges from 4-96 hours, usually 12-24 hours (mean 15 hours).

PUBLIC HEALTH MANAGEMENT

Case

Investigation

All cases reported to the local health department should initially be followed up with a telephone call to obtain demographic and epidemiologic data. No further work-up is necessary unless the case is employed in a sensitive occupation (direct food handling, direct patient care, child care center employees who handle food or directly care for children) or attends a child care center.

Treatment

Antimicrobial treatment is generally not recommended, as the disease is self-limited. In addition, antimicrobial therapy shortens neither the clinical course nor the duration of pathogen excretion.

Food Handlers/Institutions/Child Care Centers

Ohio food service operation rules do not allow food preparation by persons who are infected with a disease in a communicable form that can be transmitted by foods. See Food Service Operation Law and Rules, Ohio Department of Health 2231.32 (rev. 11/9) for more information ([OAC 3701-21-06 \[A\]](#)).

Follow-up Specimens

Follow-up specimens are not necessary because secondary transmission is rare in the United States, and no carrier state has been documented.

Contacts

Contacts need not be tested for the reasons cited under "Follow-up Specimens" above.

Prevention and Control

Special Information

Avoid raw shellfish. Cook all shellfish thoroughly (boil until shells open, plus 5 more minutes). Avoid cross-contamination of cooked food with raw seafood or juices from raw seafood. Avoid exposure of open wound or broken skin to warm salt or brackish water or to raw shellfish. Wear gloves when handling raw shellfish. Cooking destroys these and other bacteria and viruses (e.g., Shigella, Norwalk, virus, and hepatitis A virus).

Persons with certain high risk conditions should especially be advised to avoid raw shellfish. These conditions include liver disease of any type, hemochromatosis, diabetes, stomach problems (including antacid use), cancer, immune disorders (including HIV infection), and long-term steroid use.