

# Vibrio cholerae (Cholera)

## Epidemiology

### Source:

Contaminated water or food

### Anatomical source

Stools

### Transmission

- Ingestion of contaminated water or food, esp. raw or undercooked seafood
- Direct person-to-person transmission unlikely

### Infectious Dose

100 million bacteria

**Incubation**  
1-3 days  
(Few hours-5 days)

### Clinical Case Definition

- Profuse, watery diarrhea
- Colorless stools with small flecks of mucus ("rice-water" stools)
- Vomiting
- Muscle cramps
- Loss of skin elasticity
- Often asymptomatic

### Complications:

- Severe electrolyte imbalance
- Acute renal failure
- Coma
- Shock
- Death

Endemic on Gulf coast of Louisiana and Texas

Very low incidence in the U.S.  
More common in developing countries.

## Diagnosis

**Microbiology:** *Vibrio cholerae* is a gram-negative, curved, motile bacillus. Serogroups O1, O139, and O141 are associated with clinical cholera.

### Lab Diagnosis

- **Culture:** Fecal specimens or vomitus cultured on thiosulfate citrate bile salts sucrose agar.
  - Culture for *V. cholerae* is not routine; must be requested for clinically suspected cases
  - Send to state lab for serogrouping
  - Serogroups O1 or O139 should be sent to CDC

**Probable:** Clinically compatible case  
**Confirmed:** Clinically compatible case that is laboratory-confirmed

## Treatment, Prophylaxis

### Treatment

- **Oral rehydration therapy:** initiate as soon as diagnosis is suspected to correct dehydration and electrolyte imbalance.
  - **WHO's Oral Rehydration Solution (ORS)** is standard, but rice-based ORS or amylase-resistant starch ORS is more effective
- **Antimicrobial therapy:** Moderate to severe cases
  - **Oral doxycycline (single dose)**
  - **Tetracycline (3 days):** Not usually recommended for children <8 years old, but may be used in severe cases
  - **Ciprofloxacin, ofloxacin, trimethoprim-sulfamethoxazole:** may be used if strain is tetracycline-resistant

**Chemoprophylaxis:**  
Not recommended in U.S. unless there is a high probability of fecal exposure

## Standard precautions

## Control

Report immediately to OPH

Take extra precautions when traveling to developing countries

### Prevention:

- Only drink/use safe, sanitized water
- Wash hands often
- Do not defecate in bodies of water
- Cook food well, especially seafood

No vaccine available in U.S.