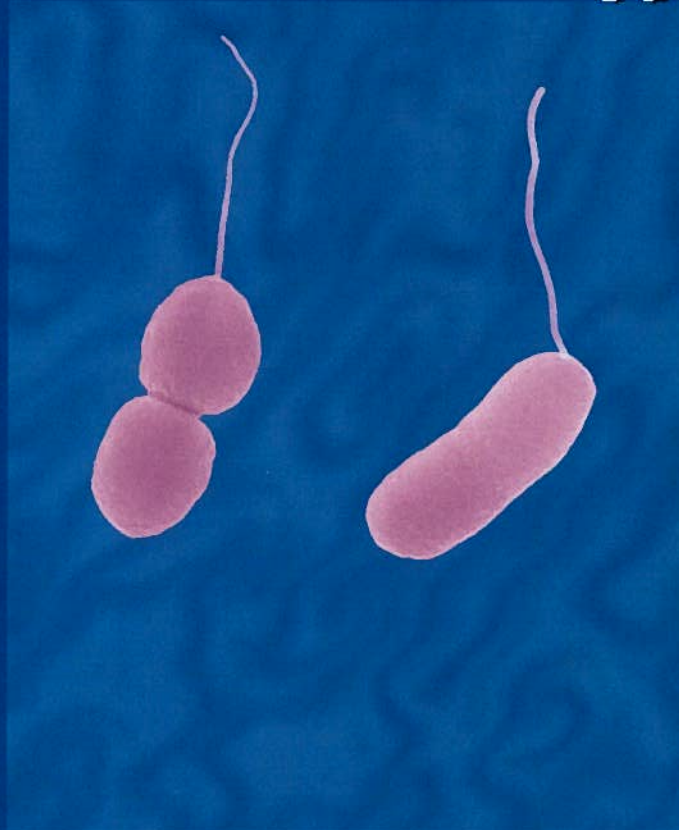


# *Vibrio* *parahaemolyticus*



[www.ehagroup.com](http://www.ehagroup.com)



# *Vibrio parahaemolyticus*

- causes gastrointestinal illness and wound infections in humans
- naturally inhabits coastal waters in the United States and Canada
- present in higher concentrations during summer months
- sporadic cases and common-source outbreaks have been reported from many parts of the world
  - particularly Japan, southeastern Asia, and the United States
- estimated 4,500 cases of *V. parahaemolyticus* infection occur each year in the United States
  - this estimate is most likely low due to underreporting

# The Organism

- gram-negative
- motile
- curved, rod shaped
- non-spore forming
- facultatively aerobic
  - can live in the presence or absence of oxygen
- halophilic
  - requires a salt-rich environment



# Sources / Reservoirs

- both pathogenic and non-pathogenic forms of the organism can be isolated from estuarine and marine coastal environments
- cold season
  - organism found in marine silt
- warm season
  - organism found free in coastal waters
  - organism found in fish and shellfish

# Mode of Transmission

- ingestion of raw, improperly cooked seafood
  - especially shellfish such as oysters
- ingestion of any food contaminated by handling of raw-seafood or by rinsing with contaminated water
- not normally communicable from person-to-person
  - fecal-oral transmission may occur
- capable of causing an infection in the skin when an open wound is exposed to warm seawater

# Signs and Symptoms

- intestinal disorder characterized by:
  - watery diarrhea
  - abdominal cramps
  - nausea and vomiting
  - Fever
  - Headache
- approximately 1/4 of cases develop a dysentery-like illness with bloody or mucoid stools, high fever, and high WBC count

# Incubation Period

- usually 12 – 24 hours
- range of 4 – 30 hours
  
- typically a disease of moderate severity lasting 1 – 7 days
  - systemic infection and death rarely occur



# Diagnosis and Treatment

- diagnosis is confirmed by isolating the organism from a patient's stool, blood, or wound
- diagnosis may also be achieved by identifying  $10^5$  or more organisms per gram of an epidemiologically incriminated food
- treatment is not necessary in most cases
- rehydration is needed to replace fluids lost through diarrhea.





# Prevention

- seafood should be chilled to less than 41°F after harvest to prevent growth
- do not eat raw oysters or other raw shellfish
- avoid cross contamination of cooked seafood and other foods with raw seafood and juices from raw seafood
- cook shellfish thoroughly
  - for shellfish in the shell, do not eat those that do not open during cooking
  - eat shellfish promptly after cooking
- avoid exposure of open wounds or broken skin to warm salt or brackish water, or to raw shellfish harvested from such waters

