

microbe OF THE MONTH

The pathogen. The problem. The prevention.

Pathogen of the Month

Vibrio

parahaemolyticus

[vib-rē-ō pear-uh-hēm-ō-lit-i-kus]

February 2007

the pathogen...

Source:

Vibrio parahaemolyticus bacteria are naturally found in seawater and are common in the Pacific Northwest. High levels of the bacteria can grow in saltwater during warm summer months. Most human infections occur after eating raw or undercooked fish or shellfish contaminated with the bacteria. These bacteria are found primarily in oysters but can infect other shellfish as well.

Symptoms:

Vibrio infection causes a variety of symptoms including diarrhea, abdominal cramps, nausea, vomiting, headache, fever, and chills.

Incubation:

The symptoms usually appear about 15 hours after eating infected shellfish but can occur anywhere from 4 to 48 hours after consumption.

Duration:

The illness usually lasts for 2 to 7 days.

YOPIAlert:

People with chronic liver illness or weak immune systems are at increased risk for serious, life-threatening, infections. People that take antacids are also at increased risk for infection.

the problem...

Vibriosis [vib-rē-ō-sis] is an infection with *Vibrio* bacteria usually caused by eating raw or undercooked fish or shellfish. Even fully cooked food can cause illness if it is cross-contaminated with seawater. Inadequate refrigeration of seafood also leads to illness because it lets bacteria to grow to high numbers.

The Washington State Department of Health tests shellfish growing areas each year from May to October to look for *Vibrio* bacteria. Shellfish bed monitoring is an important element of food safety, but is not all that must be done to prevent illnesses caused by *Vibrio* organisms. Because vibrios grow rapidly, even low levels of bacteria in shellfish can quickly grow to unsafe levels if shellfish are not refrigerated after harvest or maintained at proper temperatures during transport, processing, and storage. In 2006, shellfish harvested from areas in Washington with acceptable levels of *Vibrio* caused illnesses across several states. This is possibly because the shellfish were harvested when the water was warm (such as at low tide) or were not refrigerated properly to prevent the growth of the bacteria.

Usually, Washington has about 20 cases of vibriosis reported a year. In 2006, however, the *Vibrio* outbreak associated with oysters had over 100 people report illness across the state within a few months. Cases found in several other states and Canada were also linked to shellfish harvested in Washington.

The outbreaks were associated with shellfish eaten from restaurants, seafood markets, and recreational harvesting (people that collect shellfish directly from the beach). Although most illnesses were associated with eating raw oysters, some cases were also possibly linked to cooked seafood eaten from restaurants that had been cross-contaminated in the facility.

During the outbreak, the Benton-Franklin Health District Food Safety Program visited each of the facilities that serve shellfish (especially oysters) to inform them of the outbreak and provide educational materials regarding food safety recommendations to prevent illness.

Read more online:

The 2006 *Vibrio* Outbreak: www.doh.wa.gov/ehp/sf/vibrio-outbreak.htm
Selecting and Serving Seafood Safely www.cfsan.fda.gov/~lrd/seafsafes.html

the prevention...

At work:

- Cook shellfish to an internal temperature of 145°F, especially during the summer.
Remember: if you serve undercooked shellfish you need to provide a proper consumer advisory.
- Do not rinse cooked food with seawater or cross-contaminate with raw seafood.
- Ensure shellfish are delivered from your supplier at proper temperature (45°F or colder).
- Store shellfish cold under refrigeration or on ice (41°F or colder).
- Maintain shellfish tags for at least 90 days to identify shellfish growing areas.

At home:

- Harvest as soon as possible after the tide goes out.
- Do not harvest oysters that have been exposed to direct sunlight for more than 1 hour.
- Place oysters under refrigeration or on ice as soon as possible.
- Thoroughly cook shellfish before eating.

