

WHO IS AT RISK?

Some kinds of *Vibrio* bacteria can cause gastrointestinal illness in people of any age or health history. However, *Vibrio vulnificus* infections can lead to serious illness or death in people with the following health conditions:

- Liver disease
- Excessive alcohol intake
- Diabetes
- AIDS or HIV infection
- Gastric disorders
- Inflammatory bowel disease
- Cancer (including lymphoma, leukemia, Hodgkin's disease)
- Hemochromatosis/hemosiderosis (abnormal iron metabolism)
- Steroid dependency (as used for conditions such as emphysema, chronic obstructive pulmonary disease, etc.)
- Any illness or medical treatment which results in a compromised immune system



Older adults are more likely to have one or more of the above conditions and should be aware of their health status before eating raw oysters or clams.

Persons with the above health conditions are advised not to eat raw oysters or clams. Enjoy them cooked instead.

TIPS FOR COOKING OYSTERS & CLAMS IN THE SHELL

- Use small pots to boil or steam oysters or clams.
- Do not cook too many oysters or clams in the same pot because the ones in the middle may not get fully cooked.
- Cook live oysters or clams in boiling water for 3 to 5 minutes after shells open.
- Steam live oysters or clams 4 to 9 minutes in a steamer that is already steaming.
- Discard any oysters or clams that do not open during cooking.

Thoroughly cooking shellfish will prevent illness from *Vibrio* bacteria.

TIPS FOR COOKING SHUCKED OYSTERS & CLAMS

- Boil or simmer for at least 3 minutes or until edges curl.
- Fry in oil for at least 3 minutes at 375° F.
- Broil 3 inches from heat for 3 minutes.
- Bake for 10 minutes at 450° F.

Information in this brochure was adapted from the Interstate Shellfish Sanitation Conference

THE RISK OF EATING RAW OYSTERS AND CLAMS



VDH VIRGINIA
DEPARTMENT
OF HEALTH
Protecting You and Your Environment

DID YOU KNOW...

Every year millions of Americans eat molluscan shellfish—especially oysters and clams. While these foods can be eaten safely, people need to be aware that illnesses can result from eating raw oysters and clams and that steps can be taken to reduce the risk of illness. Bacteria, viruses, or parasites can contaminate food at any time, but cooking the food kills harmful organisms and makes the food safer to eat.

WHAT CAUSES ILLNESS?

Bacteria and viruses can contaminate water when stool from an infected person gets into the water. Infected foodhandlers can contaminate food if they do not wash their hands properly after going to the bathroom and handle the food that other people eat. Two viruses that can contaminate raw oysters and clams are hepatitis A and norovirus. Both viruses cause nausea, vomiting, and diarrhea; hepatitis A sometimes also causes liver inflammation, fever, and yellowing of the skin or whites of the eyes. These infections are rarely fatal, and most people recover without complications.

Vibrio are bacteria that can cause gastrointestinal illness in people who eat undercooked or raw shellfish, regardless of age or health history. *Vibrio vulnificus* is a kind of *Vibrio* that can cause serious illness or death, especially in people with chronic health conditions.

WHERE ARE *VIBRIO* FOUND?

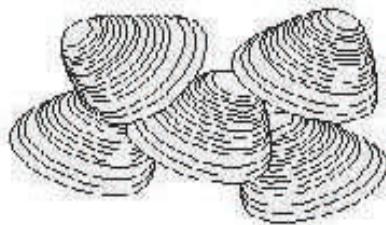
Vibrio bacteria are found naturally in coastal waters, including waters approved for oyster and clam harvesting. *Vibrio* bacteria do NOT change the look, taste, or odor of oysters or clams.

During the warm weather months of April through October, higher amounts of bacteria are found in shellfish. This is a natural occurrence and not the result of pollution.

HOW CAN YOU BECOME ILL?

You can become ill by eating raw or undercooked oysters or clams. Infection can also occur when cuts, burns, or sores come in contact with seawater containing *Vibrio*.

If the oysters or clams are cooked thoroughly, the *Vibrio* bacteria are destroyed and the risk of illness is removed. Putting hot sauce on raw oysters or clams or eating them while drinking alcohol does not kill bacteria or protect your health.



An estimated 80,000 vibriosis cases occur each year in the United States, including 500 hospitalizations and 100 deaths.

WHAT ARE THE SYMPTOMS?

Symptoms of *Vibrio* illnesses include:

- Vomiting
- Diarrhea
- Stomach pains
- Severe weakness
- Skin rashes and blisters
- Shaking chills
- High fever

It is important to remember that in individuals with certain health conditions, *Vibrio vulnificus* infection can lead to death within two days. If you have any of these symptoms, see your physician immediately for medical treatment.

WHAT CAN YOU DO?

To limit exposure to *Vibrio* bacteria, especially if you have any of the condition listed above:

- **NEVER** eat raw shellfish (oysters or clams).
- **ALWAYS** choose cooked oysters and clams when dining out.
- **ALWAYS** cook oysters and clams thoroughly.
- **NEVER** swim or wade in saltwater with open wounds or sores.
- **GET** more information by calling the FDA hotline at 1-800-332-4010, your local health department, or your physician.

A directory of local health departments is located at <http://www.vdh.virginia.gov/LHD/index/htm>