

Vibrio vulnificus and Diabetes

If you are a diabetic who loves oysters, enjoy eating them but be sure they are thoroughly cooked. Do not eat raw oysters. If you do, you are asking for trouble.

The source of the problem is *Vibrio vulnificus*, a bacterium that often thrives in waters where oysters grow. Colleen Crowe, Surveillance Epidemiologist with the U.S. Centers for Disease Control and Prevention (CDC), explains that oysters feed by filtering surrounding water that may harbor these vibrios. When diabetics dine on raw oysters, they may consume *Vibrio vulnificus* as well. The body then becomes the perfect incubator for vibrios to multiply and do their damage.

For healthy people, these bacteria rarely cause serious problems. An individual might experience mild symptoms such as diarrhea, stomachache or vomiting. But if a person with diabetes or a weakened immune system eats raw oysters containing *Vibrio vulnificus*, the results can be fatal.

Nicholas Daniels, M.D., an internist with the University of California at San Francisco and published author on *Vibrio vulnificus*, explains that the diabetic lives with a depressed immune system. Chronic high

Blood sugar makes diabetics more susceptible to infection, and sets the stage for trouble when *Vibrio vulnificus* enters the body.

Daniels stresses that in the diabetic, the white blood cells are not as effective as in the non-diabetic. A healthy immune system marshals white blood cells as the first line of defense against infection. When the immune system is operating at peak performance, you are protected, but when it isn't, the damage can get out of control.

In addition to a weakened immune system, many diabetics also have low stomach acid. So instead of being destroyed by powerful acids in the gut, the vibrios multiply rapidly. Eventually, they cannot be contained and break through the intestinal wall. Once in the bloodstream, the vibrios create toxins, which can lead to blood poisoning, called septicemia.

According to the U.S. Food and Drug Administration's (FDA) "Bad Bug Book," once septicemia develops, a person's chance of surviving drops to just 50 percent. Once the bacteria release toxins into the bloodstream, the blood vessels dilate and blood pressure drops dangerously low. The body simply can't create enough pressure to pump enough blood to the heart and the brain for the victim to survive.

Some oyster lovers think there are tricks to avoiding *Vibrio vulnificus*:

Myth: Smother the oysters in hot sauce.

Fact: This technique doesn't work any better than using plain water.

Myth: Just avoid oysters from polluted waters.

Fact: *Vibrio vulnificus* has no connection with pollution. Vibrios are a natural part of the marine environment in warm coastal waters such as the Gulf of Mexico.

Myth: Experienced oysters-lovers can tell a good oyster from a bad one.

Fact: You can't tell by looking. *Vibrio vulnificus* can't be tasted, seen or smelled.

Myth: Alcoholic beverages kill vibrios.

Fact: Alcohol may impair your good judgment, but it has little effect on harmful bacteria.

Myth: Eating just a few oysters can't hurt you.

Fact: Roberta Hammond, Ph.D., Florida's Food and Waterborne Disease Coordinator, reports a documented fatality where the victim consumed only three oysters. Hammond notes that the seriousness of any individual case depends on a number of factors, including how many bacteria were ingested and the person's underlying health conditions. She cautions that the fatal dose for any at-risk individual is unknown. So do not be fooled, even if you have eaten raw oysters without problems in the past, you

may have been lucky. This is not a risk worth taking.

Myth No. 6: Avoid raw oysters in months without the letter "R".

Fact: The CDC points out that a full 40% of cases occur during the cooler months of September through April, even though *Vibrio vulnificus* are most abundant during the warmer months.

Remember, you don't have to give up eating oysters entirely. Thorough cooking destroys *Vibrio vulnificus*.

The FDA recommends boiling oysters until the shells open and then continue cooking five more minutes. If you prefer steaming, wait until the shells open and time the steaming for nine more minutes. If you are cooking shucked oysters, boil them at least three full minutes or fry them in oil at least ten minutes at 375° F. Always avoid mixing the cooked oysters with raw ones or mixing them with any of the juice from raw oysters.

Some oyster-lovers shudder at the idea of cooking oysters at all, claiming that heat spoils the dining experience. But for diabetics the risk is too high. Thorough cooking is the best protection for an already challenged immune system.