



CONNECTICUT DEPARTMENT OF AGRICULTURE

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Recreational Shellfish Harvesting and *Vibrio*: Summer Harvest Precautions

Vibrio are naturally occurring brackish and salt water bacteria, and tend to be found in higher concentrations from June through October when coastal waters are warm. Consumers may be exposed to these pathogenic, or disease-causing, bacteria by eating raw or undercooked seafood, including shellfish like oysters, clams, scallops, lobster, crab, and shrimp. *Vibrio parahaemolyticus* is the leading cause of seafood-caused gastroenteritis, which can cause diarrhea, vomiting and nausea. *Vibrio vulnificus* is a different species of *Vibrio* bacteria, which can cause more severe infections and has gain a lot of press attention in 2023. There were two Connecticut and one New York *Vibrio vulnificus* deaths in 2023 from wound infections, which are caused by wound exposure to brackish or salt water containing the bacteria. *Vibrio vulnificus* can also infect individuals through wound contact with raw or undercooked seafood drippings, or consumption of raw seafood contaminated with *Vibrio vulnificus*. Connecticut shellfish have never been associated with *Vibrio vulnificus* infections, but it is critical to follow the guidelines below to reduce the risk of infection when consuming raw shellfish.

Vibrio infections can be life-threatening for immunocompromised people or those with chronic liver disease. Also at greater risk are people who regularly take antacids, heart or diabetes medication, or who have had antibiotic or cancer treatments recently. If you have any questions, ask your doctor about your individual risk associated with eating shellfish. Consumers who think they might have become ill from eating contaminated raw or undercooked shellfish should consult their health care providers for appropriate follow-up and treatment.

The most up-to-date information about *Vibrio* and Connecticut shellfish can be found on the Bureau of Aquaculture's website: <https://portal.ct.gov/DOAG/Aquaculture1/Aquaculture/Aquaculture-Home-Page>

The commercial shellfish industry is aware of the risks associated with *Vibrio* and follows strict icing, shading, refrigeration, and handling requirements during the summer months.

Recreational harvesters also need to be aware of the hazards associated with *Vibrio* and the appropriate harvesting, handling, and preparation techniques to minimize the risk of a *Vibrio* illness.

Guidance for Recreational Shellfish Harvesters

Harvesting Guidance:

- **Harvest only from open areas and make sure you have the appropriate permit.**
- **Always check the status of the shellfish area** by calling the local shellfish hotline. Hotline numbers and recreational shellfishing maps for each town can be found at: <https://portal.ct.gov/DOAG/Aquaculture1/Aquaculture/Shellfish-Area-Contacts-and-Hotlines>.
- **Try to plan your harvest at the beginning of the outgoing tide cycle** so that flats have been exposed to extreme temperatures for as little time as possible.
- **Do not harvest shellfish that have been exposed to direct sunlight for more than two hours.**
- **Keep shellfish submerged using a floating bag, or similar device,** until you leave the harvest area.
- **Never use your boat's live well to store shellfish after harvest.** This practice could result in the cross-contamination of shellfish, or spread of pathogens.
- **Keep shellfish shaded** until placed on ice or into refrigeration.
- **Place shellfish on ice, or under refrigeration at less than 45°F, immediately after harvest.**
- **Never leave shellfish in the car** unless they are on ice in a cooler.

Recreational Shellfish Harvesting and *Vibrio*:

Wound protection:

- Both *Vibrio parahaemolyticus* and the more dangerous *Vibrio vulnificus* can cause severe infections and sepsis from wound contact with brackish or salt water. In Connecticut, *Vibrio* are found at higher concentrations from June through October. There were 5 wound infections in 2020, none in 2021 or 2022, and 2 wound infections in 2023, as reported by the Connecticut Department of Public Health. No *Vibrio vulnificus* illnesses have been associated with consuming Connecticut shellfish.
- **Avoid exposing wounds, including recent surgeries, piercings, and tattooed skin, to brackish and salt water, and raw or undercooked seafood drippings. Cover wounds with waterproof bandages.**
- **Thoroughly wash wounds and cuts with soap and water and treat with an antibiotic ointment** if they come in contact with brackish or salt water or seafood drippings.
- **Seek immediate medical attention if a wound becomes infected** following exposure to brackish or salt water or seafood dripping.

Safe handling, storing, and cooking practices

Handling Shellfish:

- **Keep shellfish cool** after harvesting. If the temperature of shellfish is allowed to rise, bacteria will grow, and the shellfish will become unsafe to eat.

Storing Shellfish:

- **Fresh in shell shellfish** should be stored in an *open* container in the refrigerator, and *never* stored or soaked in water. Place a damp towel on top to maintain humidity. Throw out dead shellfish (those that are open and do not close when tapped are dead).
 - **Oysters and hard clams** can be kept refrigerated for up to seven days.
 - **Mussels** can be kept refrigerated for three to four days.
 - **Shellfish that cannot completely close their shells** (softshell and razor clams) can be kept refrigerated for three to four days.
- **Shucked shellfish** can be kept refrigerated for up to three days and frozen up to three months.
- **Cooked shellfish** can be kept refrigerated for up to two days and frozen up to three months.
- **Frozen shellfish** should be thawed in a refrigerator and can be kept for up to two days. Once thawed, *do not refreeze*.

Cooking Shellfish:

Thoroughly cooking shellfish **destroys** *V. parahaemolyticus* and other *Vibrio* species. Barbequing oysters or steaming clams until they open **will not** inactivate the bacteria. **Throw out any shellfish that do not open fully after cooking.**

To ensure proper food safety, shellfish must be **cooked to an internal temperature of 145°F for at least 15 seconds**. Since it is often impractical to use a food thermometer to check the temperature of cooked shellfish, here are some tips and recommended ways to cook shellfish safely:

- **Clams, mussels, and oysters in the shell** will open when cooked. The Food and Drug Administration (FDA) suggests steaming shellfish for 4 to 9 minutes or boiling them for 3 to 5 minutes after they open.
- **Shucked shellfish** (clams, mussels, and oysters without shells) become plump and opaque and the edges of oysters will start to curl when cooked thoroughly. The FDA suggests cooking shellfish by boiling for 3 minutes, frying in oil at 375°F for 3 minutes, broiling 3 inches from heat for 3 minutes, or baking at 450°F for 10 minutes.
- **Scallops** turn milky white, or opaque and firm when cooked thoroughly. Depending on size, scallops take 3 to 4 minutes to cook.
- **Boiled lobster and crab** will turn bright red when cooked thoroughly. After placing in the pot, start the cooking timer when the water comes back to a full boil. Boil lobster at least 5 to 6 minutes. Boil or steam crab for 10-20 minutes, depending on the size.
- **Shrimp** turn pink and firm when cooked thoroughly. Depending on the size, it takes from 3 to 5 minutes to boil or steam 1 pound of medium size shrimp in the shell.