STATE OF CONNECTICUT

DEPARTMENT OF AGRICULTURE
BUREAU OF AQUACULTURE & LABORATORY

Recreational Shellfish Harvesting and Vibrio:

***Vibrio parahaemolyticus* Background and Summer Harvest Precautions**

A number of states, including New York, Massachusetts, and New Jersey, faced illness outbreaks related to shellfish consumption during the summer of 2012. These outbreaks were caused by elevated levels of the naturally occurring bacteria *Vibrio parahaemolyticus* in shellfish. This marine bacterium occurs naturally in brackish and salt-water environments, and may be found in higher concentrations from April through October when coastal waters are warm. Consumers may be exposed to these pathogenic, or disease-causing, bacteria by eating raw or undercooked shellfish, including oysters, clams, lobster, and crab. The Centers for Disease Control has reported a 43% increase in the incidence of illnesses caused by *Vibrio* bacteria between 2006-2008 and in 2012. This increase includes only foodborne illnesses and does not include wound and systemic infections related to contact with contaminated seawater.

The symptoms of *V. parahaemolyticus* infection include diarrhea, stomach cramps, nausea, vomiting, headache, fever, and chills. Symptoms usually appear 12-24 hours after eating contaminated shellfish, and can last two to seven days. *Vibrio* infections can be life-threatening for immune-compromised people or those with chronic liver disease. Also at greater risk are people who regularly take antacids, heart or diabetes medication, or who've had antibiotic or cancer treatments recently. Ask your doctor if you have any questions about your individual risk from 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 commercial shellfish industry is aware of the risks associated with *V. parahaemolyticus* and follows strict refrigeration and handling requirements during warm summer months. Recreational harvesters also need to be aware of this risk when planning recreational shellfish harvest. Here are a few tips you need to know:

Guidance for Recreational Shellfish Harvesters

- **Harvest only from areas that you have a permit from and harvest only from areas that are open**
- **Always check the status of the shellfish area** you want to harvest by calling the local shellfish hotline Hotline numbers can be found at: http://www.ct.gov/doag/cwp/view.asp?a=3768&q=478084
- **Harvest as soon as possible after the tide goes out** (at the beginning of the tide cycle instead of at the end so that flats have been exposed for as little time as possible)
- **Keep shellfish submerged** until you leave the harvest area.
- **Do not use your boat's live well for storing shellfish after harvest.** Most people use these to hold fish or other organisms; this practice could result in the cross-contamination of shellfish
- **Keep shellfish shaded** until placed on ice or into refrigeration
- **Do not harvest oysters that have been exposed to direct sunlight for more than two hours**
- **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
- **Thoroughly cook your shellfish: the internal temperature must reach 145°F for 15 seconds.**

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Recreational Shellfish Harvesting:
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 shellfish in the shell.** All fresh shellfish should be stored in an open container in the refrigerator. Place a damp towel on top to maintain humidity. Never store shellfish in water. They will die and may spoil. Shellfish that are open and don't close when tapped are dead. Throw them out. **Storage times for shellfish vary:**

- **Shellfish that close their shells completely** can be stored for up to seven days. This includes oysters and littleneck clams or quahogs. *Exception:* **Mussels** can be stored for three to four days.
- **Shellfish that cannot completely close their shells** can be stored for three to four days. This includes softshell clams and razor clams.
- **Shucked Shellfish.** Shellfish removed from their shells should keep in a refrigerator for up to three days. In a freezer, they should keep for up to three months.
- **Cooked Shellfish.** Cooked shellfish should keep in a refrigerator for up to two days and in a freezer up to three months.
- **Thawed Shellfish.** Shellfish taken from the freezer and thawed in a refrigerator should keep for up to two days. Once thawed, do not refreeze.

Cooking Shellfish

Thorough cooking **does** destroy *V. parahaemolyticus*, but barbequing oysters or steaming clams just until they open will not inactivate the bacteria. 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:

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

Information on harvest, handling, storing and cooking excerpted with permission from the WA State Department of Public Health Document: Recreational Shellfish Harvesting: Safe handling, storing, and cooking practices. http://www.doh.wa.gov/Portals/1/Documents/4400/332-072-RecHarvest.pdf

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