

EMPLOYEE SHELLFISH TRAINING



New Hampshire

Department of Health and Human Services

Food Protection – Shellfish Program

Employee Shellfish Training

From harvest to consumer, it is important that bi-valve molluscan shellfish be handled properly. Shellfish are often served raw or undercooked, thus increasing the risk of a food-borne illness. Even low numbers of *Vibrio* can grow rapidly with temperature abuse.

HARVEST

Natural Pathogens:

Vibrio Parahaemolyticus and *vibrio vulnificus* are naturally occurring bacteria that proliferate during warm weather. Shellfish can concentrate vibrios as they feed and if the shellfish are eaten raw, or undercooked, these bacteria can make a person ill.

Vibrio Parahaemolyticus: Eating raw shellfish when *Vp*. Bacteria are present at high levels can cause gastroenteritis:

- Flu-like symptoms
- Diarrhea
- Vomiting
- Headache
- Fever/chills



Vibrio Vulnificus: Symptoms of *Vibrio Vulnificus* infection usually develop within 3 to 48 hours and may include:

- Rapid swelling, pain reddening of skin around the wound
- Blisters, dead tissue surrounding the wound
- Fever/chills
- Nausea/stomach pain/diarrhea/vomiting
- Fluid accumulation, especially in the legs
- Large blisters, sometimes blood-filled
- Bacterial infection in the bloodstream
- Rapid drop in blood pressure
- Death



Risk:

For those in a high-risk group, the death rate from *Vibrio vulnificus* infections through ingestion ranges from 50-61%.

Avoid Wound Infection:

- Eliminate or minimize exposure to seawater

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- Protect wounds from seawater and avoid punctures, scrapes, or cuts while fishing and handling raw seafood
- Wear protective gloves and eyewear when shucking oysters

Reduce Illness caused by Vibrio:

- Harvest begins when the first shellstock is exposed to the air, either when pulling a cage up or when the tide recedes.
- Temperature control is the best way to control Vibrio and limit bacterial growth.
- Bacterial growth slows at low temperatures and stops altogether at temperatures at or below 45 °F
- Use an ice slurry to rapidly cool oysters and hard clams during Vibrio months (May-September)
- Adequately ice or move product to mechanical refrigeration as soon as possible
- Provide shading from direct sun exposure
- Rinse shellfish only with an approved water source

Fecal Coliform: Animal & Birds and Human waste can be an issue.

- If birds are present, a written strategy for mitigation is required and must be approved by the Authority



MSD: All marine sanitation devices shall be properly labeled and handled. Overboard dumping is not allowed and could contaminate shellfish harvested for food.

Water: Any water for rinsing shellfish or washing hands shall be from approved sources. Unsafe water can contaminate shellfish and hands.

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Tagging: All shellfish shall be properly tagged prior to leaving the harvest site.

Proper handling: Employees should not handle shellfish if they are feeling ill. Do not work if you have the following symptoms: vomiting, diarrhea, fever with sore throat, jaundice, or any open wounds or sores. Follow proper hand hygiene.

DEALER



-Have at least one HACCP trained individual to conduct reviews of HACCP required documentation (note: this individual does not need to be an employee of the firm)

-Receive product only from an approved dealer listed on the ICSSL

<https://www.cfsanappsexternal.fda.gov/scripts/shellfish/sh/shellfish.cfm>

-Record the date, time, and temperature of product at arrival. Reject product that is above 50 °F

-Ensure the product is adequately iced; or shipped in a conveyance at or below 45 °F and internal shellstock temperature is 50 °F or below.

-All employees to be trained in proper food handling and personal hygiene practices.

-Retain shellstock tags for 90 days and receiving and shipping records for 1 year (fresh) or 2 years (frozen).

-Store product and utensils properly to avoid cross-contamination




 Improper storage



 Improper storage



 Better, but walls might still contaminate the ice shovel

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RETAIL

- Store and display product off the floor and stacked for good air circulation.
- Do not store in standing water. Ensure that the shellstock is well drained.
- Discard dead or broken shellfish.
- Avoid cross-contamination:



INCORRECT: Lobster juice dripping on shellstock

CORRECT: Only shellstock stored on this shelf

- Do not store or display raw and cooked products together.
- Do not store shellstock below foods that may drip or leak onto bags.
- Do not handle ready-to-eat shellfish (raw or cooked) with you bare hands.
- Wash your hands before and after preparing raw seafood products.
- Retain shellstock tags for 90 days and receiving records for 1 year (fresh) or 2 years (frozen).
- Retain tags in chronological order
- Record on the tag the date the last shellfish from a container was consumed or discarded

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Bailey	PERISHABLE KEEP REFRIGERATED	Name and Address of Shellfish Dealer	CERT. # NH-131-SS
	ORIGINAL SHIPPER'S CERT. NO. (if other than above):		
Allen	HARVEST DATE: 8/9/19		SHIPPING DATE: 8/9/19
	HARVEST LOCATION: LITTLE BAY, NEW HAMPSHIRE		
	TYPE OF SHELLFISH: OYSTERS		
	QUANTITY OF SHELLFISH: 100 WAGON HILLS		
	THIS TAG IS REQUIRED TO BE ATTACHED UNTIL CONTAINER IS EMPTY OR IS RETAGGED AND THEREAFTER KEPT ON FILE IN CHRONOLOGICAL ORDER, FOR 90 DAYS. RETAILERS: DATE WHEN LAST SHELLFISH FROM THIS CONTAINER WAS SOLD OR SERVED:		
TO:		RESHIPPER'S CERT. No.	DATES RESHIPPED
PRODUCT OF U.S.A.			
FARM RAISED OYSTERS			
"RETAILERS INFORM YOUR CUSTOMERS" "Consuming raw or undercooked meats, poultry, seafood, shellfish or eggs may increase your risk of foodborne illness, especially if you have certain medical conditions."			
PERISHABLE KEEP REFRIGERATED			

Conclusion: Bi-valve molluscan shellfish are a delicious and nutritious food, but proper handling and care must be taken to ensure that they are safe to eat, especially when served raw or undercooked.