

What to do when you get foodborne illness complaints

- Advise the complainant to see their doctor for testing, advice and treatment.
- Record the details of the complaint (name, phone number, date of meal, etc).
- Contact your local Environmental Health Protection office to report the illness complaint.



Photo Source: BC Shellfish Growers Association

BC programs that monitor shellfish quality and safety

The Canadian Shellfish Sanitation Program (CSSP) classifies harvesting areas and controls the commercial and recreational harvesting and processing of shellfish for the consumer market. The CSSP is run by three federal government agencies:

- Environment Canada (EC)
 - monitors water quality in shellfish areas
- Canadian Food Inspection Agency (CFIA)
 - monitors for marine toxins in shellfish areas
 - registers and inspects shellfish processing plants
- Fisheries and Oceans Canada (DFO)
 - closes harvest areas
 - prohibits shellfish harvesting when bacteriological or toxin levels are unsafe



Photo Source: BC Shellfish Growers Association

In BC, all commercially harvested bivalve shellfish are processed and inspected in federally registered plants.

The shellfish industry is organized under the BC Shellfish Growers Association. The industry participates with CSSP and other provincial and federal government agencies in monitoring and managing bivalve shellfish.

Shellfish harvesters and processing plants manage risks by following strict time/temperature guidelines to safely harvest and transport shellfish. A shellfish sampling program ensures that *Vibrio parahaemolyticus* levels during warm summer months are within Health Canada guidelines. These control measures work together to reduce the risk of illness to the consumer.

For further information please contact your Shellfish Safety Officer at:
604.707.2458



Bivalve Shellfish Safety: Restaurant Operator Advice

Bivalve shellfish have two hinged shells and include oysters, clams, scallops, mussels and cockles. Bivalve shellfish can contain naturally occurring toxins, or harmful bacteria or viruses. Not all toxins are destroyed by cooking.



Photo Source: BC Shellfish Growers Association

Recommendations for purchasing shellfish

- Buy shellfish from an approved source.
 - * **keep issued bivalve shellfish tags for one year** *
- Shellfish are highly perishable. Do not purchase or accept shellfish with strong or rotten odors - this is a sign the shellfish have not been stored properly and are decomposing.
- Keep shellfish cold (less than 4°C), and refrigerate immediately after receiving or purchasing.
- When you receive whole shellfish (unshucked), they should be alive, with the shells closed. If the shells are open, tap the shellfish - if the shell closes, the shellfish is still alive. Throw out any shellfish with shells remaining open.

Shelf-life and recommendations for storing shellfish

FRESH IN SHELL OR SHUCKED

- Store live shellfish in an open container, and keep chilled (0 to 4°C).
- Do not put live shellfish in a closed container or into fresh water (the shellfish will suffocate and die).
- Place live shellfish on the lowest shelf in the refrigerator, and cover with a damp towel. Do not allow any juices or liquids to leak onto other food items.
- Store shucked shellfish (meaning without the shell) in a closed (plastic or glass) container, or a leak-proof bag.

FROZEN SHELLFISH

- For optimum quality, commercially frozen seafood can be stored in the freezer for up to six months.
- Thaw shellfish either in the refrigerator overnight; *or* in cold running water for approximately one hour.

FRESHLY COOKED SHELLFISH

- Store cooked shellfish refrigerated in containers for 1 to 4 days.



Shellfish should not be kept for more than the shelf-life:

	Fresh in Shell	Fresh Shucked
Oysters	7 - 10 days	5 - 7 days
Clams & Mussels	2 - 3 days	1 - 2 days
Scallops		2 - 3 days

Recommendations for cooking shellfish

- During preparation keep raw shellfish separated from cooked foods and follow good hygiene practices:

- wash hands before preparing foods
- wash hands after handling raw shellfish
- keep counters and utensils clean and sanitized.



- Use only drinking-quality water for rinsing.
- Scrub shells of clams, mussels and oysters with a stiff brush (under running water) before cooking.
- Bacterial and viral infections can be avoided by thoroughly cooking shellfish to an internal temperature of 90°C for 1.5 minutes. The following instructions should be followed for cooking bivalve shellfish (clams, mussels and oysters):

Boil: add shellfish in the shell to water that is already boiling. Boil for 3 to 5 minutes after the shells are open.

Steam: for 4 to 9 minutes. Throw out any shellfish with unopened shells.

Fry: for at least 3 minutes at 190°C (375°F)

Bake: for at least 10 minutes at 230°C (450°F)

- Avoid direct contact between raw shellfish and other cooked ready-to-eat foods.
- **Cooking does not destroy toxins in bivalve shellfish.**

Why does eating shellfish sometimes cause illness?

Shellfish naturally ingest organisms such as bacteria, viruses, and plankton toxins that are in ocean water. These organisms and toxins can build up in the shellfish and can make people sick when they consume the contaminated shellfish.

Vibrio parahaemolyticus, Hepatitis A and Norovirus infections are associated with eating raw shellfish. *Vibrio* is a bacterium naturally found in the ocean. During warm summer months the levels of bacteria increase in the water and bivalve shellfish (especially raw oysters) can become contaminated. Shellfish contaminated with viruses (like Hep A and Norovirus) are likely a result of sewage contamination.

Eating raw shellfish increases the risk of foodborne illness. Cooking shellfish will destroy these organisms and prevent illness.

Paralytic Shellfish Poisoning (PSP) and Amnesic Shellfish Poisoning (ASP) can be the result of eating shellfish contaminated with toxins from plankton (sometimes seen in 'red tides'). **Cooking shellfish does not destroy these toxins.**

People with underlying medical conditions such as liver disease may be at increased risk of serious complications.

Allergic Reactions can result in some persons when they contact seafood (fish, crustaceans and shellfish). Seafood is considered one of the nine most common food allergens by Health Canada.