



Fact Sheet

FOOD SAFETY FACTS ON PARALYTIC SHELLFISH POISONING (PSP)

Several illnesses are associated with the consumption of tainted, decomposed or unwholesome fish and fish products, including shellfish. These include illnesses caused by fish which carry bacteria or other microorganisms, and illnesses caused by fish contaminated with marine biotoxins.

Marine biotoxins are a group of natural toxins that sometimes accumulate in fish and shellfish. Many biotoxins are produced by microscopic marine algae (phytoplankton, including diatoms and dinoflagellates) and can accumulate in fish or shellfish if they ingest these algae.

There are several types of illnesses, caused by marine biotoxins, that are connected with the consumption of contaminated shellfish. They include Paralytic Shellfish Poisoning (PSP), Amnesic Shellfish Poisoning (ASP), and Diarrhetic Shellfish Poisoning (DSP).

What is Paralytic Shellfish Poisoning?

- Paralytic Shellfish Poisoning (PSP) is an illness caused by a group of 18 to 24 marine biotoxins that are derivatives of saxitoxin.
- PSP toxins can accumulate in a number of filter-feeding bivalve molluscan shellfish, such as clams, mussels, scallops and oysters, and in the hepatopancreas or tomalley (liver) of crustaceans such as crabs and lobsters.

What are the symptoms of PSP?

- The symptoms of PSP usually begin within 5 to 30 minutes after consumption, with a tingling sensation or numbness around the lips. This gradually spreads to the face and neck. Other symptoms are a prickly sensation in the fingertips and toes, headache and dizziness.
- In moderate to severe cases there may also be incoherent speech, a prickly sensation in the arms and legs, stiffness and non-coordination of limbs, weakness, rapid pulse, respiratory difficulty, salivation or temporary blindness. Nausea and vomiting may also occur.
- In the most severe cases, paralysis of respiratory muscles may progress to respiratory arrest and death within 2 to 12 hours after consumption.

- There is no known antidote for PSP.
- Seriously affected persons must be hospitalized and placed under respiratory care.

Where could I come into contact with PSP?

- Most cases of illness from PSP are linked to the consumption of contaminated bivalve molluscan shellfish, such as clams, mussels, oysters, and whole scallops containing high levels of PSP toxins.
- The majority of cases occur from shellfish harvested recreationally from closed areas on the Atlantic and Pacific coasts and along the St. Lawrence River during the summer months.

What can I do to protect myself and my family?

- In order to avoid PSP, only shellfish harvested from open harvest areas should be consumed. When an area is closed to shellfish harvesting, signs are posted and the public is warned by means of a general announcement in the news media.
- Properly cooked shellfish can still be toxic since PSP toxins are relatively heat-stable.
- If you think you have symptoms of shellfish poisoning, consult your physician immediately.
- PSP can also occur in tropical areas, and tourists should be aware of local conditions before consuming shellfish abroad.

How does the Canadian Food Inspection Agency (CFIA) protect consumers?

- The CFIA operates a shellfish monitoring program to provide early warning of PSP toxins (and other toxins) in molluscan shellfish.
- Under this program, the CFIA analyzes shellfish samples, taken directly from shellfish growing areas, for PSP toxins and domoic acid. Hundreds of sites in Atlantic Canada, Quebec and British Columbia are regularly tested for PSP toxins.
- When unacceptable levels of toxins are found in a shellfish growing area, the CFIA informs the Department of Fisheries and Oceans (DFO), which takes immediate measures to close the affected area to shellfish harvesting.
- When areas are closed, signs are posted and DFO fishery officers patrol the areas to prevent the harvesting of shellfish.

For more information on foodborne illness and safe food handling practices, visit the Canadian Food Inspection Agency website at www.inspection.gc.ca