

seafood facts

Alaska Seafood Processing
Guidance

Food Safety & Sanitation Program
Alaska Department of Environmental
Conservation



Paralytic Shellfish Poisoning

“This toxin is extremely poisonous; as little as one milligram (0.000035 ounce) is enough to kill an adult.”

Seafood Definitions:

Paralytic Shellfish Toxin (PST)

A naturally occurring toxin, called a “biotoxin,” that is produced by some species of microscopic algae. PST can concentrate in shellfish and, when eaten, can cause severe illness and death.

Algae Blooms

Biotoxin-producing algae are common in marine water. The toxin produced is normally very low. However, in certain water conditions (not completely understood yet), the algae “bloom” and produces high concentrations of PST.

Red Tide

The term “red tide” is often used to describe toxic blooms; however, red is only one of many colors algae blooms may produce. The color of a bloom is not an indicator if PST is present, which may or not be present. PST can be present even if the water looks clear.

Certified Shellfish Growers

Shellfish harvested commercially and sold to the public come from licensed, certified growers. Their harvest operations must meet specified standards, and the shellfish they harvest are regularly tested for biotoxins.



- **What is Paralytic Shellfish Poisoning?** Paralytic shellfish poisoning (PSP) is a serious illness caused by eating shellfish contaminated with algae that contains Paralytic Shellfish Toxin (PST), a toxin harmful to humans. This toxin is extremely poisonous; as little as one milligram (0.000035 ounce) is enough to kill an adult.
- **How do shellfish become contaminated with PST?** Shellfish feed by filtering food particles, including algae, from ingested water. When they filter and eat biotoxin-producing algae, the PST accumulates in their tissue.
- **What types of shellfish might be contaminated?** All molluscan shellfish (those having a hinged shell), including clams, mussels, geoducks, oysters, snails and scallops may be contaminated. Crab meat is not known to contain the toxin, but they feed on shellfish, so it's possible the guts may contain unsafe levels of PST. To be safe, clean crab thoroughly, removing all butter (the white-yellow fat inside the back of the shell), and discard the gut. Shrimp and finfish are not known to contain the toxin.
- **What about shellfish I buy in the store?** Restaurants and stores must purchase shellfish from certified growers. Certified growers are required to have their products regularly tested for PSP.
- **What if I cook contaminated shellfish thoroughly?** The toxin is not destroyed by cooking or freezing.
- **Does shellfish containing PSP taste different?** No. Shellfish containing PSP toxin may not look, smell or taste any different than uncontaminated shellfish.
- **What are the symptoms of PSP?** Early symptoms include tingling of the lips and tongue, which may begin within minutes of eating poisonous shellfish or may take an hour or two to develop. Depending upon the amount of toxin a person has ingested, symptoms may progress to tingling of fingers and toes and then loss of control of arms and legs, followed by difficulty in breathing. Some people have experienced a sense of floating or nausea. If a person consumes enough poison, muscles of the chest and abdomen become paralyzed. Death can result in as little as two hours, as muscles used for breathing become paralyzed.
- **What is the treatment for PSP?** The only treatment for severe cases is the use of a mechanical respirator and oxygen. If symptoms are exhibited, call 911, or get to a medical facility immediately.

PSP in Alaska – How to avoid Paralytic Shellfish Poisoning

- Don't eat shellfish harvested from untested Alaska beaches.
- Don't eat the viscera (guts) of crab. Because PSP has been found in crab viscera, it is recommended that crab be cleaned and eviscerated before being cooked.
- Cooking will not destroy the toxin. Freezing will not destroy the toxin.
- Shellfish should be purchased from a reputable retail store or restaurant.
- Commercially sold shellfish and crab are routinely tested.
- For more information contact Carol Brady, carol.brady@alaska.gov, Alaska DEC shellfish expert.



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<http://www.dec.alaska.gov/eh/fss/>
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