



Paralytic Shellfish Poisoning Fact Sheet

What is paralytic shellfish poisoning?

Paralytic shellfish poisoning (PSP) is a serious illness caused by eating shellfish contaminated with algae that contains a toxin harmful to humans. When this algae increases to high numbers in marine waters, the condition is sometimes (and somewhat erroneously) referred to as a "red tide". PSP can occur without a "red tide".

What causes unsafe levels of PSP?

The amount of toxin increases when water conditions are favorable. However, the exact combination of conditions that cause "blooms" of poison-producing plankton is not known. We do not yet understand the interaction of the water conditions. Unlike bacterial contaminants like vibrio, warm water does not necessarily increase the level.

Which seafood can transmit PSP to humans?

All molluscan shellfish including clams, mussels, oysters, geoduck and scallops can have paralytic shellfish poison. Moon snails and other gastropods also can become toxic. Other marine species, such as sea cucumbers, might also be affected. Crabmeat is not known to contain the PSP toxin, but the guts can contain unsafe levels. To be safe, clean crab thoroughly and discard the guts.

Who is most at risk?

Anyone who eats PSP contaminated shellfish is at risk for illness or death.

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.

If the water looks dirty or red, does that mean that shellfish are contaminated?

Not necessarily. Paralytic shellfish poison is rarely associated with a red tinge to the water. Reddish coloration of the water is more commonly associated with other, non-toxic organisms.

If the water is not red, does that mean that shellfish are not contaminated?

Not necessarily. PSP can be present in large amounts even if the water looks clear. Also, the toxin can remain in shellfish long after the algae bloom is over.

Can I tell if it's safe to gather shellfish by how they look?

No! Only laboratories can reliably test shellfish for PSP. Toxin can be present with no visible signs.

How can I protect my family from paralytic shellfish poisoning?

The only way to protect your family or yourself from PSP is by not eating shellfish collected from recreational beaches in Alaska. Commercial shellfish in Alaska are routinely tested and are considered safe for consumption.

Is the shellfish safe to eat if I cook it?

No, cooking shellfish doesn't make it safe to eat. Commercially harvested shellfish is routinely tested and is considered safe to eat.

If someone else eats shellfish harvested from a certain beach and doesn't get sick – does that mean the beach is safe?

No, never assume a beach is safe even if someone has eaten shellfish without getting sick. Toxins can be present in varying amounts in shellfish on the same beach.

What should I do if I think that I, or someone in my family, have paralytic shellfish poisoning?

PSP is a medical emergency. Induce vomiting and call 911 or have someone take you to the emergency room if you suspect PSP. Medical care in a hospital may be needed to support an ill person until the toxin has worn off.

What is the treatment?

There is no medication available. The only treatment for severe cases is the use of a mechanical respirator and oxygen. Induced vomiting may help purge some of the toxin from the stomach. Seek medical care as soon as possible.

Are there any other illnesses associated with shellfish?

Yes, a person may have an allergic reaction to shellfish or become ill due to bacteria or viruses in shellfish.

What else can be done to prevent these diseases?

It is important to notify public health departments about even one person with marine toxin poisoning. Public health departments can then investigate to determine the source of the problem. This prevents other illnesses. Any suspected cases of PSP should be reported to the State of Alaska Section of Epidemiology at 907-269-8000 or after hours at 1-800-478-0084.