

## What are Shellfish Biotoxin Closures?

As a public resource, most of our recreational beaches contain mussels and clams. These molluscan shellfish may be harvested recreationally for personal consumption here in Oregon. One of the ODA's missions is to help prevent illnesses that can occur from recreationally harvested shellfish containing biotoxins. Please be advised that biotoxin closures affect **all** bi-valve molluscan shellfish, including mussels, clams, cockles, scallops and oysters. For information on season openings, regulations and permits for the recreational harvest of molluscan shellfish please check Oregon Dept. of Fish and Wildlife.

As filter feeders bivalve molluscan shellfish concentrate contaminants from the water in their digestive tracts. The shellfish can be contaminated by harmful algae blooms (HABs) so ODA routinely samples mussels and clams along the entire Oregon coast (as tides, weather, and surf allow) to test for the presence of biotoxins. ODA and ODFW jointly issue recreational shellfish closures when biotoxin test results exceed safe levels. Recreational shellfish harvesters should always check the biotoxin hotline before each harvest event to make sure they always have the latest information in case of a closure.

## Paralytic Shellfish Toxin (PST)

A shellfish biotoxin closure is issued immediately if PST levels rise above the alert level of 80 micrograms per 100 grams of shellfish meat. Shellfish contaminated with PST can cause minor to severe illness, and even death. PST cannot be destroyed by cooking, by adding baking soda, or by any other method of processing, and there is no known antidote. PST symptoms usually begin with tingling of the mouth and tongue. Severe poisoning can result in dizziness, numbness and tingling in the arms and legs, paralysis of the arms and legs, and paralysis of the muscles used for breathing, which can lead to death. PST(s) are produced by algae and usually originate in the ocean.

## Domoic Acid (DA)

A shellfish biotoxin closure is issued immediately if DA levels rise above the alert level of 20ppm. DA is a naturally occurring toxin produced by marine algae. Eating shellfish contaminated with DA can cause minor illness within minutes or hours. As with Paralytic Shellfish Toxin, DA is not destroyed by cooking, by adding baking soda, or by any other method of processing, and there is no known antidote. In mild cases, symptoms can include vomiting, diarrhea, abdominal cramps, and headache. More severe cases can result in memory problems and death.

## Other Causes of Contamination

Shellfish can also be contaminated by other events, such as sewage spills, heavy rainfall causing pollution to flow into bays, and places where wildlife gather. Recreational shellfish harvesting areas are not monitored for fecal coliform bacteria and viruses. You can contact your local county health department, local sewage treatment plant, or review beach coliform levels using the Oregon Beach Monitoring Program.

Because shellfish are not formally sampled and tested for the presence of fecal coliform bacteria, ODA recommends you thoroughly cook all recreationally harvested shellfish prior to consumption. Thorough cooking of shellfish may destroy fecal coliform bacteria and viruses, but does not destroy biotoxins.

