



Bulletin No. 30

August 4, 1997

PSP Proves Fatal to Kodiak Islander

Case 1. On June 7, a resident of Karluk went to the Sturgeon River Lagoon to collect butter and littleneck clams. He ate about 6-8 raw butter clams. Two hours later, he had numb lips. Knowing this to be a symptom of paralytic shellfish poisoning (PSP), he tried unsuccessfully to induce vomiting by drinking large amounts of water. On the way to the village, he developed weakness, dysphagia, slurred speech, shortness of breath, and a floating sensation. No medical personnel were available, so a plane was called to take him to a nearby village where community health aides were on duty. The patient had a respiratory arrest while waiting for the plane and was later pronounced dead at the Kodiak Island Hospital. The butter and littleneck clams were found to contain 8532 µg toxin/100 gm tissue and 1374 µg toxin/100 gm tissue, respectively.

Cases 2 and 3. On June 7, two residents of Larsen Bay were seen at Kodiak Island Hospital with perioral paresthesia, nausea, weakness, ataxia, shortness of breath, and dysphagia. These two persons and a friend consumed 20-25 butter clams that had been gathered 2 days earlier in Larsen Bay. Symptoms began with lip tingling during the meal, followed by the other symptoms 1-2 hours later. One person was admitted overnight for observation. The other recovered within 6 hours after the meal. The third person declined to be evaluated, although she experienced some oral numbness. The clams contained 470 µg toxin/100 gm tissue.

Cases 4 and 5. On June 14, two fishermen developed oral and hand paresthesias 2 hours after eating 10-15 cooked mussels from Gardner Point near Kake. Both were hospitalized overnight and released the next day in good condition.

Discussion: Five cases of PSP, including one fatality, occurred during an 8 day period when low tides provided optimal clamming. Three of the cases occurred on Kodiak Island which has had numerous PSP cases. High levels of toxin were found in the batch of clams consumed by the fatal case. Shellfish containing >80 µg toxin/100 gm tissue are considered unfit for human consumption.

The toxin which causes PSP can be present at any time in the marine environment in Alaska. **Beaches used for recreational clamming are not tested for PSP.** People who eat recreational shellfish should be aware of PSP symptoms (Table 1) and go to the nearest medical facility if symptoms develop. Vomiting should be induced mechanically (placing a finger down the throat) or with syrup of ipecac. There is no specific treatment; mechanical ventilation may be required until the effects of the toxin resolve, usually within 24 hours.

Table 1. Symptoms of Paralytic Shellfish Poisoning

Paresthesias	Shortness of breath	Dry mouth
Perioral numbness	Dizziness	Dysarthria
Perioral tingling	Ataxia	Dysphagia
Extremity numbness	Weakness	Nausea
Extremity tingling	Floating sensation	Vomiting

Recommendations:

1. Persons who wish to avoid PSP should not collect shellfish in Alaska. Shellfish sold commercially are routinely tested and are safe for consumption.
2. Persons who eat recreational shellfish should be aware of the symptoms of PSP and go to the nearest medical facility if symptoms occur.
3. PSP is a public health emergency. All suspected cases should be reported to the Section of Epidemiology at 269-8000 (business hours) or 1-800-478-0084 (after hours).

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