

PSP Project Ends September 30, 2011. What's next?
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Distribution: To PSP results recipients and APIA staff

For two years the Environmental Protection Agency (EPA) has funded the Aleutian Pribilof Islands Association (APIA) to establish a testing and monitoring program for paralytic shellfish poisoning (PSP) in Aleut communities (*Project Title: Response to Paralytic Shellfish Poisoning in Aleut Communities*) with the intent of building capacity in the region so that residents will understand the risks associated with eating subsistence shellfish and what steps to take to avoid poisoning. The EPA funded project ends September 30, 2011, but during this investigation we have learned much about some of the Aleutian's popular clamming beaches, when PSP usually peaks and that PSP levels can remain high even in the winter. During the last two years we have also seen far fewer reported PSP illnesses in the Aleut region.

Even though the EPA PSP project is ending, there are still ways you can protect yourself from PSP poisoning.

I. Don't Eat Them: The easiest and best way you can protect yourself from PSP poisoning is to not eat bivalves (clams, mussels, scallops, cockles) from Alaska beaches.

[Shellfish sold at wholesale and retail markets require PSP testing and are considered safe for human consumption.]

II. Know the Species: But if you do eat bivalves from Alaska's beaches you can reduce your risk by avoiding the most dangerous species, butter clams and blue mussels. Littleneck clams usually do not reach as high of toxicity levels as butter clams and littleneck clam toxicity levels usually drop off quicker than butter clams. The official policy of the state of Alaska is that all shellfish that are untested are unsafe to eat. This includes littleneck clams since there have been recorded toxin levels. Littleneck clams are safer than other shellfish, but there is not guarantee they are safe when there is a PSP problem in the area with other species. If you harvest/consume clams from Alaska beaches you should become familiar with all the clam species. Extreme caution should be taken when consuming any clams, scallops and mussels from Alaska's beaches.

Crabs feeding on toxic shellfish can accumulate PSP toxin in their digestive system, so I recommend that before cooking, remove the back shell of the crab and clean out all the dark soft tissues that compose the digestive system and crab butter.

III. Practice safe harvest strategy: Catch - Hold - Test

Follow these steps and you will decrease the likelihood of becoming ill from PSP:

1. Identify a beach in the community where a harvest will be scheduled.
2. Notify community members of the harvest location and date.
3. Monitor the beach for toxin levels at least once prior to the harvest date and during the same tide cycle as the harvest by collecting sample(s) of the target species and testing for toxin

at the ADEC laboratory (see Appendices A-C). Since this is not a regularly scheduled event and timely notice of results is essential, DEC should be notified in advance of any collection and shipment to be sure the DEC lab has the testing supplies on hand and can provide timely notice. Contact Matthew Forester, Bio-Analysis Section Manager, Department of Environmental Conservation, Environmental Health Lab., Phone: 907.375.8204, Email: Matthew.Forester@Alaska.gov

4. If the samples are acceptable for harvest (less than 80 ug PSP/100 grams of tissue), the community will be notified that the harvest will proceed.
5. The beach boundaries for harvest will be marked, and on the day of harvest, harvesters will be supervised by a selected community representative to assure they are harvesting the correct species and remain within the boundary of harvest.
6. Harvesters will be instructed to refrigeration and hold their harvest until an official PSP test of the harvest is completed.
7. Sample(s) of shellfish will be taken from the harvest and tested by ADEC laboratory. This should require 24-48 hours and the sampling and shipping instructions are in the Appendices A-C.
8. Test results will be delivered to the community and through local broadcast media.
9. Harvesters will be instructed to return the shellfish to the beach if PSP results are unacceptable.

PSP is a public health emergency and should be reported immediately to Alaska Section of Epidemiology by health care providers or citizens. To report, please call 907-269-8000 Mon-Fri 8 AM-5PM, or 1-800-478-0084 after-hours. Early symptoms include tingling of the lips and tongue, which may begin within minutes of eating toxic shellfish or may take an hour or two to develop. 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 feel nauseous or experience a sense of floating. If a person consumes enough toxin, muscles of the chest and abdomen become paralyzed, including muscles used for breathing, and the victim can suffocate. Death from PSP has occurred in less than 30 minutes.

General questions about PSP and PSP testing can be directed to George Scanlan at the Alaska Department of Environmental Conservation at (907) 269-7638 (see <http://www.dec.state.ak.us/eh/fss/seafood/psp/psp.htm>).

I would like to thank all the people who assisted with the PSP project. Tami Fordham was the EPA manager and very supportive of this project. Ray RaLonde of Alaska Sea Grant was a good advisor and the staff of the Alaska Department of Environmental Conservation Environmental Health Lab was very professional. The field technicians were great throughout this project including Dana Osterback and Lisa Barnes, of the Qagan Tayagungin Tribe, Sand Point, AK; Desirae Roehl and AnnDee Roehl, Agdaagux Tribe of King Cove; Antone Shelikoff of Akutan; Reid Brewer Marine Advisory Program Agent, Unalaska; Elijah Donat, Chilkat Environmental, Haines; Lisa Spitler of the US Fish and Wildlife Service (Adak) and many others provided samples of opportunity. Thank you.

Appendix A. Sampling Protocols: Standard Operational Practice (SOP) for Collection of Shellfish for PSP Testing.

This SOP provides the procedure to be used when collecting shellfish for PSP testing. The collection practices apply to preparing shellfish for shipment. Shipping procedures apply only to samples that are freighted to Anchorage. The data sheet (PSP TESTING DATA ENTRY SHEET) accompanying this SOP must be completed and placed in the plastic storage bag with the shellfish at the time the shellfish are collected.

Collection Procedure

1. Fill out the collection portion of the data sheet.
2. Harvest shellfish as follows:
 - a. The general rule is that you will need at least 150 grams of drained tissue weight (about 2/3 cup) of meat to conduct the PSP test. Include a shell with each sample to confirm ID.
 - b. Blue mussels – 30 shucked mussels per sample.
 - c. Butter clams - If they are greater than 3” in size 5 shucked clams per sample. If they are less than 2” in size at least 10.
3. Be sure the data sheet is completed after sampling.
4. Place sample into zip-lock bag along with the data sheet.

PSP TESTING DATA ENTRY SHEET

The data is entered on the following table and placed in the bag with the sample and frozen.

Location (Town, village etc) sample collected _____

Sampler's name _____

Date sample collected _____

Species _____

Instructions for Completing the Data Sheet:

- Location – This is site location by town, island, village name, or other appropriate identifying location name.
- Your Name – This is the name of the person who collected the sample.
- Date Collected – This is the date the sample was actually collected from the beach.
- Species – Shellfish species being tested.

Appendix B. Standard Operational Practice (SOP) for Storage of Shellfish for PSP Testing.

These procedures are to be used when storing shellfish for PSP testing.

- Freeze samples (shucked clams or mussels) in plastic ziplock bag prior to shipping)
- Freezing does not affect the PSP results.
- Freezing may cause the shellfish to gap open, making them easier to shuck and test.

- Make sure you have included the PSP TESTING DATA ENTRY SHEET (see Appendix A.) in the ziplock with the sample (clams/mussels).

Appendix C: Shipping Procedures

All samples submitted to the DEC Environmental Health Lab are received by laboratory technicians within the Lab's Shipping & Receiving department. The technicians require the following information as soon as your samples are shipped so they may arrange for courier pick-up and delivery to the lab:

- Date shipped
- Your name
- Your contact number
- Number of pieces
- Content of shipment
- Test(s) requested
- Freight carrier
- Name of carrier
- The waybill number (or other carrier tracking number)
- Flight number, if available
- Date delivery is expected, FOB Anchorage

✓ Please notify EHL Shipping & Receiving by phone, (907) 375-8231, or via email at DEC.EH-Lab-ShippingReceiving@alaska.gov with the above information. This phone is not staffed 24 hours a day; please leave a detailed message.

✓ Address all sample shipping labels as follows:

ADEC – EH Laboratory
ATTN: Eagle Express Courier
5251 Dr. Martin Luther King Jr. Ave.
Anchorage, AK 99507-1293
NOA 227-8444

When sending samples, please call Eagle Express Courier at 907-227-8444 or send them an e-mail at dtc_hobson@yahoo.com.

Ship frozen samples in labeled (with address and “KEEP FROZEN”) insulated container shipped via PenAir's PenPak, Alaska Airlines Gold Streak or similar fast shipping. You will be responsible for the shipping costs and lab fees (\$125 per sample), but the courier service is free.