Assessing the Relationship between Northern Pike Consumption and Human Hair Mercury Levels in Rural Alaska

Background and Objectives
Fish and other traditional foods are nutritious – they are almost always the best choice for a healthy diet. However, some fish contain small amounts of chemicals that may harm health. There is growing concern that some northern pike may not be safe for pregnant women to eat in large amounts. The Alaska Division of Public Health (DPH) is working with the U.S. Fish and Wildlife Service (USFWS) to learn more about mercury levels in northern pike, so that we can provide advice to Alaskan women about how much is safe to eat. The USFWS is sampling northern pike on National Wildlife Refuges. The participating refuges are: Yukon Flats, Yukon Delta, Innoko, Northern Innoko, Koyukuk, Nowitna and Selawik. The USFWS will be analyzing the northern pike for traces of mercury. At the same time, DPH will be collecting hair samples from women living on or near these refuges to test for mercury. We will also be asking women about the types and amounts of fish they eat. The level of mercury in human hair can provide information about exposure to mercury from food.

The goal of this project is to determine if the amounts of northern pike that women eat are safe. Results of the project will help us develop information campaigns for the public. This way, individual consumers can make informed decisions about the northern pike they eat.
Data Collection and Analysis
Data collection will occur from Spring 2007 to Fall 2008. Villages invited to participate in the project will be located on or near the refuges (see map on previous page). All women of childbearing age in these villages will be eligible to participate. If they choose to participate, they will be asked to answer a short survey about the fish they eat. They will also be asked to provide a small hair sample to be tested for mercury. Results of the hair analysis will be sent directly back to them. Results will be sent within two months of sample donation.

Outreach and Communications
The results of the project will be presented at public gatherings at the participating villages. In addition, we will produce a poster and a fact sheet explaining the project and the results. These will be distributed to the village schools and other public places. Results may also be published in scientific journals, ensuring that all participant information remain confidential. Data, fact sheets and any publications from this project will be available at: www.epi.alaska.gov

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Health Implications
Using data from this project, we will evaluate the impact of eating northern pike on public health. The Alaska Scientific Advisory Committee for Fish Consumption will help determine the best fish consumption advice for Alaskans. This information will be used to develop fish consumption information campaigns for the public.

Hair sample being collected