Dear Community Members,

I am pleased to send you the first issue of NEAM News, a series of reports about a tobacco research project conducted by the Bristol Bay Area Health Corporation (BBAHC) and the Alaska Native Tribal Health Consortium (ANTHC). The Nicotine Exposure and Metabolism study (NEAM) was conducted in order to learn more about how people in the Bristol Bay region use tobacco, what they know about tobacco, and how they feel about tobacco use. Another goal of the study was to measure how much nicotine and cancer causing agents could be found in bodies of people who use different types and amounts of tobacco. By studying how fast the body is able to get rid of nicotine more was learned about how people metabolize nicotine. The purpose of NEAM News is to update the community on the research findings as well as share wellness information in order to help spread the word about the effects of tobacco. I encourage anyone interested in quitting tobacco use to visit the websites listed on the back of this newsletter or call 1-800-QUIT-NOW for help. Together we can make Alaska tobacco free!

I would like to thank all of the participants, researchers, and supporters of this research project.

Sincerely,

H. Sally Smith

A Community Advisory Board (CAB) was formed in order to develop the research study materials including several questionnaires asking about how participants viewed and used tobacco. The CAB was comprised of regional health and tribal leaders, community members, tobacco workers, ethics committee members and medical staff.
What is the **Nicotine Exposure and Metabolism (NEAM)** study?

The NEAM study is a collaborative project between the Bristol Bay Area Health Corporation (BBAHC) and the Alaska Native Tribal Health Consortium (ANTHC) that took place from 2004 - 2010. The study had several goals including:

- Describe the exposure to nicotine and carcinogens in Alaska Native adults who use tobacco (cigarettes, commercial chew, and/or Iqmik).
- Characterize nicotine metabolism in Alaska Native adult tobacco users.
- Learn more about the nicotine and carcinogen content in commercial chew and Iqmik.
- Help educate about the specific health concerns related to tobacco use.

Participants in the study answered a questionnaire about their health, tobacco use, and their thoughts and feelings about tobacco in general. Next, measures such as height, weight, and waist circumference were taken. Finally, participants voluntarily provided a small blood and urine sample for the genetics part of the study. Many participants also provided the researchers with a sample of the commercial chew or Iqmik they use.

The findings of the study may help community leaders understand the prevalence of tobacco use in the Bristol Bay region and develop better programs to help Alaska Native people stop using tobacco. By studying metabolism, guidelines for nicotine replacement therapy can be better understood for Alaska Native people. Iqmik is a product that has not been studied often; the NEAM study findings examine the product and measure how dangerous it can be to use in comparison with cigarettes and commercial chewing tobacco. Many educational activities were created using the information learned from this study.

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**Vocabulary:**

- **Genes:** Genes are found in every cell of your body. They direct your body’s functions throughout your lifetime and you get them from your parents.

- **Metabolism:** The process by which the body breaks down chemicals in the body. It may increase or reduce the harmful effects of drugs like tobacco.

- **Nicotine:** The chemical in tobacco that makes it addictive or habit forming.

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**Why Was This Research Conducted?**

A tobacco treatment program for nicotine addiction and a Dillingham community clean indoor air ordinance were developed in 2004. At that time community leaders wanted to learn how Alaska Native people use tobacco and what effects it may have on their bodies. It became clear that research needed to be done in order to better understand what the people in the Bristol Bay region think and feel about tobacco.
Tobacco prevalence trends among Alaska Native people are significantly higher than other ethnic groups in Alaska and across the country. In contrast, amounts of tobacco smoked daily by Alaska Native people are consistently lower. Determining potential differences in the speed of nicotine metabolism by the body might explain the reason for this difference.

Genes known to metabolize nicotine include the CYP2A6 gene and its variants. These are the genes that the NEAM study looked at to determine how fast NEAM participants in the study metabolize nicotine. The rate of metabolism may have an effect on the amount of tobacco people use and their level of dependency on tobacco products.
THE PEOPLE WHO JOINED THE NEAM STUDY

Recruitment

Alaska Native people who wanted to join were interviewed and put into one of five groups depending on their current tobacco use. All of the groups answered the same questions about their own tobacco use, and their perceptions of use in the community.

The groups were:

- Cigarette User: a person who regularly used manufactured cigarettes for 30 days before the study.
- Spit Tobacco User: a person who regularly used commercial spit tobacco without ash/buluq for 30 days before the study.
- Iqmik User: a person who regularly used Iqmik for 30 days before the study.
- Mixed User: a person who regularly used both cigarettes and spit tobacco and/or Iqmik for 30 days before the study.
- Non-user: a person who had never used tobacco or had not used in the last 12 months.

General Findings from the Research

Researchers for the Nicotine Exposure and Metabolism study (NEAM) interviewed Alaska Native adults in the Bristol Bay region about their lifestyle. The questions focused on health and wellness topics such as physical activity level, eating habits, common illnesses, tobacco use, and feelings about tobacco. Since people’s bodies react to tobacco differently, part of this study looked at how tobacco is generally broken down inside the body (metabolized) by people from this region. Samples of commonly used tobacco products were collected in order to learn more about the contents in comparison to other tobacco products. This issue of NEAM News discusses some of the findings from the study including self-reported tobacco use, thoughts about tobacco use in the community, and perceptions about the number of people who use tobacco within the Bristol Bay region.

Check Out More Issues of NEAM News at: www.bbahc.org
The Future Looks Bright!

How can the NEAM findings help Alaska Native people?

Studying different types of tobacco that are used by Alaska Native people will help community members gain insight into the chemicals found in locally used products and the particular dangers associated with those tobacco products. Learning more about the lifestyles of people who live in the Bristol Bay region will help community leaders and healthcare providers understand what aspects of daily life are healthy and what areas may need to change in order to foster a healthier environment.

One way the NEAM study can impact Alaska Native people is by providing insight into what it means for an Alaska Native person to be addicted to tobacco. The findings from the genetics study will help adapt the current tobacco cessation programs, adjust dosage for quitting medication, and create new guidelines for quitting local products like Iqmik. NEAM News is dedicated to informing community members about health and wellness issues.

Long Term Specimen Storage

At the request of the Community Advisory Board and BBAHC leadership, the option for long term storage of their blood sample was offered to participants.

The plan is to keep looking for better ways to help people stop using tobacco and to find ways to keep people from getting diseases caused by tobacco. Storing blood and the DNA in it allows each participant the choice to be in other future studies without having to give blood again. All research study samples are for only the NEAM research study. No other research will be done with the stored samples unless the project is approved by BBAHC, Alaska Area Institutional Review Board, and agreed upon in writing by the individual.

Long Term Consent & Storage Process

Every person who enrolled in the study was given the option to store their bloods sample.

All of the NEAM samples are frozen and stored in the Alaska Area Specimen Bank. This is at the Center for Disease Control and Prevention’s Arctic Investigations Program in Anchorage. Samples will be kept for as long as they are usable for research.
According to a statewide survey in 2007, 48% of Alaska Native adults living in the Bristol Bay region smoke cigarettes. The survey also found that 11% of Alaska Native adults in the region use spit tobacco. The NEAM study results showed that half of the participants felt that “almost everyone uses tobacco” in the community. **Tobacco use may be perceived as more common than it is in reality.**

60% of the 400 NEAM participants described their physical health as “good.” Only 1% of the participants viewed themselves as in “poor” physical health; although, approximately 72% of the participants used tobacco on a regular basis. The difference between the negative health risks of tobacco and how participants viewed their own health suggests more education about the effects of tobacco on a community and more tobacco cessation efforts may be needed.
The NEAM scientists talked to kids in the Bristol Bay region about the dangers of spit tobacco and smoking.

**Tobacco Trivia!**

The NEAM scientists talked to kids in the Bristol Bay region about the dangers of spit tobacco and smoking.

**Across**
1. Disease that destroys alveoli
5. ____________ Monoxide is a colorless, odorless, poisonous gas produced when tobacco burns
7. A psychological or physical need for a drug or other substance
8. Tube in throat that takes air to and from lungs (windpipe)
10. Large, dome-shaped muscle below the lungs that expands and relaxes to produce breathing
11. An addictive drug found in tobacco

**Down**
2. ____________ Smoke is air that has been contaminated by tobacco smoke
3. ____________ System is the set of organs that supply your body with oxygen and rid your body of carbon dioxide
4. The unpleasant symptoms that someone experiences when he or she stops using an addictive substance
6. Two tubes that branch from the trachea; one tube leads to each lung
9. A thick dark liquid that forms when tobacco burns

**Possible answers**

Nicotine   Addiction
Diaphragm   Bronchi
Trachea     Respiratory
Emphysema   Tar
Carbon      Withdrawal
Secondhand

Test your nicotine knowledge with our Tobacco Trivia in each issue of NEAM News!
Are you thinking about quitting? You don’t have to do it alone. **Free** help is just a call away.

**BBAHC Nicotine Dependence Treatment Program**

P.O. Box 130
Dillingham, Alaska 99576

**Phone:** 907-842-9547 or 1-800-478-5201 ext. 6547

**Website:** www.bbahc.org/tobacco.html