Nicotine can have negative effects on your health, see page 2 for details.

Nicotine

is a natural pesticide which:
- Is extremely addictive when smoked
- Causes addiction as permanent as alcoholism
- Prevents pre-cancerous cells from dying
- Contributes to heart attack
- Is extremely addictive when chewed
- May be harder to quit than heroin or cocaine
- Accelerates cancer tumor growth in animals
- May cause birth defects

THE EFFECTS OF NICOTINE:

IMMEDIATE
- Increase in blood pressure
- Increase in heart rate
- Thickening of blood
- Narrowing of arteries
- Decrease in skin temperature
- Increase in respiration
- Stimulation of the central nervous system
- Vomiting
- Diarrhea

LONGTERM
- High blood pressure
- Blockage of blood vessels
- Depletion of vitamin C
- Reduction in the effectiveness of the immune system
- Cancer of the mouth, throat, and lungs
- Cancer of the upper respiratory tract
- Bronchitis and/or emphysema
- Stomach ulcers
- Dryness and wrinkling of the skin
- Production of abnormal sperm in males
Nicotine is a substance found in tobacco. It is found in all tobacco products such as: cigarettes, pipe tobacco, chewing tobacco, and cigars. When a person smokes a tobacco product, they inhale the smoke which contains nicotine as well as over 4000 chemicals. Nicotine is absorbed through the gums, cheek, and saliva of people who use spit tobacco. Nicotine is the drug in tobacco that causes addiction. When a person is addicted to nicotine, they feel as if they need nicotine in order to function normally. The smoke from tobacco also contains tar which is damaging to the mouth, throat, and lungs.

Nicotine reaches the brain within 10 seconds after intake, and is a stimulant to the brain and the central nervous system. Nicotine itself does not cause cancer, but it can keep a person using tobacco because it is addictive. The more tobacco you expose your body to over time then the more likely you are to develop serious illnesses or die at an earlier age than if you did not use.

**Nicotine is highly addictive.** It is both a stimulant and a sedative to the central nervous system. The ingestion of nicotine results in an almost immediate "kick" because it causes a discharge of epinephrine from the adrenal cortex. This stimulates the central nervous system, and other endocrine glands. Stimulation is then followed by depression and fatigue, leading the person to seek more nicotine.

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**Tobacco Trivia**

Match each letter in each column with the correct box above to reveal a fact about tobacco!

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**True or False**

1. Spit tobacco is not as addictive as other tobacco products.
2. Lung cancer may spread to the backbone, to the liver, kidneys, and on to the brain.
3. Light and Filtered Cigarettes are a safe alternative to other cigarettes.
4. If a pregnant woman uses spit tobacco, it will not affect her baby.
5. Secondhand smoke can contribute to heart disease and lung disease in non-smokers.
6. Flavored spit tobacco makes your breath smell better.
7. Nicotine causes arteries to constrict, so smoking reduces the blood supply to the heart.
8. After 48 hours without a cigarette, your nerve endings will start to re-grow, and your ability to smell and taste is enhanced.

How did the NEAM study look at nicotine?

Participants gave samples of their urine and blood to the NEAM researchers. These samples were sent to a laboratory in California and analyzed to look at the amount of nicotine, cotinine, and tobacco specific carcinogens found in the samples. Then the average amounts of these chemicals was calculated depending on if the participant was a cigarette user, spit tobacco user, iqmk user, mixed user, or non-user. The graph below shows the average amount of nicotine that was found in the urine of NEAM participants. The term “free nicotine” means that the drug nicotine was found in the urine sample in the same form that it can be found in a tobacco plant. The results show that all tobacco users had high levels of nicotine in their bodies, and were at risk for becoming addicted to tobacco. While some tobacco products may seem safer than others, it is important to note that all tobacco products have nicotine in them and are harmful to your body.

Samples of unused tobacco were tested to see how much nicotine was in them. While cigarettes contained more nicotine per gram, all tobacco products contain enough nicotine to make them addictive.

NEAM Participant Data

Nicotine and cotinine are found in the urine of people who use any type of tobacco product.

What is Cotinine?
Cotinine is created in the body of people who smoke when nicotine is metabolized (broken down) by the body. Cotinine is not eliminated from the body as fast as nicotine, instead it stays inside the body longer than nicotine. This makes it easier to detect than nicotine and a better way to measure the amount of nicotine that a person has been exposed to from using tobacco products.
Stop using tobacco and see a healthy future for you and your community.