

# Narcotic Educational Foundation of America

Drug Abuse Education Provider of the:

## California Narcotic Officers' Association

# TOBACCO - SMOKE OR CHEW

### QUICK FACTS:

The most common use of tobacco is for cigarettes, cigars, pipes, and chewing. Tobacco contains nicotine and other alkaloids. Alkaloids are nitrogen-containing organic compounds that are generally recognized as habit-forming and have a narcotic effect. This narcotic effect is considered to be the major reason for the worldwide appeal and use of tobacco products.

It is unclear whether nicotine alone has a long-term health effect. Nicotine is known to constrict the blood vessels, raise the pulse rate and blood pressure, and can place a strain on the heart. Nicotine also suppresses the appetite. Of more than 4000 substances found in tobacco smoke, about 60 are associated with cancer or tumor formation. Two of the most dangerous components of tobacco smoke are carbon monoxide (a gas) and particulate substances, which are collectively known as tar. Continued exposure to the particulate substances damages the lungs and increases the smoker's chances of developing such conditions as chronic bronchitis and emphysema. Chewing tobacco has been linked to various forms of cancer of the mouth and esophagus.

### HISTORY OF DRUG

Tobacco was already present in America when Christopher Columbus arrived. He found the natives using tobacco much the same way as it is used in many parts of the world today. Because it was thought to have medicinal qualities, it was soon transported to Europe. By the 16th century Spaniards had established tobacco plantations in the West Indies. The Virginia colonists had begun to successfully grow tobacco in 1612. Production gradually spread to the rest of the world. Today tobacco is grown in more than 120 countries. The largest growers are China (with nearly one-fourth of the world's production), the United States, India, Brazil, Turkey, and several European countries.

Tobacco is a name used for several different plants. It is closely related to the tomato and potato as well as to the deadly nightshade, from which the drug "belladonna" is derived. All are members of the *Nicotine* family of plants, named for a Frenchman, Jean Nicot, who first grew tobacco in France. Some of these plants have sweet-smelling blossoms, and grow as high as thirty feet.

Tobacco seeds are black and extremely tiny. One teaspoon of seeds can grow into enough seedlings for 6 acres. More than 350,000 seeds have been counted in an ounce. One mature plant has a potential yield of a million seeds.

From seedling to full plant requires specialized handling.

*(continued column 3, this page)*

### METABOLIC CONVERSION WITH DRUGS OF ABUSE

NICOTINE = DRUG  
COTININE = METABOLITE

**Importance of conversion:**  
Nicotine is active for 20 - 40 minutes. Cotinine lasts about 18 hours, which explains why a nicotine addict can sleep all night and not need a cigarette.



### SUDDEN INFANT DEATH SYNDROME (SIDS)

Research has linked a high incident risk level of SIDS to cigarette smoke. The statistics are staggering when a mother smokes. More recent data supports that even second hand smoke increases the risk of SIDS.

### History - *(continued from column 1)*

The full-grown plant has large leaves that droop from a central stem. Large, sweet-scented flowers appear in a cluster at the top of the stalk. They range in color from deep pink to nearly white.

The most common uses of tobacco are for cigarettes, cigars, pipe tobacco, and chewing tobacco and snuff. The leaves contain nicotine, which in its pure form is a poison. In small quantities (as in tobacco used for smoking or chewing) it increases the blood pressure and may give an appearance of calming a person's nerves (narcotic effect). The plant also is used to obtain nicotine sulfate for use in insecticides and nicotine tartrate, which is used in some medicines.

### SMOKING

People who smoke may find the habit invigorating at some times and relaxing at others. These apparently opposite effects are produced by nicotine. Nicotine is a poisonous alkaloid found in tobacco smoke, and is the substance to which many smokers are addicted. (Other well-known alkaloids are cocaine, morphine and strychnine.) It acts as a stimulant when inhaled in short puffs, but may act as a tranquilizer when inhaled in deep drags. Because it also suppresses the appetite, many people use smoking as an aid in weight control. The two most dangerous components of tobacco smoke are carbon monoxide (a gas) and particulate substances (including nicotine), which are collectively known as tar. *(continued on page #, column 1)*

## History - (continued from page 1)

In the blood, carbon monoxide interferes with the supply of oxygen to all tissues and organs, including the brain and heart. Particulates accumulate in the mucous linings of the airways and lungs and impair their functioning.

When people give up smoking, the risk of developing tobacco-related diseases declines. The speed and degree of this decline depends on how long and heavily the person smoked.

## CHEWING

Chewing tobacco is **usually** determined by the manufacturing which may involve the application of heat pressure as well as the use of flavorings. It may be flavored with molasses. It is sometimes packed in shredded form in bags, and sometimes compressed into little cakes called "slugs."

This slug is then placed between the lower gum and the cheek. The person sucks on the tobacco and spits out the resulting brown juice.

During the recent past, events have focused a spotlight on the nicotine in cigarettes. But this potentially addictive drug naturally laces smokeless tobaccos as well. Moreover, unlike cigarettes, snuff and chewing tobacco labels do not disclose the amount of nicotine these products contain. Studies have shown that the blood of adult smokeless-tobacco users has nicotine levels comparable to those found in smokers.

According to a 1991 study, high school boys who chewed tobacco often engaged in other types of risky behavior. As a central nervous system stimulant, it was reported that they more frequently got into fist fights and carried a weapon during one or more of the preceding 30 days, used anabolic steroids without a doctor's prescription, or had made one or more suicide attempts in the preceding 12 months.

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## HIGH RISK DISEASES ASSOCIATED WITH TOBACCO

- Heart disease  
(170,000 die each year)
- Lung cancer
- Larynx cancer
- Esophageal cancer
- Bladder cancer
- Pancreatic cancer
- Kidney Cancer
- Cancer deaths  
(30% of 130,000 per year)
- Chronic obstructive lung,  
emphysema, chronic bronchitis
- Pregnancy
  - spontaneous abortions
  - pre-term birth
  - low birth weights
  - fetal deaths
  - infant deaths

## FALLACY

Tobacco is the principal crop that man grows to furnish **not a necessity**, but to provide a habit. Scientists have long argued, about the harmful effects of tobacco, but people (including the same scientists) have gone right on using it. "don't do as I do, but do as I say" has been a problem in convincing young people not to experiment with this drug.

## SNUFF - (continued from column 1, this page)

Tobacco used for snuff is ground almost into a powder. It may be inhaled by holding a small pinch between the thumb and forefinger, holding it to the nose and sniffing it up. This allows a slow release of the contents of the tobacco product to be absorbed through the mucous membranes of the nose and into the blood stream.

Another method of use is to place the powder or finely cut tobacco between the gum and the lip. Again the user sucks on the tobacco and spits out the brown juice. This is called dipping snuff.

Several studies have found that smokeless tobacco use is a risk factor for cigarette smoking, and vice versa. The exchangeability of tobacco use supports the idea that nicotine addiction can be maintained by tobacco from any source.



Many people who chew tobacco graduate to cigarettes. This is because people who are addicted to nicotine in chewing tobacco can also get a hit of nicotine by smoking. The new cigarette smoker is then also at risk for lung disease caused by smoke.

## "SNUFF OUT SNUFF"

One of the most recent stories of the effects of smokeless tobacco was that of the all-star outfielder for the Los Angeles Dodgers, Brett Butler. After several years of chewing tobacco, one day he found it hard to swallow. The original diagnosis was tonsillitis, but further tests revealed throat cancer. This disease was directly linked to his chewing of tobacco.

The best-known adolescent victim of smokeless tobacco was Sean Marsee, a star high school athlete from Oklahoma who regularly dipped snuff. Marsee developed oral cancer as a result, and died in 1984 at the age of 19. The outcry over his death sparked a nationwide campaign to snuff out snuff.

## CHEWING TOBACCO IT IS ADDICTIVE

Most people don't know that you can get addicted to smokeless tobacco just like cocaine or other drugs. That is because tobacco has nicotine in it. Nicotine is a drug. It's hard to stop chewing tobacco once you are hooked on nicotine.

Nicotine gets into the body through the gums. Nicotine gives you a buzz or high that makes you feel good. But when you are used to nicotine and don't get any for a while, you get dizzy, shaky, or moody. That is how it gets you hooked. People who make dipping or chewing a habit must get a nicotine hit every 20 - 30 minutes.

Each tin of snuff and every package of chew has as much nicotine as 30 - 40 cigarettes. If you could take all the nicotine in just one package all at once, it would be enough to kill you!!

## SMOKING: ANOTHER REASON TO QUIT

A recent study reports that men who smoke can pass on a risk of cancer to their children. Researchers at the University of Birmingham in England say smoking adversely affects sperm and that men surveyed in their study who smoked 20 or more cigarettes a day had a 42 percent increased chance of having a child with cancer. The research also suggested that men who smoked between 10 and 20 cigarettes a day had a 31 percent increased risk compared to non smokers. This new study gives a compelling reason for men who smoke, and who want children, to quit, said a representative of the Cancer Research Campaign, which sponsored the research.



## WARNING SIGNS OF CANCER FROM CHEWING TOBACCO

If you dip snuff or chew tobacco, check your mouth often for these warning signs. If you have any of these, see your doctor or dentist right away. Even if you don't have any of these signs, have a doctor or dentist check your mouth every three months:

- ◆ A red or white patch that doesn't go away.
- ◆ A sore that bleeds easily and does not get well.
- ◆ A lump anywhere in your mouth or neck.
- ◆ Soreness or swelling that doesn't go away.
- ◆ Trouble chewing, swallowing or moving your tongue or jaw.

## THERE IS NO WAY IT'S WORTH THE PRICE YOU HAVE TO PAY



**Here are some of the poisons  
that dippers and chowers put  
into their mouths:**

### NICOTINE

Addictive drug, insecticide

### FORMALDEHYDE

Embalming fluid

### POLONIUM 210

Nuclear waste

### LEAD

Nerve poison

### NITROSAMINES

Cancer-causing chemicals

### HYDROCARBONS

Car exhaust

### CADMIUM

Battery chemical

## HEALTH HAZARDS

The suspicion that smoking can be a health hazard dates back at least to 1604, when King James I of England issued a condemnation of tobacco. However, it wasn't until after World War II that the modern concern over health of smokers emerged. By then medical evidence began to accumulate that eventually established that cigar and pipe smoking cause cancer of the mouth and that cigarette smoking is directly linked to lung cancer. Later other forms, including smokeless tobacco, were included in the evidence as causing cancer diseases.

Studies support all smokeless tobacco users expose themselves to serious health disorders. The Department of Human Health Services reported the chief hazards for young smokeless users were nicotine dependence, bad breath, receding gums and leukoplakia — a white patch that forms on the soft oral tissue and cannot be scraped off. Long-term users run a high risk of developing cancers of the gums, mouth, larynx / pharynx, and esophagus.

In general, a person's risk of developing a tobacco-related cancer depends on how long and how heavily the person has smoked. Among those who have smoked more than a pack of cigarettes a day for more than twenty years, a minimum of three years must elapse after quitting before a decreased risk for cancer is evident. More than ten years of abstinence is necessary before the degree of risk approaches that for those who have never smoked. Also, for the pack a day smokers, the increased risk of heart attack

## PASSIVE INHALATION OF CIGARETTE SMOKE

In the 1970's and 80's, concern increased among nonsmokers about the risks associated with passive smoking, or breathing the tobacco smoke exhaled by others. Studies conducted on passive smoking indicated that passive smokers had a higher risk of developing lung cancer than did nonsmokers. Because of these findings, this has led to widespread restrictions on smoking cigarettes in workplaces and public buildings.