



## Did You Know?

Nicotine is one of the most heavily used addictive drugs in the United States. In 2003, 29.8 percent of the U.S. population 12 and older—70.8 million people—used tobacco at least once in the month, including 3.6 million young people age 12 to 17.

## What's So Dangerous About Tobacco?

Tobacco use is perhaps the most preventable cause of disease and premature death. Each year tobacco use contributes to more than 450,000 deaths in the United States. One of every six deaths in the United States is a result of tobacco use. Heart and blood vessel diseases claim about half of these lives. Yet, not all victims are smokers or smokeless tobacco users. Environmental tobacco smoke (often called second-hand smoke or passive smoke) contributes to about 40,000 deaths each year.

Tobacco leaves may be smoked in cigarettes, cigars, or pipes. Tobacco smoke contains more than 4,000 chemicals which include cancer causing toxins as well as high levels of nicotine.

Smokeless tobaccos — snuff and chewing tobacco — consist of tobacco leaves that are shredded, twisted, or powdered. Smokeless tobacco users chew or place the tobacco in the cheek between the lower lip and gum. The powdered form can be sniffed. Approximately 12 million Americans use smokeless tobacco. Of the 12 million smokeless tobacco users, about 3 million are under the age of 21. Unfortunately, smokeless tobacco is more dangerous than

smoking. A study by the University of Southern California found taking one pinch of snuff was equivalent to smoking three or four cigarettes. The chances of getting oral cancer are higher when using smokeless tobacco than smoking cigarettes. Other effects are severe inflammations of gum tissue, tooth decay, and receding gums.

## What Is Nicotine?

Whether someone smokes, chews, or sniffs tobacco, he or she is delivering nicotine to the brain. Nicotine is a mind-altering alkaloid. The blood carries nicotine to the heart and distributes it throughout the body. The effects of nicotine reach the brain quickly — in eight seconds. In small amounts, nicotine produces pleasurable feelings in the central nervous system and causes a person to feel alert. Larger amounts make a person feel relaxed. These feelings increase the desire to use tobacco.

Few people know that nicotine is extremely toxic. In fact, a dose as small as 30 milligrams can be deadly. Large amounts of nicotine can kill by paralyzing the muscles of the lungs. Even though nicotine is a poison, the amount usually inhaled by smokers, 1 to 2 milligrams per cigarette, is not lethal since the body quickly breaks it down.

## Is Nicotine Addictive?

Nicotine is the addictive drug in tobacco leaves. Nicotine changes the way the brain works. Nicotine raises the heart rate and respiration rate, and causes more glucose, or blood sugar, to be released into the blood. This might be why smokers feel more alert after smoking a cigarette. Nicotine stimulates brain cells to release a neurotransmitter called dopamine. Dopamine stimulates the brain's pleasure and reward circuit. Normally, pleasurable feelings come from food, comfort, and the company of people you love. But tobacco use causes a flood of dopamine in the user's brain. After repeated doses of nicotine, the brain changes to adjust to too much dopamine. The brain cuts production of the neurotransmitter and reduces the number of receptors. Now, the user needs nicotine just to create normal levels of dopamine in his or her brain. Without nicotine, the user feels irritable and depressed. Other addictive drugs of abuse, including heroin and cocaine, cause the same changes in the brain.

### PHYSICAL WITHDRAWAL SYMPTOMS INCLUDE:

changes in body temperature, heart rate, digestion, and appetite.

### PHYSIOLOGICAL WITHDRAWAL SYMPTOMS INCLUDE:

irritability, anxiety, sleep disturbances, nervousness, headaches, nausea, and cravings for tobacco lasting for weeks, months, years, or even an entire lifetime.

## Other Deadly Ingredients

Tar, another ingredient in tobacco, is a sticky combination of hundreds of chemicals, including poisons and cancer-causing substances. Cigarette smoke also produces carbon monoxide, the poisonous gas that emits from the exhaust system of a car.

## What Are Bidis?



Although hand-rolled cigarettes called bidis (pronounced "beedees"), are increasingly popular among teens in the United States, they are not less addictive. Research comparing a dozen brands of bidis with a brand of unfiltered cigarettes found that 11 of the 12 bidi brands had 28 percent higher nicotine concentrations than the unfiltered cigarettes.

Originally from India, bidis are popular with teens because they come in colorful packages with flavor choices such as cinnamon, orange and chocolate. Some teens think that bidis are less harmful than regular cigarettes. But bidis have even more nicotine, which may make people smoke more, causing them to be more harmful to the lungs than cigarettes.

## Danger!!! Environmental Smoke

Exposure to a smoke-filled room can affect healthy non-smokers. As a result, many cities and states throughout the United States have banned smoking in public buildings, public areas in hotels restaurants, and night clubs.

Environmental smoke is hazardous to people with allergies, those with heart or lung disease, and children. Infants exposed to passive smoke have twice the ear infections, coughs, colds, pneumonia, and bronchitis as infants whose parents do not smoke.

## Effects Of Tobacco Use

Tobacco use accounts for one-third of all cancers. This includes increased risks for cancer of the lungs, mouth, throat, colon, bladder, kidneys and cervix. In addition, tobacco use:

- » Destroys lung tissue leading to frequent colds, bronchitis, and emphysema.
- » Increases the heart rate which increases the risk of heart attacks.
- » Increases the chance of gastric ulcers.
- » Can initially cause diarrhea and vomiting.
- » Diminishes the sense of smell and taste.
- » Prematurely wrinkles the face.



HEALTHY LUNG



SMOKER'S LUNG