



## **HARMS OF CIGARETTE SMOKING & HEALTH BENEFITS OF QUITTING**

### **Does tobacco smoke contain harmful chemicals?**

Yes. Tobacco smoke contains many chemicals that are harmful to both smokers and nonsmokers. Breathing even a little tobacco smoke can be harmful .

Of the more than 7,000 chemicals in tobacco smoke, at least 250 are known to be harmful, including hydrogen cyanide, carbon monoxide, and ammonia .

Among the 250 known harmful chemicals in tobacco smoke, at least 69 can cause cancer. These cancer-causing chemicals include the following :

- ★ Acetaldehyde
- ★ Aromatic amines
- ★ Arsenic
- ★ Benzene
- ★ Benzo[ $\alpha$ ]pyrene
- ★ Beryllium (a toxic metal)
- ★ 1,3-Butadiene (a hazardous gas)
- ★ Cadmium (a toxic metal)
- ★ Chromium (a metallic element)
- ★ Cumene
- ★ Ethylene oxide
- ★ Formaldehyde
- ★ Nickel (a metallic element)
- ★ Polonium-210 (a radioactive chemical element)
- ★ Polycyclic aromatic hydrocarbons (PAHs)
- ★ Tobacco-specific nitrosamines
- ★ Vinyl chloride

### **What are some of the health problems caused by cigarette smoking?**

Smoking has been found to harm nearly every bodily organ and organ system in the body and diminishes a person's overall health.

Smoking is a leading cause of cancer and death from cancer. It causes cancers of the lung, esophagus, larynx, mouth, throat, kidney, bladder, liver, pancreas, stomach, cervix, colon, and rectum, as well as acute myeloid leukemia .

Smoking causes heart disease, stroke, aortic aneurysm (a balloon-like bulge in an artery in the chest), chronic obstructive pulmonary disease (COPD) (chronic bronchitis and

emphysema), diabetes, osteoporosis, rheumatoid arthritis, age-related macular degeneration, and cataracts, and worsens asthma symptoms in adults. Smokers are at higher risk of developing pneumonia, tuberculosis, and other airway infections . In addition, smoking causes inflammation and impairs immune function.

Since the 1960s, a smoker's risk of developing lung cancer or COPD has actually increased compared with nonsmokers, even though the number of cigarettes consumed per smoker has decreased . There have also been changes in the type of lung cancer smokers develop – a decline in squamous cell carcinomas but a dramatic increase in adenocarcinomas. Both of these effects may be due to changes in the formulation of cigarettes .

Smoking makes it harder for a woman to get pregnant. A pregnant smoker is at higher risk of miscarriage, having an ectopic pregnancy, having her baby born too early and with an abnormally low birth weight, and having her baby born with a cleft lip and/or cleft palate . A woman who smokes during or after pregnancy increases her infant's risk of death from Sudden Infant Death Syndrome (SIDS) . Men who smoke are at greater risk of erectile dysfunction .

Cigarette smoking and exposure to tobacco smoke cause about 480,000 premature deaths each year in the United States . Of these premature deaths, about 36 percent are from cancer, 39 percent are from heart disease and stroke, and 24 percent are from lung disease . Smoking is the leading cause of premature, preventable death in this country.

Regardless of their age, smokers can substantially reduce their risk of disease, including cancer, by quitting.

### **What are the risks of tobacco smoke to nonsmokers?**

Secondhand smoke (also called environmental tobacco smoke, involuntary smoking, and passive smoking) is the combination of “sidestream” smoke (the smoke given off by a burning tobacco product) and “mainstream” smoke (the smoke exhaled by a smoker) . The U.S. Environmental Protection Agency, the U.S. National Toxicology Program, the U.S. Surgeon General, and the International Agency for Research on Cancer have classified secondhand smoke as a known human carcinogen (cancer-causing agent). Inhaling secondhand smoke causes lung cancer in nonsmoking adults . Approximately 7,300 lung cancer deaths occur each year among adult nonsmokers in the United States as a result of exposure to secondhand smoke . The U.S. Surgeon General estimates that living with a smoker increases a nonsmoker's chances of developing lung cancer by 20 to 30 percent .

Secondhand smoke causes disease and premature death in nonsmoking adults and children . Exposure to secondhand smoke may increase the risk of heart disease by an estimated 25 to 30 percent . In the United States, exposure to secondhand smoke is thought to cause about 34,000 deaths from heart disease each year . Exposure to secondhand smoke also increases the risk of stroke by 20 to 30 percent . Pregnant women exposed to secondhand smoke are at risk of having a baby with low birth weight . Children exposed to secondhand smoke are at an increased risk of SIDS, ear infections, colds, pneumonia, and bronchitis. It can also increase the frequency and severity of asthma symptoms among children who have asthma. Being exposed to secondhand smoke slows the growth of children's lungs and can cause them to cough, wheeze, and feel breathless .

## Is smoking addictive?

Yes. Nicotine is a drug that is naturally present in the tobacco plant and is primarily responsible for a person's addiction to tobacco products, including cigarettes. The addiction to cigarettes and other tobacco products that nicotine causes is similar to the addiction produced by using drugs such as heroin and cocaine .

## How much nicotine is in cigarettes and cigars?

Cigarettes, cigars, and other tobacco products vary widely in their content of nicotine, cancer-causing substances, and other toxicants. In a cigarette (which contains 0.49 to 0.89 gram of tobacco), the nicotine content can vary between 13.79 and 22.68 milligrams per gram of dry tobacco. In a cigar (which can contain as many as 21.5 grams of tobacco), the nicotine content can vary between 6.3 and 15.6 milligrams per gram of tobacco or 5.9 to 335.2 milligrams per cigar .

The way a person smokes a tobacco product is as important as the nicotine content of the product in determining how much nicotine gets into the body. Nicotine is absorbed into the bloodstream through the lining of the mouth and the lungs and travels to the brain in a matter of seconds. Taking more frequent and deeper puffs of tobacco smoke increases the amount of nicotine absorbed by the body.

## Are other tobacco products, such as smokeless tobacco or pipe tobacco, harmful and addictive?

Yes. All forms of tobacco are harmful and addictive . There is no safe tobacco product.

In addition to cigarettes and cigars, other forms of tobacco include smokeless tobacco (also called chewing tobacco, snuff, and sinus), pipes, hookahs (waterpipes), bidis, and kreteks.

- ★ **Pipes:** Pipe smoking causes lung cancer and increases the risk of cancers of the mouth, throat, larynx, and esophagus.
- ★ **Hookahs or waterpipes** (other names include argileh, ghelyoon, hubble bubble, shisha, boory, goza, and narghile): A hookah is a device used to smoke tobacco. The smoke passes through a partially filled water bowl before being inhaled by the smoker. Some people think hookah smoking is less harmful and addictive than smoking cigarettes , but research suggests that waterpipe smoke is at least as toxic as cigarette smoke .
- ★ **Bidis:** A bidi is a flavored cigarette made by rolling tobacco in a dried leaf from the tendu tree, which is native to India. Bidi use is associated with heart attacks and cancers of the mouth, throat, larynx, esophagus, and lung .
- ★ **Kreteks:** A kretek is a cigarette made with a mixture of tobacco and cloves. Smoking kreteks is associated with lung cancer and other lung diseases .

## What are the immediate benefits of quitting smoking?

The immediate health benefits of quitting smoking are substantial:

- ★ Heart rate and blood pressure, which are abnormally high while smoking, begin to return to normal.
- ★ Within a few hours, the level of carbon monoxide in the blood begins to decline. (Carbon monoxide reduces the blood's ability to carry oxygen.)
- ★ Within a few weeks, people who quit smoking have improved circulation, produce less phlegm, and don't cough or wheeze as often.

- ★ Within several months of quitting, people can expect substantial improvements in lung function.
- ★ Within a few years of quitting, people will have lower risks of cancer, heart disease, and other chronic diseases than if they had continued to smoke.
- ★ In addition, people who quit smoking will have an improved sense of smell, and food will taste better.

### **What are the long-term benefits of quitting smoking?**

Quitting smoking reduces the risk of cancer and many other diseases, such as heart disease and COPD, caused by smoking.

Data from the U.S. National Health Interview Survey show that people who quit smoking, regardless of their age, are less likely to die from smoking-related illness than those who continue to smoke. Smokers who quit before age 40 reduced their chance of dying prematurely from smoking-related diseases by about 90 percent, and those who quit by age 45-54 reduced their chance of dying prematurely by about two-thirds .

People who quit smoking, regardless of their age, have substantial gains in life expectancy compared with those who continue to smoke. Those who quit between the ages of 25 and 34 years lived about 10 years longer; those who quit between ages 35 and 44 lived about 9 years longer; those who quit between ages 45 and 54 lived about 6 years longer; and those who quit between ages 55 and 64 lived about 4 years longer..

### **Does quitting smoking lower the risk of cancer?**

Yes. Quitting smoking reduces the risk of developing and dying from cancer. Although it is never too late to get a benefit from quitting, the benefit is strongest among those who quit at a younger age .

The risk of premature death and the chance of developing cancer from smoking depend on many factors, including the number of years a person smokes, the number of cigarettes he or she smokes per day, the age at which he or she began smoking, and whether or not he or she was already ill at the time of quitting. For people who have already developed cancer, quitting smoking reduces the risk of developing a second cancer .

### **Should someone already diagnosed with cancer bother to quit smoking?**

Yes. Cigarette smoking has a profound adverse impact on health outcomes in cancer patients. For patients with some cancers, quitting smoking at the time of diagnosis may reduce the risk of dying by 30 percent to 40 percent. For those having surgery, chemotherapy, or other treatments, quitting smoking helps improve the body's ability to heal and respond to therapy .It also lowers the risk of pneumonia and respiratory failure Moreover, quitting smoking may lower the risk of the cancer returning, of dying from the cancer, of a second cancer developing, and of dying from other causes

#### **Source:**

<http://www.cancer.gov/about-cancer/causes-prevention/risk/tobacco/cessation-fact-sheet>