



Questions About Smoking, Tobacco, and Health

People have many questions about tobacco that can sometimes be hard to answer. There are all sorts of questions about cigarettes, cigars, spit and other types of smokeless tobacco, other tobacco products, nicotine, addiction, and quitting. Many of these questions are answered here.

We also answer some questions about how smoking and tobacco can affect a person's health, including the heart, circulation, and lungs. We discuss its effect on unborn babies and how it affects the risk of cancer and other diseases.

Is there a safe way to smoke cigarettes?

No. All cigarettes damage the human body. Any smoking is dangerous.

Some people try to make their smoking habit safer by smoking fewer cigarettes, which most smokers find quite hard to do. Sadly, research has found that even smoking as few as 1 to 4 cigarettes a day can lead to serious health outcomes, including an increased risk of heart disease and a greater chance of dying at a younger age.

Some smokers believe that "light" cigarettes are a lower health risk. This is not true. Studies have not found that the risk of serious health effects is lower in smokers of "light" or low-tar cigarettes. Because of this, the US Food and Drug Administration (FDA) has banned use of the terms "light," "mild," and "low" in any cigarette sales unless the FDA specifically allows it – and so far, they haven't.

Hand-rolled cigarettes are thought by some people to be a cheaper and healthier way to smoke, but they are not safer than commercial brands. In fact, life-long smokers of hand-rolled cigarettes have been found to have a higher risk of cancers of the larynx (voice box), esophagus (swallowing tube), mouth, and pharynx (throat) when compared with smokers of machine-made cigarettes.

Some cigarettes are now being sold as "all natural." They are marketed as having no chemicals or additives and rolled with 100% cotton filters. There is no proof they are

healthier or safer than other cigarettes, nor is there good reason to think they would be. Smoke from these cigarettes, like the smoke from all cigarettes, contains many agents that cause cancer (carcinogens) and toxins that come from burning the tobacco itself, including tar and carbon monoxide.

Even though herbal cigarettes do not contain tobacco, they give off tar and carbon monoxide and are dangerous to your health. The bottom line is there's no such thing as a safe smoke.

Are menthol cigarettes safer?

Menthol cigarettes are not safer than any other brand. In fact, they may even be more dangerous. The added menthol produces a cooling sensation in the throat when the smoke is inhaled. It also lessens the cough reflex and covers the dry feeling in the throat that smokers often have. People who smoke menthol cigarettes can inhale deeper and hold the smoke in longer.

About one-fourth (25%) of all cigarettes sold in the United States are flavored with menthol. These cigarettes are most popular among children, African-Americans, Hispanics, and smokers in other minority groups.

Studies have shown that people who smoke menthol cigarettes are less likely to try to quit and are less likely to succeed when they do try. At least one researcher proposed that menthol smokers might want to switch to non-menthol cigarettes before they quit to improve their chances of quitting smoking.

Most people don't know that many cigarette brands that are not advertised as having menthol often have a bit of menthol added. Even amounts of menthol that are too small to taste can make a cigarette seem smoother and less harsh. These small amounts of menthol can ease the path for new smokers.

Is cigarette smoking really addictive?

Yes. The nicotine in cigarette smoke can cause addiction. Nicotine is an addictive drug just like heroin and cocaine:

- When taken in small amounts, nicotine creates pleasant feelings that make the smoker want to smoke more. It acts on the chemistry of the brain and central nervous system, affecting the smoker's mood. Nicotine works very much like other addicting drugs, by flooding the brain's reward circuits with dopamine (a chemical messenger). Nicotine also gives you a little bit of an adrenaline rush – not enough to notice, but enough to speed up your heart and raise your blood pressure.
- Nicotine reaches the brain within seconds after taking a puff, but its effects start to wear off within a few minutes. This is what most often leads the smoker to get another cigarette. If the smoker doesn't smoke again soon, withdrawal symptoms kick in and get worse over time.

- The typical smoker takes about 10 puffs from each cigarette. A person smoking a pack per day gets about 200 “hits” of nicotine each day.
- Smokers usually become dependent on nicotine and suffer physical and emotional (mental or psychological) withdrawal symptoms when they stop smoking. These symptoms include irritability, nervousness, headaches, and trouble sleeping. The true marker for addiction, though, is that people still smoke even though they know smoking is bad for them – affecting their lives, their health, and their families in unhealthy ways. Most people who smoke want to quit.

Researchers are also looking at other chemicals in tobacco that make it harder to quit. In the brains of animals, tobacco smoke causes chemical changes that are not fully explained by the effects of nicotine.

What does nicotine do?

In large doses nicotine is a poison and can kill by stopping the muscles a person uses to breathe. But smokers usually take in small amounts that the body can quickly break down and get rid of. The first dose of nicotine makes a person to feel awake and alert, while later doses make them feel calm and relaxed.

Nicotine can make new smokers, and regular smokers who get too much of it, feel dizzy or sick to their stomachs. The resting heart rate for young smokers increases 2 to 3 beats per minute. Nicotine also lowers skin temperature and reduces blood flow in the legs and feet. It may play a role in increasing smokers’ risk of heart disease and stroke, but other substances in cigarette smoke likely play a bigger part.

Many people mistakenly think that nicotine is the substance in tobacco that causes cancer. This belief may cause some people to avoid using nicotine replacement therapy when trying to quit. Nicotine is what gets (and keeps) people addicted to tobacco, but other substances in tobacco cause cancer. Some animal studies have shown that nicotine may help existing tumors grow and spread, but whether this happens in people is not yet known and more research is needed.

Why do people start smoking?

Most people begin smoking as teens. Those with friends and/or parents who smoke are more likely to start smoking than those who don’t. Some teens say that they “just wanted to try it,” or they thought it was “cool” to smoke.

The tobacco industry’s ads, price breaks, and other promotions for its products are a big influence in our society. The tobacco industry spends billions of dollars each year to create and market ads that show smoking as exciting, glamorous, and safe.

Despite the fact that cigarette brand product placement in movies was banned by the 1998 Tobacco Master Settlement Agreement, cigarettes appeared in 2 out of 3 box office hit movies in 2005. More than one-third of the movies were youth-rated films. The number of movies with tobacco-related scenes has gone down since 2005. But in 2010, more than

30% of top-grossing movies rated as G, PG, and PG-13 had tobacco scenes. And studies show that young people who see smoking in movies are more likely to start smoking.

TV ads for smoking have been banned for many years, but films that show tobacco brands are much more likely to include smoking scenes as part of their TV trailers. This seems to undercut the intent of the TV ad ban.

Who is most likely to become addicted?

Anyone who starts smoking can become addicted to nicotine. Studies show that cigarette smoking is most likely to become a habit during the teen years. The younger a person is when he or she begins to smoke, the more likely he or she is to become addicted to nicotine. According to the American Lung Association, 68% of adult smokers started smoking regularly at age 18 or younger. And 85% started when they were 21 or younger.

How many people use tobacco?

Cigarette smoking has decreased among adults in the United States from about 42% of the population in 1965 to about 19% in 2010 (the latest year for which numbers are available). It is still the most common form of tobacco use in the US: about 45 million adults currently smoke cigarettes. About 22% of men and 17% of women were smokers in 2010. Education is linked to smoking rates, with lower smoking rates in groups with higher levels of education. More people smoke in the Midwest (22%) and South (21.0%), and fewer smoke in the West (16%).

Tobacco use does not end with cigarettes; other forms of tobacco use are common. In 2010, a survey by the US Substance Abuse and Mental Health Administration found that 8.9 million people used smokeless or spit tobacco. The same survey reported that 13.2 million smoked cigars, and 2.2 million people smoked tobacco in pipes.

Is smoking common among young people?

Yes. Tobacco use, including smoking cigarettes, using chew or spit tobacco, and dipping snuff, is common among American youth, according to the most recent government surveys.

Despite declines in recent years, in 2009 nearly 1 in 3 male high school students (30%) and more than 1 in 5 female high school students (22%) used some type of tobacco in the month before they were surveyed. About 1 in 5 students (20%) were considered current cigarette smokers. More than half of these students (51%) reported they had tried to quit smoking during the past year. Cigar smoking was also common among high school students (about 14%).

Also, about 7% of middle school girls and 10% of middle school boys used some form of tobacco, with cigarettes (about 5%) being the most common.

In both middle school and high school, tobacco use was higher among male students for all products

Other problems have been linked to smoking. Studies have shown that students who smoke are also more likely to use other drugs, get in fights, carry weapons, try to kill themselves, and take part in risky sex.

What in cigarette smoke is harmful?

Cigarette smoke is a complex mixture of chemicals produced by the burning of tobacco and its additives. The smoke is made up of more than 4,000 chemicals, including over 60 known to cause cancer. Some of these substances cause heart and lung diseases, and all of them can be deadly. You might be surprised to know some of the chemicals found in cigarette smoke include:

- Cyanide
- Benzene
- Formaldehyde
- Methanol (wood alcohol)
- Acetylene (the fuel used in welding torches)
- Ammonia

Cigarette smoke also contains tar and the poison gases carbon monoxide and nitrogen oxide. The ingredient that produces the effect people are looking for is nicotine, an addictive drug.

The tobacco leaves used in making cigarettes contain radioactive materials; the amount depends on the soil the plants were grown in and fertilizers used. But this means that cigarette smoke contains small amounts of radioactive material too, which smokers take into their lungs as they inhale. These radioactive particles build up in the lungs, and over time can mean a big dose of radiation. This may be another key factor in smokers getting lung cancer.

Does smoking cause cancer?

Yes. Smoking accounts for at least 30% of all cancer deaths in the United States and 80% of lung cancer deaths. Smoking also causes cancers of the nasopharynx, nasal cavity, paranasal sinuses, lip, larynx (voice box), mouth, pharynx (throat), esophagus (swallowing tube), and bladder. It also has been linked to the development of cancers of the pancreas, cervix, ovary (mucinous), colorectum, kidney, stomach, and some types of leukemia. Cigars, pipes, and spit and other types of smokeless tobacco all cause cancers, too. There is no safe way to use tobacco.

How does cigarette smoke affect the lungs?

Damage to the lungs begins early in smokers, and cigarette smokers have a lower level of lung function than non-smokers of the same age. Lung function continues to worsen as long as the person smokes, but it may take years for the problem to become noticeable enough for lung disease to be diagnosed. Cigarette smoking causes many lung diseases that can be nearly as bad as lung cancer.

Chronic obstructive pulmonary disease

Chronic obstructive pulmonary disease (COPD) is a name for long-term lung disease which includes both chronic bronchitis and emphysema (discussed below). Here are some facts about COPD:

- More than 12 million people in the United States suffer from COPD.
- It is the fourth leading cause of death in the United States.
- More women die from COPD than men.
- Smoking is the main risk factor for COPD, though it can also be caused by other factors such as secondhand smoke.
- More than 75% of COPD deaths are caused by smoking.
- The longer and heavier a person smokes, the higher their COPD risk.

COPD most often starts unnoticed in young smokers, and usually gets far worse before it is diagnosed. Noises in the chest (such as wheezing rattling or whistling), shortness of breath during activities like walking up a flight of stairs, and coughing up mucus (phlegm) are some of the earlier signs of COPD.

Over time, COPD can make it hard to breathe even at rest. It limits activities and causes serious health problems. The late stage of chronic lung disease is one of the most miserable of all illnesses. It makes people gasp for breath and feel as if they are drowning.

Chronic bronchitis

Chronic bronchitis is a disease where the airways make too much mucus, forcing the person to cough it out. It is a common problem for smokers. The airways become inflamed (swollen) and the cough becomes chronic (long-lasting). The symptoms can get better at times, but the cough keeps coming back. Airways get blocked by scars and mucus, which can lead to bad lung infections (pneumonia).

There is no cure for chronic bronchitis, but quitting smoking can help keep symptoms under control. Quitting smoking also helps keep the damage from getting worse.

Emphysema

Cigarette smoking is also the major cause of emphysema, a disease that slowly destroys a person's ability to breathe. Oxygen gets into the blood by moving across a large surface area in the lungs. Normally, thousands of tiny sacs make up this surface. In emphysema, the walls between the sacs break down and create larger but fewer sacs. This decreases the lung surface area, which lowers the amount of oxygen reaching the blood. Over time, the lung surface area can become so small that a person with emphysema must work very hard to get enough air, even when at rest.

Signs of late emphysema may include a cough that doesn't go away (which is often dismissed as "smoker's cough"), shortness of breath even when lying down, feeling tired, and weight loss. People with emphysema are at risk for many other problems linked to weak lung function, including pneumonia. In later stages of the disease, patients can only breathe comfortably with the help of an oxygen tube under the nose.

Emphysema cannot be cured or reversed, but it can be slowed down, especially if the person stops smoking.

Why do smokers have "smoker's cough?"

Cigarette smoke has chemicals and particles that irritate the airways and lungs. When a smoker inhales these substances, the body tries to clear them by making mucus and coughing.

The early morning smoker's cough happens for many reasons. Normally, tiny hair-like formations (called cilia) beat outward and sweep harmful material out of the lungs. But cigarette smoke slows the sweeping action, so some of the particles in the smoke stay in the lungs and mucus stays in the airways. While a smoker sleeps, some cilia recover and begin working again. After waking up, the smoker coughs because the lungs are trying to clear away the irritants and mucus that built up from the day before.

The cilia will completely stop working after they have been exposed to smoke for a long time. Then the smoker's lungs are even more exposed and prone to infection and irritation.

If you smoke but don't inhale, is there any danger?

Yes. Wherever smoke touches living cells, it does harm. Even smokers who don't inhale are breathing secondhand smoke. They are at risk for lung cancer and other diseases caused by secondhand smoke.

Pipe and cigar smokers, who often don't inhale, are at an increased risk for lip, mouth, tongue, and some other cancers, too.

Does cigarette smoking affect your heart?

Yes. Smoking cigarettes increases the risk of heart disease, which is the number one cause of death in the United States. Smoking, high blood pressure, high cholesterol, physical inactivity, obesity, and diabetes are all risk factors for heart disease. But the biggest risk factor for sudden death from a heart attack is cigarette smoking.

A smoker who has a heart attack is more likely to die within an hour of the heart attack than a non-smoker. Cigarette smoke can harm the heart at very low levels, even when the amount is too low to cause lung disease.

How does smoking affect pregnant women and their babies?

Pregnant women who smoke risk the health and lives of their unborn babies. Smoking during pregnancy is linked with a greater chance of miscarriage, premature delivery, stillbirth, infant death, low birth-weight, and sudden infant death syndrome (SIDS). Up to 5% of infant deaths could be prevented if pregnant women did not smoke. Many women know about some of these hazards, and most try to stop smoking when they find out they're pregnant.

When a pregnant woman smokes, she's smoking for 2. The nicotine, carbon monoxide, and other harmful chemicals enter her bloodstream, go into the baby's body, and keep it from getting vital nutrients and oxygen it needs for growth.

Breast-feeding is the best way to feed a new baby, but if the mother smokes the baby is exposed to nicotine and other substances from the smoke through breast milk. Nicotine can cause unwanted symptoms in the baby, such as restlessness, a rapid heartbeat, vomiting, shorter sleep times, and diarrhea. It is better not to smoke while breast feeding. But breast feeding is thought to be healthier for the baby than the bottle, even when the mother smokes. Women who can't quit right away can

- Make their homes smoke-free to keep the child away from second hand smoke
- Smoke just after breast-feeding to give the body more time to clear nicotine from breast milk
- Cut back on their smoking as much as possible

Some research has also suggested that children whose mothers smoked while pregnant or who have been exposed to secondhand smoke, even in small amounts, may be slower learners in school. They may be shorter and smaller than children of non-smokers. They are also more likely to smoke when they get older.

What are some of the short- and long-term effects of smoking cigarettes?

Smoking causes many types of cancer. But cancers account for only about half of the deaths linked to smoking. Long-term, smoking is also a major cause of heart disease, aneurysms, bronchitis, emphysema, and stroke. It also makes pneumonia and asthma worse. Smoking is linked to about half of the gum disease in the United States, which means more tooth loss and mouth surgery. Wounds take longer to heal and the immune system may not work as well in smokers as in non-smokers.

Smoking also damages the arteries. This is why many vascular surgeons refuse to operate on patients with peripheral artery disease (poor blood circulation in the arms and legs) unless they stop smoking. And male smokers have a higher risk of sexual impotence (erectile dysfunction) the longer they smoke

The truth is that cigarette smokers die younger than non-smokers. In fact, according to a study done in the late 1990s by the Centers for Disease Control and Prevention (CDC), smoking shortened male smokers' lives by 13.2 years and female smokers' lives by 14.5 years. Men and women who smoke are much more likely to die during middle age (between the ages of 35 and 69) than those who have never smoked.

Smoking also causes many short-term effects, such as poor lung function. This is why smokers often suffer shortness of breath and nagging coughs. They often tire quickly during physical activity. Some other common short-term effects include less ability to smell and taste, premature aging of the skin, bad breath, and stained teeth.

What are the chances that smoking will kill you?

About half of the people who keep smoking will die because of it. In the United States, tobacco causes nearly 1 in 5 deaths; or about 443,000 premature deaths each year. Smoking is the single most preventable cause of death in our society.

Tobacco is expected to cause more than 175 million total deaths between 2005 and 2030, increasing from 5.4 million a year in 2005 to 6.4 million in 2015 and 8.3 million in 2030. Deaths from tobacco are expected to go down 9% in high income countries between 2002 and 2030, but double from 3.4 to 6.8 million in low and middle-income countries during that same time.

What are the dangers of secondhand (environmental) tobacco smoke?

There is no safe level of exposure for secondhand smoke (SHS), which is also known as environmental tobacco smoke. Passive smoking (inhaling secondhand smoke) happens

when non-smokers breathe other people's tobacco smoke. This includes *mainstream smoke* (smoke that is exhaled into the air by smokers) and *sidestream smoke* (smoke that comes directly from the burning tobacco). SHS contains the same harmful chemicals the smokers inhale.

There is strong evidence that SHS causes serious damage to human health. Each year about 3,400 non-smoking adults die of lung cancer and about 46,000 die of heart disease as a result of breathing SHS. There is also some evidence suggesting it may be linked with childhood leukemia and cancers of the larynx (voice box), pharynx (throat), brain, bladder, rectum, stomach, and breast.

SHS can also affect non-smokers by causing asthma and other breathing problems, eye irritation, headaches, nausea, and dizziness.

Children whose parents smoke are more likely to suffer from asthma, pneumonia, bronchitis, ear infections, coughing, wheezing, and increased mucus production. Babies of parents who smoke have a greater chance of dying of sudden infant death syndrome (SIDS). Pregnant women exposed to SHS are at risk for having a low birth weight baby and may also be at risk for pre-term (premature) delivery and miscarriage.

Please see our document called *Secondhand Smoke* to learn more.

Am I at risk for getting lung cancer from smoke odors on clothing or from being in a room that still smells of tobacco smoke?

There are no medical research reports on the cancer-causing effects of cigarette odors, but research does show that secondhand smoke (SHS) can seep into hair, clothing, dust, and other surfaces. Researchers call this "thirdhand" smoke. This refers to particles that are left on surfaces after you can no longer see the smoke. These particles can become airborne again when disturbed, or they can be picked up by people (especially babies and small children) who touch the surfaces and get particles on their hands and bodies.

Though unknown, the cancer-causing effects would likely be small compared with direct SHS exposure, such as living in a household that has a smoker. But this is an active area of tobacco research.

For more information, see our document called *Secondhand Smoke*.

What is being done to protect people from the hazards of smoking?

Tobacco labels

Since 1966, the US Surgeon General's health warnings have been required on all cigarette packages and, since 1987, on all spit or oral tobacco products. Since 2001, the 7 major cigar manufacturers in the United States have provided 5 health warnings that rotate on cigar labels. These labels are much like those on cigarette packages.

On June 21, 2011, the Food and Drug Administration (FDA) announced its selection of 9 new larger, more prominent, color graphic cigarette health warnings. As of September 22, 2012, all cigarettes for sale or distribution in the United States must be packaged or advertised with these new cigarette health warnings and a stop smoking hotline number. It has not yet been determined how this labeling change may impact other tobacco products. Some cigarette companies are protesting these measures and are trying to stop them in the courts.

Advertising

Congress banned cigarette advertising on TV and radio in 1971 and spit tobacco advertising in 1987. The American Legacy Foundation and many states have made anti-smoking public service messages that are featured on television, radio, and billboards. Some tobacco companies have come up with their own ads, which appear to be anti-smoking but seem to actually promote a more favorable attitude toward the tobacco industry. In the future, the new FDA regulations mentioned above will require that any tobacco ad use 20% of its ad space to display warnings about the dangers of smoking.

New laws affect tobacco marketing

The Family Smoking Prevention and Tobacco Control Act went into effect in October 2009. This law gives the Food and Drug Administration (FDA) power to regulate tobacco products in the United States.

One of the goals of the law is to restrict the marketing and advertising of tobacco products. Colorful ads and store displays are no longer permitted. Only black and white text ads are allowed. And in 2010, it became illegal to place outdoor tobacco ads within 1,000 feet of schools and playgrounds.

Taxes

Taxes on cigarettes have risen in many states in recent years. These increased costs have been shown to discourage young people from starting to smoke and encourage smokers to quit. As of late 2011, the federal cigarette tax is \$1.01 per pack. State taxes on tobacco vary from as low as 17 cents (in Missouri) to up to \$4.35 a pack (in New York).

Smoking bans

Laws in all 50 states and the District of Columbia restrict or do not allow smoking in certain public places. These laws range from simple restrictions, such as designated areas in state or local government buildings, to laws that ban smoking in all public places and workplaces. Federal buildings are now required to be smoke-free. Smoking is also banned on all domestic airplane flights.

According to the US Surgeon General, smoke-free policies that ban smoking in all indoor areas are the only way to be sure that people are not exposed to secondhand smoke in workplaces and other public places.

Are spit tobacco and snuff safe alternatives to cigarette smoking?

Many terms are used to describe tobacco that is put in the mouth, such as spit, oral, smokeless, chewing, and snuff tobacco. Using any kind of spit or smokeless tobacco is a major health risk. It is less lethal than smoking cigarettes, but less lethal is a far cry from safe.

The amount of nicotine absorbed is usually more than the amount delivered by a cigarette. Overall, people who dip or chew get about the same amount of nicotine as regular smokers. The most harmful cancer-causing substances in spit tobacco are *tobacco-specific nitrosamines* (TSNAs) which have been found at levels 100 times higher than the nitrosamines that are allowed in bacon, beer, and other foods. These carcinogens cause lung cancer in lab animals, even when injected rather than inhaled.

The juice from smokeless tobacco is absorbed directly through the lining of the mouth. This causes sores and white patches (called *leukoplakia*) that often lead to cancer of the mouth.

People who use spit and other types of smokeless tobacco greatly increase their risk of other cancers, including those of the mouth, pharynx (throat), esophagus (the swallowing tube that connects the mouth and the stomach), stomach, and pancreas. Other effects of using spit tobacco include chronic bad breath, stained teeth and fillings, gum disease, tooth decay, tooth loss, tooth abrasion, and loss of bone in the jaw. Users may also have problems with high blood pressure and may be at increased risk for heart disease.

To learn more, please read our document called *Smokeless Tobacco*.

What is snus? Is it safe?

Snus (sounds like “snoose”) is a type of moist snuff first used in Sweden. It is often flavored with spices or fruit, and is usually packaged like small tea bags. It is also sold loose, as a moist powder. Like snuff and other spit tobaccos, snus is held between the gum and mouth tissues where the juice is absorbed into the body.

Because it is steam-heated rather than fermented, Swedish snus has fewer tobacco-specific nitrosamines that are known to cause cancer. (See the previous section, “Are spit tobacco and snuff safe alternatives to cigarette smoking?”)

Snus users in Sweden have lower rates of some types of cancer than Swedish smokers. Because of this, some people believe snus is safe. But snus users may have a higher risk of cancer of the pancreas than non-users. They also get sores or spots in the mouth (lesions) where the snus is held. It appears that snus users may have mouth cancer more often than non-users, though more studies need to be done to confirm this.

Since US tobacco sellers are not required to list what is in their products, it would be hard to know how the US versions of snus might compare to the Swedish versions without doing studies here. Since snus is still new in the United States, it is uncertain what other problems it might cause. Still, snus is not a safe alternative to smoking.

What are the health risks of smoking pipes or cigars?

Many people view cigar smoking as more civilized and sophisticated, as well as less dangerous than cigarette smoking. Yet one large cigar can contain as much tobacco as an entire pack of cigarettes.

Most of the same cancer-causing substances found in cigarettes are found in cigars. And big cigars have as much nicotine as several cigarettes. When cigar smokers inhale, nicotine is absorbed as quickly as it is with cigarettes. For those who do not inhale, it is absorbed more slowly through the lining of the mouth. Either way, nicotine can cause addiction.

Smoking cigars causes cancers of the lung, lip, tongue, mouth, throat, larynx (voice box), esophagus (swallowing tube), and probably cancers of the bladder and pancreas. Cigar smokers have a greater risk of dying from cancer of the mouth, larynx, or esophagus than non-smokers. The risk of death from lung cancer is not as high as it is for cigarette smokers, but is still many times higher than the risk for non-smokers.

Cigar smokers who inhale deeply and smoke several cigars a day are also at increased risk for heart disease and chronic lung disease. Those who don't inhale are exposed to secondhand smoke, which also has many health risks.

Pipe smokers have an increased risk of dying from cancers of the lung, throat, esophagus, larynx, pancreas, and colon and rectum. They also have an increased risk of dying of heart disease, stroke, and chronic lung disease. The level of these risks seems to be about the same as that for cigar smokers.

Smoking cigars or pipes is not a safe alternative to smoking cigarettes.

To learn more, please see our document called *Cigar Smoking*.

What about more exotic forms of smoking tobacco, such as clove cigarettes, bidis, and hookahs?

Many forms of flavored tobacco have become popular in recent years, especially among younger people. Clove cigarettes, bidis, and hookahs often appeal to those who want something a little different. They also give young people another way to experiment with tobacco. The false image of these products as clean, natural, and safer than regular cigarettes seems to attract some who may otherwise not start smoking. But these products carry many of the same risks of cigarettes and other tobacco products, and each has its own additional problems linked to it.

As of October 2009, federal laws have banned flavored cigarettes. It is not illegal to have or smoke them, but it is illegal to sell them in the United States. Tobacco companies are working around this by making flavored small cigars as a replacement product.

Clove cigarettes

Clove cigarettes, also called *kreteks*, are imported mainly from Indonesia. They contain 60% to 70% tobacco and 30% to 40% ground cloves, clove oil, and other additives. The chemicals in cloves have been linked to asthma and other lung diseases.

Users often have the mistaken notion that smoking clove cigarettes is safer than smoking regular cigarettes. But this is a tobacco product with the same health risks as cigarettes. In fact, kreteks have been shown to deliver more nicotine, carbon monoxide, and tar than regular cigarettes.

Bidis

Bidis or “beedies” are flavored cigarettes imported mainly from India. They are hand-rolled in an unprocessed tobacco leaf and tied with colorful strings on the ends. Their popularity has grown in part because they come in many candy-like flavors (strawberry, vanilla, licorice, and grape), and because they tend to cost less than regular cigarettes. They often give the smoker a quick buzz.

Even though bidis contain less tobacco than regular cigarettes, they deliver higher levels of nicotine (the addictive substance in tobacco) and other harmful substances, such as tar, ammonia, and carbon monoxide. Because they are thinner than regular cigarettes, they require about 3 times as many puffs per cigarette. They are also unfiltered.

Bidis seem to have all of the same health risks of regular cigarettes, if not more. Bidi smokers have much higher risks of heart attacks, chronic bronchitis, and some cancers than non-smokers.

Hookah (water pipes)

Hookah (or narghile) smoking started in the Middle East. Users burn flavored tobacco (called *shisha*) in a water pipe and inhale the smoke through a long hose. It has become popular among young people. Hookah smoking is usually a social event in which smokers talk as they pass the pipe around. It is thought of as a safer alternative to cigarettes because the percentage of tobacco in the product smoked is low and people think the water filters out the toxins. This is false. The water does not filter out many of the toxins. In fact, hookah smoke contains more toxins such as nicotine, carbon monoxide, tar, and other hazardous substances, than cigarette smoke. Several types of cancer have been linked to hookah smoking. Hookah use is also linked to other unique risks not found with cigarette smoking. For example, infectious diseases can be spread by sharing the pipe or through the way the tobacco is prepared.

All forms of tobacco are dangerous. Even if the health risks were smaller for some tobacco products as opposed to others, all tobacco products contain nicotine, which can lead to increased use and addiction. Tobacco is not safe in any amount or form.

What can I do to help with any damage that may have been caused by smoking?

If you use or have used tobacco, tell your health care provider so he or she can be sure that you get the right preventive health care. It is well known that tobacco use puts you at risk for certain health-related illnesses. This means part of your health care should focus on related screening and preventive measures to help you stay as healthy as possible. For example, you will want to be sure that you regularly check the inside of your mouth for any changes, and have your mouth checked by a doctor or dentist if you find any changes or problems. The American Cancer Society recommends that regular check-ups include oral cavity (mouth) exams. By doing this, tobacco users may be able to find oral changes and leukoplakia (white patches on the mouth membranes) early. This may help prevent oral cancer.

You should also be aware of any of the following:

- Any change in a cough (for example, you cough up more mucus than usual)
- A new cough
- Coughing up blood
- Hoarseness
- Trouble breathing
- Less tolerance for exercise (getting out of breath easily when active)
- Wheezing, whistling, or rattling when breathing

- Headaches
- Chest pain
- Loss of appetite
- Weight loss
- General fatigue (feeling tired all the time)
- Frequent or repeated respiratory infections

Any of these could be signs of lung cancer or a number of other conditions, and you should see a doctor right away. Although they can be signs of a problem, many people do not notice symptoms of lung cancer until it is advanced and has spread to other parts of the body.

Remember that tobacco users have a higher risk for other cancers too, depending on the way they use tobacco. You can learn more about the types of cancer you may be at risk for by reading our document that discusses the type of tobacco you use (for example, *Cigar Smoking*). Other risk factors for these cancers may be more important than your use of tobacco, but you should know the additional risks that might apply to you.

If you are concerned about your health because of your tobacco use, see a health care provider as soon as possible. Taking care of yourself, talking to a doctor about screening tests that may be right for you, and getting treatment for early problems will give you the best chance for treatment success. The best way, though, to take care of yourself and decrease your risk for life-threatening lung problems is to quit using tobacco.

How does tobacco use affect the economy?

The tobacco industry is one of the most profitable businesses in the country, making billions of dollars every year. But the costs of smoking are far higher than the income from cigarette sales.

- Smoking causes more than \$193 billion each year in health-related costs, including the cost of lost productivity caused by deaths from smoking.
- Smoking-related medical costs averaged more than \$96 billion each year between 2000 and 2004.
- Death-related productivity losses from smoking among workers cost the US economy almost \$97 billion yearly (average for 2000-2004).

Can quitting really help a lifelong smoker?

Yes. It is never too late to quit using tobacco. The sooner smokers quit, the more they can reduce their chances of getting cancer and other diseases. Within minutes of smoking the last cigarette, the body begins to restore itself.

20 minutes after quitting

Your heart rate and blood pressure drop.

(Effect of smoking on arterial stiffness and pulse pressure amplification, Mahmud A, Feely J. 2003. *Hypertension*:41:183)

12 hours after quitting

The carbon monoxide level in your blood drops to normal.

(*US Surgeon General's Report*, 1988, p. 202)

2 weeks to 3 months after quitting

Your circulation improves and your lung function increases.

(*US Surgeon General's Report*, 1990, pp.193, 194,196, 285, 323)

1 to 9 months after quitting

Coughing and shortness of breath decrease; cilia (tiny hair-like structures that move mucus out of the lungs) start to regain normal function in the lungs, increasing the ability to handle mucus, clean the lungs, and reduce the risk of infection.

(*US Surgeon General's Report*, 1990, pp. 285-287, 304)

1 year after quitting

The excess risk of coronary heart disease is half that of a continuing smoker's.

(*US Surgeon General's Report*, 2010, p. 359)

5 years after quitting

Risk of cancer of the mouth, throat, esophagus, and bladder are cut in half. Cervical cancer risk falls to that of a non-smoker. Stroke risk can fall to that of a non-smoker after 2-5 years.

(*A Report of the Surgeon General: How Tobacco Smoke Causes Disease - The Biology and Behavioral Basis for Smoking-Attributable Disease Fact Sheet, 2010; Tobacco Control: Reversal of Risk After Quitting Smoking. IARC Handbooks of Cancer Prevention, Vol. 11. 2007, p 341*)

10 years after quitting

The risk of dying from lung cancer is about half that of a person who is still smoking. The risk of cancer of the larynx (voice box) and pancreas decreases.

(*A Report of the Surgeon General: How Tobacco Smoke Causes Disease - The Biology and Behavioral Basis for Smoking-Attributable Disease Fact Sheet, 2010; and US Surgeon General's Report, 1990, pp. vi, 155, 165*)

15 years after quitting

The risk of coronary heart disease is that of a non-smoker's.

(Tobacco Control: Reversal of Risk After Quitting Smoking. IARC Handbooks of Cancer Prevention, Vol. 11. 2007. p 11)

These are just a few of the benefits of quitting smoking for good. Quitting smoking lowers the risk of diabetes, lets blood vessels work better, and helps the heart and lungs. Quitting while you are younger will reduce your health risks more, but quitting at any age can give back years of life that would be lost by continuing to smoke.

Are there some benefits of quitting that I'll notice right away?

Kicking the tobacco habit offers some rewards that you'll notice right away and some that will show up more slowly over time. These benefits can improve your day-to-day life a lot.

- Food will taste better.
- Your sense of smell returns to normal.
- Your breath, hair, and clothes smell better.
- Your teeth and fingernails stop yellowing.
- Ordinary activities leave you less out of breath (for example, climbing a flight of stairs or doing light housework).
- You can be in smoke-free buildings without having to go outside to smoke.

Quitting also helps stop the damaging effects of tobacco on how you look, including premature wrinkling of your skin and gum disease.

Suppose I smoke for a while and then quit?

Smoking begins to cause damage right away and is highly addictive. Studies have found that nicotine is as addictive as heroin, cocaine, or alcohol. It's the most common form of drug addiction in the United States. It's much better to never start smoking cigarettes – and become addicted to nicotine – than it is to smoke with the plan to quit later.

Like alcohol, heroin, and cocaine, nicotine creates a tolerance in the body and promotes psychological dependence. This makes it much harder to quit, but with the right support it can be done. Still, it's much easier if you never start.

When an ex-smoker smokes a cigarette, even years after quitting, the body reacts the same way it did when the person was smoking, which can cause the person to want to smoke again. Don't think you can smoke for a short while and quit when you want to – it's seldom that easy.

How do people quit smoking?

Quitting smoking is not easy, and most people try many times before they are able to quit for good. There are many ways to quit smoking. For example, some are able to stop “cold turkey,” by taking part in the Great American Smokeout[®], or by using other methods.

No matter what methods they use, they need more than one approach. They must deal with the physical symptoms caused by withdrawal from nicotine, which usually only last a few days to a couple of weeks. They also need to deal with the emotional, psychological, and mental dependence. People who quit for good find ways to deal with pressure, stress, and emotional pain without smoking. The mental/psychological craving can cause relapse even years later – that’s how addictive nicotine is.

There’s no single best way to quit. Quitting for good may mean using many methods, including step-by-step manuals, self-help groups, counseling, toll-free telephone-based counseling programs, online support, and/or using nicotine replacement therapies or other medicines (see the next questions). Smokers may also need to make changes in their daily routines to help them break their smoking habits. Some may find long-term support such as Nicotine Anonymous helpful. To improve your chances of success, try to use 2 or more of these methods to help you quit.

What are nicotine replacement therapies?

Nicotine replacement therapies (NRTs) are medicines that help decrease or stop a smoker’s withdrawal symptoms by giving controlled doses of nicotine without the other harmful chemicals of cigarette smoke. NRTs are sold as patches, gums, inhalers, nasal sprays, or lozenges. The Food and Drug Administration (FDA) has approved all of these products to help people quit smoking. You can buy patches, gums, and lozenges over the counter, but you need a prescription for inhalers and nasal sprays.

These products work by helping smokers manage their physical responses as they quit. For best results, smokers should use NRTs along with behavioral change programs that are designed to help smokers break their psychological (mental) dependence on cigarettes. For more information on such programs, call your American Cancer Society at 1-800-227-2345.

Not everyone can use NRT. People with certain medical conditions and pregnant women should use it only with a doctor’s supervision. It is always a good idea to get your doctor’s input and support when you decide to quit smoking.

The best time to start NRT is when you begin to try to quit. Many smokers ask if it is possible to start using NRT while they are still smoking. There is some research on smokers using NRT while still smoking, but the results are still not clear enough to say for certain if this might pose a danger to your health. The most important thing is to make sure that you are not overdosing on nicotine, which can affect your heart and blood circulation. It is safest to be under a doctor’s care if you wish to try smoking and using NRT while you are tapering off cigarette smoking.

For more information, see our document called *Guide to Quitting Smoking*.

Are there other medicines or vaccines to help smokers quit?

Yes. Some medicines that don't contain nicotine have already been approved to help quit smoking.

Bupropion (Wellbutrin[®]) was first used as an anti-depressant, and later approved by the FDA to help people quit smoking (under the brand name Zyban[®]). This medicine does not contain nicotine and you need a prescription for it. It affects chemicals in the brain that are related to nicotine craving. It can be used alone or together with nicotine replacement therapy (NRT). Unlike NRT, you start taking it 1 or 2 weeks before you stop smoking.

Newer medicines may help smokers (or former smokers) by stopping them from getting physical pleasure from smoking. The medicines seem to work by stopping nicotine from stimulating the brain. They may work by blocking the brain receptors that nicotine normally attaches to, or by keeping nicotine from reaching the brain altogether (as in the case of the vaccines; see below).

One such medicine, varenicline (Chantix[®]), is FDA-approved for help with quitting. Varenicline is a pill that is started at a low dose before your quit date, then the dose is increased slowly over the next few days. Once in the body, it attaches to nicotine receptors in the brain, reducing the pleasurable effects of smoking and helping to reduce nicotine withdrawal symptoms. Many studies have shown varenicline can more than double the chances of quitting smoking. Since varenicline is a newer drug, research has not been done yet to find out if it is safe to use along with NRT. But the company that makes varenicline noted that people who used the drug along with NRT had more side effects such as nausea and headaches.

For people who have not been able to quit smoking using NRT, bupropion, or varenicline, or who can't use these drugs, some doctors prescribe older medicines that have been approved by the FDA for uses other than quitting smoking. For instance, nortriptyline is a drug used to treat depression and clonidine is used to treat high blood pressure. Both of these drugs may be used to help a person quit smoking, but both have restrictions on who can safely use them. People taking them need medical monitoring because of rare but serious side effects. Still, studies have shown that they can make it easier for some people to quit smoking, even though they have not been approved by the FDA for that purpose.

Other medicines still being studied include naltrexone, which also comes as a pill. It is being used along with other medicines such as bupropion and NRT to see if it can reduce cravings. Another drug called cytisine was recently tested in Poland and found to help reduce smoking when compared to placebo. About 8% of smokers remained quit after a year, compared to about 2% of those on placebo. Also still being tested are anti-smoking vaccines that are given as a series of shots. Tests of these new treatments have been

promising. So far they seem to be safe, but larger studies are needed to show these treatments work before the FDA can approve them for this use. Large studies of these treatments are now under way.

It is not likely that any one of these drugs will work in every person. That's why using different quitting aids at the same time is still the best way to increase your chances of success. For more information on quitting and medicines that can be used, see our document called *Guide to Quitting Smoking*.

Where can I go for help?

It's hard to stop smoking, but you can do it! About 50 million Americans have quit smoking for good, and now there are more former smokers than current smokers in the US. Many organizations offer information, counseling, and other services on how to quit, as well as information on where to go for help. Other good resources for finding help include your doctor, dentist, local hospital, or employer.

If you want to quit smoking and need help, contact one of these organizations:

American Cancer Society

Toll-free number: 1-800-227-2345

Web site: www.cancer.org

Centers for Disease Control and Prevention

Toll-free smoking cessation/tobacco line: 1-800-QUIT-NOW (1-800-784-8669)

Quitting help Web site: www.cdc.gov/tobacco/quit_smoking/how_to_quit/index.htm

National Cancer Institute

Toll-free smoking cessation/tobacco line: 1-877-448-7848

Smoking cessation: www.smokefree.gov

Nicotine Anonymous

Toll-free number: 1-877-879-6422

Web site: www.nicotine-anonymous.org

QuitNet

Web site: www.quitnet.com

To learn more

More information from your American Cancer Society

The following information may also be helpful to you. These materials may be read online or free copies may be ordered from our toll-free number.

Trying to quit or help someone else quit?

Guide to Quitting Smoking (also in Spanish)

Smokeless Tobacco and How to Quit

Improve Your Chances of Quitting Smoking

Quitting Smoking – Help for Cravings and Tough Situations (also in Spanish)

Helping a Smoker Quit: Dos and Don'ts

More about smoking and tobacco use

Cigar Smoking (also in Spanish)

Cigarette Smoking (also in Spanish)

Secondhand Smoke (also in Spanish)

Child and Teen Tobacco Use (also in Spanish)

Women and Smoking (also in Spanish)

No matter who you are, we can help. Contact us anytime, day or night, for information and support. Call us at **1-800-227-2345** or visit www.cancer.org.

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