



Mindful
Continuing Education

Preparing for a Tobacco-Free Generation



A PERSISTENT EPIDEMIC

BUT A WINNABLE PUBLIC HEALTH BATTLE



Every adult who dies early because of smoking is replaced by two new, young smokers, one of whom also will die early from smoking.

Introduction

We have known for the last 50 years that people who smoke cigarettes are much more likely to develop—and die from—certain diseases than people who don't smoke. More than 20 million Americans have died because of smoking since the first *Surgeon General's Report on Smoking and Health* was issued in 1964. Most of those deaths were of adults who smoked, but 2.5 million were of nonsmokers who died because they breathed secondhand smoke—air that was polluted by other people's cigarette smoke.

Adults are not the only people who suffer because of smoking. Today, about half of all the children between ages 3 and 18 years in this country are exposed to cigarette smoke regularly, either at home or in places such as restaurants that still allow smoking.

For decades the tobacco industry has been encouraging children to start smoking. Images that make smoking appealing to children are still highly visible in our society.

**TIMELINE:
50 YEARS
OF PROGRESS
IN TOBACCO
CONTROL**

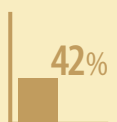
January 11, 1964

First *Surgeon General's Report on Smoking and Health*.



1964

Forty-two percent of American adults smoke.



They are found:

- In movies and on TV
- In video games
- In retail advertising, including in convenience stores
- Online

As a result of tobacco industry marketing and other influences, more than 3,200 children younger than the age of 18 smoke their first cigarette every day. Another 2,100 youth and young adults who are occasional smokers become daily smokers. Nearly 9 out of 10 smokers start before the age of 18, and 98% start smoking by age 26. Every adult who dies early because of smoking is replaced by two new, young smokers; if current risks hold, one of the two also will die early from smoking.



THAT'S EQUAL TO
1 CHILD
OUT OF
EVERY 13
ALIVE IN THE U.S. TODAY

—OR—

2 OF THE **27**
CHILDREN
IN THE AVERAGE
3RD GRADE
CLASSROOM



1966

The United States becomes the first country to require warning labels on cigarettes.



1967

U.S. Fairness Doctrine requires public service announcements about smoking's health risks to counter tobacco ads on radio and TV.

1969

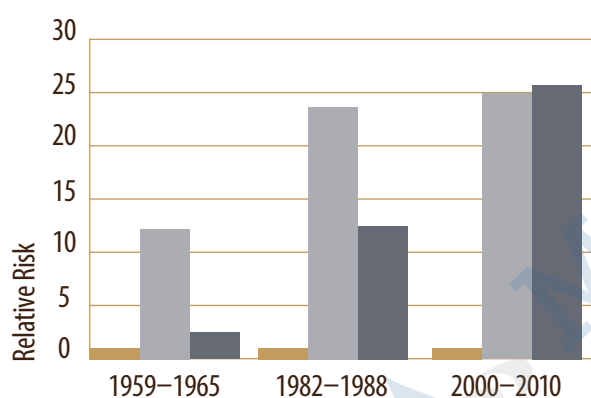
The National Association of Broadcasters agrees to phase out cigarette ads on TV and radio.

SMOKING RISKS ARE MORE DEADLY NOW THAN 50 YEARS AGO

LUNG CANCER RISK FOR SMOKERS

—COMPARED TO—

PEOPLE WHO NEVER SMOKED



Nonsmokers



Male Smokers



Female Smokers

The Killer Cigarette

In the first half of the 20th century, cigarettes were simpler than they are now. They had no filters, no vent holes, and fewer added chemicals. By the time the first *Surgeon General's Report on Smoking and Health* came out in 1964, cigarettes were much more complex. Today's cigarettes are even more so, and the risks from smoking have become more deadly over time.

Between 1959 and 2010, lung cancer risk for smokers rose dramatically. Among female smokers, risk increased tenfold and among male smokers, risk doubled. These increases occurred even though smokers in 2000 through 2010 smoked fewer cigarettes a day than earlier smokers. The risk for lung cancer in people who never smoked stayed about the same between 1959 and 2010.

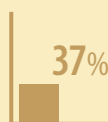
One possible explanation for the higher rates of lung cancer is that the filters and vent holes in most modern cigarettes may lead smokers to inhale more deeply, pulling dangerous chemicals farther into their lungs.

Why Smoking Tobacco Products Is So Deadly

The danger of smoking comes from inhaling chemical compounds, some in the tobacco and some that are created when tobacco is burned. The tobacco in cigarettes is a blend of dried tobacco leaf and tobacco sheet made

1970

Thirty-seven percent of American adults smoke.



1970

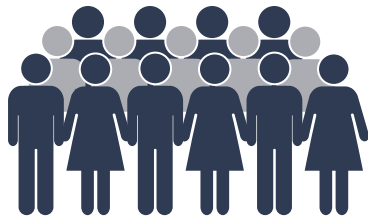
Congress passes the Public Health Cigarette Smoking Act, which bans cigarette ads on TV and radio, and strengthens the Surgeon General's warning label on cigarette packs.

1971

Last cigarette ad airs on U.S. TV, on The Tonight Show starring Johnny Carson.



2.5 MILLION HAVE DIED FROM SECONDHAND SMOKE



from stems, ribs, and other tobacco leaf waste. The process used to make modern cigarettes includes the use of many chemicals. In all, scientists have identified more than 7,000 chemicals and chemical compounds in tobacco smoke. At least 70 of them are known specifically to cause cancer.

All cigarettes are harmful, and any exposure to tobacco smoke can cause both immediate and long-term damage to the body. There is no safe level of exposure to tobacco smoke, and there is no safe cigarette. To reduce cancer risk, quitting smoking entirely is an important strategy that has been proven to work.



Since 1964, more than 20 million Americans have died because of smoking. Of the 20 million who died, 2.5 million were nonsmokers who died because of secondhand smoke.

CIGARETTE SMOKE CONTAINS MORE THAN 7,000 CHEMICALS AND CHEMICAL COMPOUNDS

1972

Surgeon General's Report discusses secondhand smoke as a health risk.

1973

Arizona becomes the first state to restrict smoking in some public places.



1975

Army and Navy stop providing cigarette rations to their troops.





About three out of four teen smokers become adult smokers, even if they plan to quit in a few years.

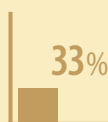
The Power of Nicotine Addiction

Many smokers say they choose to continue smoking despite knowing the health risks. The reality is that smoking is not usually a choice. For most smokers, tobacco use is an addiction, and nicotine is the primary drug in tobacco that causes addiction. It only takes 10 seconds for the nicotine from one puff of smoke to reach the brain. This rapid delivery of nicotine from the lungs to the brain is one of the reasons that cigarettes are so addictive. And once it gets there, nicotine causes cells in the brain to release dopamine. One of the effects of dopamine released in the brain is to create a heightened sense of alertness and contentment. Over time, the brain cells of smokers are changed to expect the regular bursts of extra dopamine that result from smoking. When a smoker tries to quit, these brain changes cause strong cravings for more nicotine.

Some of today's cigarettes are more addictive than those from earlier decades. In part, this is a result of chemicals added to today's cigarettes that cause the nicotine to reach the brain more quickly. In addition, menthol reduces the harshness of the smoke and makes it easier to smoke—particularly for children and teens. Research suggests that children and adolescents may be sensitive to nicotine and can become addicted more easily than adults. The younger smokers are when they start, the more likely they are to become addicted, and the more likely that they will become heavily addicted. Many young people underestimate the power

1980

Thirty-three percent of American adults smoke.



1981

Surgeon General's Report examines changes in how cigarettes are made and what they contain.

1984

Surgeon General's warning on cigarette packs replaced with four health warnings that appear on a rotating basis.

of nicotine addiction. About three out of four high school smokers will become adult smokers—even if they intend to quit in a few years.

In addition to causing addiction, nicotine that is rapidly delivered by cigarettes can affect the body in other ways. For example, a rapid increase in nicotine blood levels can raise the heart rate and blood pressure and narrow arteries around the heart. Fetal exposure to nicotine during pregnancy has long-lasting effects on brain development. At high-enough doses, nicotine is toxic, and nicotine poisoning can be very dangerous or even cause death. But the most common and most serious effect of nicotine is addiction. Nicotine addiction keeps people smoking longer, and the longer they smoke, the more damage they do to their bodies.

NEARLY
1 IN 5
ADULTS AND
TEENAGERS
SMOKE



You Can Beat Nicotine Addiction

Quit rates for smokers are on the rise and today, there are many ways to beat nicotine addiction. More than half of all smokers have already quit. People who talk to their doctors about quitting or call quitlines for advice are more successful than those who go it alone. FDA-approved medications and nicotine patches, gum, or lozenges, along with coaching support, can double or triple your chances of success.

If you are a smoker and you want to quit, free help is available at 1-800-QUIT-NOW (1-800-784-8669) and at smokefree.gov.

1986

First Surgeon General's Report dedicated to the health effects of secondhand smoke is released.

1988

Proposition 99 passes in California, first tobacco tax to dedicate funds for a state tobacco control program.



1988

Surgeon General's Report concludes nicotine is addictive.

DISEASES AND HEALTH PROBLEMS LINKED TO SMOKING

LINKED TO SMOKING

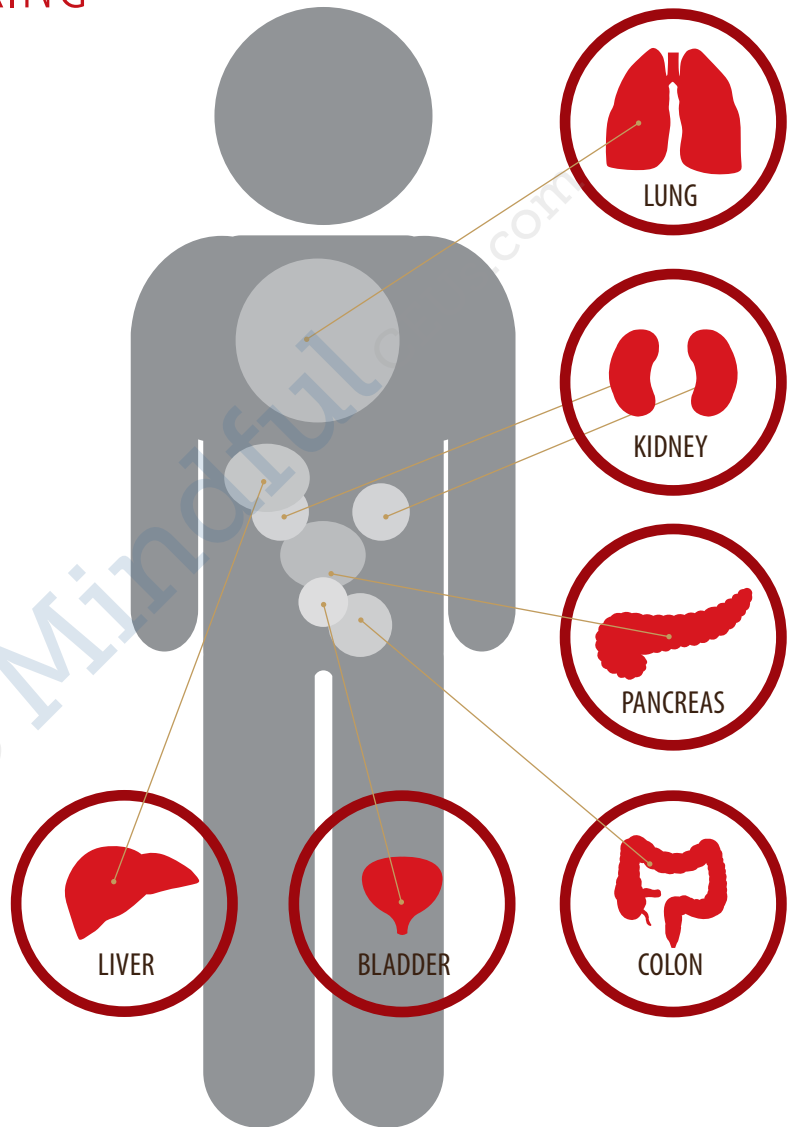
1 OUT OF 3
CANCER DEATHS
COULD BE PREVENTED

SMOKING CAUSES CANCER

—IN THE—

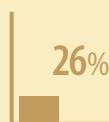
LUNGS • TRACHEA
BRONCHUS • ESOPHAGUS
ORAL CAVITY • LIP
NASOPHARYNX
NASAL CAVITY • LARYNX
STOMACH • BLADDER
PANCREAS • KIDNEY
LIVER • UTERINE CERVIX
COLON AND RECTUM
AND CAUSES LEUKEMIA

Smoking can cause cancer almost anywhere in the body.



1990

Twenty-six percent of American adults smoke.



1990

R.J. Reynolds ends a marketing test targeting African Americans in response to protests organized by Uptown Coalition.

1990

Congress makes domestic airline flights smokefree.



Smoking—The Cancer Trigger

Cancer is a serious disease that happens when cells grow uncontrollably in the body. These cells grow into tumors that damage organs and can spread to other parts of the body. Smoking can cause cancer almost anywhere in the body. Nearly all lung cancer—the number-one cancer killer of both men and women—is caused by smoking. If no one in the United States smoked, we could prevent one out of three cancer deaths.

DNA Damage

DNA is the “blueprint” for every cell in the human body—the cell’s “instruction manual.” DNA controls a cell’s growth and the work each cell does. When tobacco smoke damages DNA, cells can begin growing abnormally. Typically, the body releases special cells to attack and kill cells that are growing out of control. However, toxic chemicals in cigarette smoke weaken this process and make it easier for the abnormal cells to keep growing and dividing.

Lung Cancer

Today, lung cancer is the number-one cause of cancer death for both men and women. Nearly 9 out of 10 lung cancers are caused by smoking. In fact, smokers today are much more likely to develop lung cancer than smokers were in 1964, when the first *Surgeon General’s Report on Smoking and Health* linked smoking to lung cancer.



Smoking Linked to Two Additional Cancers

Evidence now proves that smoking causes liver cancer, and colorectal cancer, which is the second deadliest cancer among those that affect both men and women. Studies suggest a link between smoking and breast cancer, but the evidence is not as firm. Studies also suggest that men with prostate cancer who smoke may be more likely to die from the disease than nonsmokers.

Cancer Treatment

People who continue to smoke after being diagnosed with cancer raise their risk for future cancers and death. They’re more likely to die from their original cancer, secondary cancers, and all other causes than are former smokers and people who have never smoked.

1990

San Luis Obispo, California, passes first smokefree restaurant law.



1991

National Cancer Institute launches the ASSIST program, supporting tobacco control programs in 17 states.

1992

U.S. Environmental Protection Agency classifies secondhand smoke as a Group A carcinogen.



1 OUT OF 10
HIGH SCHOOL
STUDENTS HAS
ASTHMA



Smoking—The Breath Blocker

Respiratory Diseases

The chemicals in cigarette smoke cause immediate damage to cells and tissue in the human body, including those on the path from the mouth to the lung's air sacs—the final target of the smoke. Delicate lung tissue damaged by chemicals in cigarette smoke doesn't have a chance to heal if it is exposed to these chemicals in large amounts day after day. The result is a wide range of deadly lung conditions.

Chronic Obstructive Pulmonary Disease

Smoking causes chronic obstructive pulmonary disease (COPD). COPD includes several underlying lung diseases, such as emphysema and chronic bronchitis, in which the airways are damaged and can never completely heal, and the lungs lose their elastic properties. People with COPD suffer from shortness of breath, coughing, difficulty exercising, air trapped in their lungs, swollen airways, and scar tissue. As a result, they may even have trouble with routine activities such as walking and dressing. Their quality of life can drop significantly. Over time, COPD causes low oxygen levels in the body. People with COPD are at high risk for many other serious diseases, including lung cancer and heart disease. The disease has no cure.

1993

The White House goes smokefree.



1994

Mississippi files first state lawsuit against U.S. tobacco companies to recover Medicaid costs for smoking-related illnesses.

1994

Seven tobacco company executives testify to Congress that they believe nicotine is NOT addictive.



Women are now dying from COPD in about the same numbers as men, and women appear more susceptible to developing severe COPD at younger ages. Women smokers in certain age groups are more than 38 times as likely to develop COPD, compared with women who have never smoked.

Tuberculosis

Tuberculosis (TB) is a common infection worldwide that usually attacks the lungs. TB is spread through the air when people with the disease cough or sneeze. It was once a leading cause of death in the United States, but advances in public health have made TB far less common here. However, it remains a serious health issue elsewhere in the world. According to the World Health Organization, TB caused 1.4 million deaths worldwide in 2011. There is now enough evidence to conclude that smoking increases a person's risk of getting TB disease and dying from it.

Other Respiratory Damage Caused by Smoking

More than 11% of high school students in the United States have asthma, and studies suggest that youth who smoke are more likely to develop asthma. Breathing someone else's smoke also triggers asthma attacks in nonsmokers. Children exposed to secondhand smoke have more respiratory infections than children who are not exposed.



Women smokers in certain age groups are more than 38 times as likely to develop COPD, compared with women who have never smoked.

Although the body has ways to prevent or lessen the severity of injury caused by agents inhaled into the lungs, these defenses are overwhelmed when the body is exposed to cigarette smoke over and over again. People who stop smoking begin to breathe easier, may regain higher levels of oxygen in the body, and lower their risk of respiratory disease compared to those who continue to smoke.

1995

California passes first statewide smokefree restaurant and bar law.



1996

FDA makes first attempt to regulate manufacture, sale and marketing of tobacco products.



1998

Forty-six states and four tobacco companies sign Tobacco Master Settlement Agreement which requires tobacco companies to reimburse a portion of state Medicaid costs resulting from smoking.



SAVE YOUR HEART AVOID THE SMOKE

Smoking damages the heart and blood vessels very quickly, but the damage is repaired quickly for most smokers who stop smoking. Even long-time smokers can see rapid health improvements when they quit. Within a year, heart attack risk drops dramatically. Within five years, most smokers cut their risk of stroke to nearly that of a nonsmoker. Even a few cigarettes now and then damage the heart, so the only proven strategy to keep your heart safe from the effects of smoking is to quit.

Go to [cdc.gov/tips](https://www.cdc.gov/tips) to see how heart disease motivated one smoker, Roosevelt, to quit.

Smoking—The Heart Stopper

More than 16 million Americans have heart disease, almost 8 million already have had a heart attack and 7 million have had a stroke. Cardiovascular disease (CVD) is the single largest cause of all deaths in the United States, killing more than 800,000 people a year.

CVD includes narrow or blocked arteries in and around the heart (coronary heart disease), high blood pressure (hypertension), heart attack (acute myocardial infarction), stroke and heart-related chest pain (angina pectoris). Smoking is a major cause of CVD.

Even people who smoke fewer than five cigarettes a day show signs of early stages of CVD. The risk of CVD increases when more cigarettes a day are smoked, and when smoking continues for many years.

Exposure to secondhand smoke can increase the risk for a heart attack or stroke. More than 33,000 nonsmokers die every year in the United States from coronary heart disease caused by exposure to secondhand smoke.

Peripheral Arterial Disease

Blood vessels are found throughout the body and carry oxygen to every organ. The oxygen makes it possible for organs to do the work needed to keep the body healthy and working correctly. Cigarette smoke makes cells lining blood vessels swell so that the vessels become narrower, reducing the flow of blood. Even smoking every now and then, or inhaling someone else's smoke, damages blood vessels.

1998

Surgeon General's Report examines tobacco use and disease among racial/ethnic minority groups.

1999

U.S. Department of Justice files lawsuit against major U.S. tobacco companies for deceiving Americans about health hazards of smoking and secondhand smoke.

1999

Centers for Disease Control and Prevention (CDC) launches the National Tobacco Control Program, supporting tobacco control programs in 50 states.

Atherosclerosis, or hardening of the arteries, occurs when artery walls thicken and the opening inside the artery narrows. Peripheral arterial disease (PAD) or peripheral vascular disease (PVD) occurs when arteries that supply the legs, feet, arms, or hands become narrow, reducing blood flow. Without normal blood flow, people with PAD may have pain when they walk, and cells and tissue can die from lack of oxygen. In extreme cases, gangrene can develop and the infected limb may have to be removed. Smoking is the most common preventable cause of PAD.

Coronary Heart Disease

Components in the blood, called platelets, stick together along with proteins to form clots. Clotting prevents blood loss and infection after an injury. Chemicals in cigarette smoke cause blood to thicken and form clots inside veins and arteries, even when clotting isn't needed to prevent bleeding or infection. Smoking also promotes the formation of plaque in the walls of arteries and clots can form where there is plaque. This is especially dangerous when arteries are already narrowed from smoking, because the clots can easily block those arteries. When arteries are blocked, the oxygen to nearby organs is cut off. Coronary heart disease occurs when arteries that carry blood to heart muscles are blocked by clots. This blockage can lead to a heart attack and sudden death.

Stroke

A stroke is loss of brain function caused when blood flow within the brain is interrupted. Strokes can occur when arteries that carry blood to the brain become blocked from narrowing or a clot, or when a blood vessel leaks or bursts inside the brain. Strokes can cause permanent brain damage and death. Smoking increases the risk for stroke. Deaths



from strokes are more likely among smokers than among former smokers or people who have never smoked. The more cigarettes a person smokes per day, the higher his or her risk of dying from a stroke. Even exposure to secondhand smoke can cause strokes in nonsmokers.

Abdominal Aortic Aneurysm

The aorta is the body's main artery that carries oxygen-rich blood to all parts of the body. Smoking is a known cause of early hardening of the abdominal aorta, the part of the aorta that supplies blood to the abdomen, pelvis, and legs. Autopsy studies have found that smoking during adolescence can cause this dangerous condition as early as young adulthood. Hardening of the abdominal aorta can lead to an aneurysm, or a weakened and bulging area. A ruptured abdominal aortic aneurysm causes life-threatening bleeding and is often fatal. Almost all deaths from abdominal aortic aneurysms are caused by smoking and other tobacco use. Women smokers have a higher risk of dying from an aortic aneurysm than men who smoke.

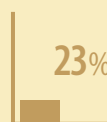
1999

Tobacco Master Settlement Agreement bans outdoor and transit billboard ads for tobacco products.



2000

Twenty-three percent of American adults smoke.



2001

Surgeon General's Report calls smoking-related disease among women a full-blown epidemic.



Babies whose mothers smoked during pregnancy or who are exposed to secondhand smoke after birth are more likely to die of sudden infant death syndrome (SIDS) than are babies who are not exposed.

Smoking and Reproduction

For many reasons, men and women who want to have children should not smoke. Studies suggest that smoking affects hormone production. This could make it more difficult for women smokers to become pregnant. Pregnant women who smoke or who are exposed to secondhand smoke endanger their unborn babies, as well as their own health. Babies whose mothers smoked during pregnancy or who are exposed to secondhand smoke after birth are more likely to die of sudden infant death syndrome (SIDS) than are babies who are not exposed. More than 100,000 of the smoking-caused deaths over the last 50 years were of babies who died from SIDS or other health conditions. Deadly chemicals in cigarette smoke reached these infants before they were born, or when they were exposed to cigarette smoke during infancy.

Pregnancy Complications

More than 400,000 babies born in the United States every year are exposed to chemicals in cigarette smoke before birth because their mothers smoke. Smoking is known to cause ectopic pregnancy, a condition in which the fertilized egg fails to move to the uterus and instead attaches in the fallopian tube or to other organs outside the womb. Ectopic pregnancy almost always causes the fetus to die and poses a serious risk to the health of the mother. Another possible complication from smoking during pregnancy is miscarriage.

2003

World Health Organization adopts the first international tobacco control treaty, the Framework Convention on Tobacco Control.



2004

New York passes first fire-safe cigarette law, requiring cigarettes to have fire-retardant bands in the paper wrapper that slow burn rates and prevent accidental fires.

2006

A federal court finds major U.S. tobacco companies guilty of deceiving public on dangers of smoking and secondhand smoke.

Mothers who smoke during pregnancy are more likely to deliver their babies early. Preterm delivery is a leading cause of death, disability, and disease among newborns. Mothers who smoke during pregnancy are also more likely to deliver babies with low birth weight, even if they are full term.

Carbon monoxide in tobacco smoke keeps the fetus from getting enough oxygen. Smoking during pregnancy can also cause tissue damage in the fetus, especially in the lungs and brain. This damage can last throughout childhood and into the teenage years.

Birth Defects

Smoking during pregnancy can cause birth defects. Women who smoke during early pregnancy are more likely to deliver babies with cleft lips and/or cleft palates—conditions in which the lip or palate fails to form completely. Both conditions interfere with an infant’s ability to eat properly, and both must be corrected with surgery.

Male Reproduction and Sexual Function

In the United States, 18 million men over age 20 suffer from erectile dysfunction (ED). A man with ED can’t have and maintain an erection that is adequate for satisfactory sexual performance, which can affect reproduction. Recent evidence concludes that smoking is a cause of ED. Cigarette smoke alters blood flow necessary for an erection, and smoking interferes with the healthy function of blood vessels in erectile tissue.

Men need healthy sperm for fertility. Smoking damages DNA in sperm, which can lead to infertility or early fetal death.



**18
MILLION
MALES**

—OVER AGE 20—

**SUFFER FROM ERECTILE
DYSFUNCTION (ED)**



SMOKING IS A CAUSE OF ED

Cigarette smoke alters blood flow
necessary for an erection.

2009

The Family Smoking Prevention and Tobacco Control Act, directing the FDA to regulate the manufacture, marketing, and sale of tobacco products, is signed into law.



2009

Congress authorizes the biggest federal tobacco excise tax in U.S. history.

2010

Nineteen percent of American adults smoke

19%



Smokers are 30% to 40% more likely to develop type 2 diabetes than nonsmokers.

Smoking and Diabetes

Diabetes—a disease that causes blood sugar levels in the body to be too high—is a growing health crisis around the world. In the United States, more than 25 million adults suffer from diabetes. We now know that smoking causes type 2 diabetes, also known as adult-onset diabetes. Smokers are 30% to 40% more likely to develop type 2 diabetes than nonsmokers. The more cigarettes an individual smokes, the higher the risk for diabetes.

Diabetes can cause serious health problems, including heart disease, blindness, kidney failure, and nerve and blood vessel damage of the feet and legs, which can lead to amputation. A person with diabetes who smokes is more likely to have trouble regulating insulin and controlling the disease than nonsmokers with diabetes. Both smoking and diabetes cause problems with blood flow, which raises the risk of blindness and amputations. Smokers with diabetes are also more likely to have kidney failure than nonsmokers with diabetes. Diabetes is the seventh leading cause of death in the United States.

Smoking and the Immune System

The immune system is the body's way of protecting itself from infection and disease. The immune system fights everything from cold and flu viruses to serious conditions such as cancer. Smoking compromises the immune system and can make the body less successful at fighting disease. Smokers have more respiratory infections than nonsmokers, in part because the chemicals in cigarettes make it harder for their immune systems to successfully attack the viruses and bacteria that can cause respiratory infections. In fact, smokers generally are much less healthy than nonsmokers. Their overall health is worse, they need to go to the doctor more often, and they are admitted to the hospital more often.

Smoking also causes autoimmune disorders. Autoimmune disorders occur when the immune system attacks the body's healthy cells. For example, in rheumatoid arthritis, or RA, the immune system attacks the joints and tissue around the joints, causing swelling and pain. As a result, people with RA have a harder

2010

Half of U.S. states and the District of Columbia have adopted comprehensive smokefree laws.



2012

Surgeon General's Report concludes that tobacco marketing causes smoking among youth and young adults.

2012

CDC launches *Tips From Former Smokers*, the first federally funded national tobacco education campaign.



time getting around and doing normal daily activities. We now know RA can be caused by smoking, and smoking makes some RA treatments less effective. More women have RA than men.

Smoking and Eye Disease

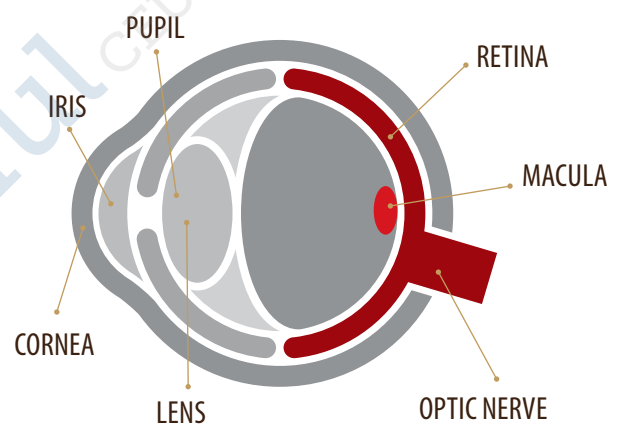
Chemicals in cigarette smoke restrict blood flow to important organs by causing blood vessels to narrow. The eye has many tiny blood vessels that keep it healthy and working properly. Chemicals in tobacco smoke damage these blood vessels and prevent them from carrying enough oxygen throughout the eye. Smoking causes damage to delicate cells in the eye, and exposure to cigarette smoke over long periods of time means the cells do not have a chance to heal. These effects from smoking can cause serious eye diseases.

Age-related macular degeneration, or AMD, is an eye disease that causes loss of vision in the center of the field of vision. The retina is a delicate tissue that lines the inside of the eye. It is sensitive to light and sends visual images to the brain. The macula is the most sensitive part of the retina and is the part of the eye that gives you sharp vision. Age-related macular degeneration damages the macula over time and can lead to loss of vision in the center of the eye. AMD is common in older people and is the leading cause of vision loss in people over age 65. Smoking is now known to cause AMD. Studies show that quitting smoking may reduce that risk, but it might take 20 or more years after smokers quit for the risk to go down.

In addition to causing AMD, smoking causes cataracts. A cataract is the clouding of the eye's lens. Cataracts cause loss of vision because the



A LOOK AT YOUR EYE

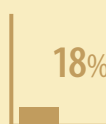


Smoking causes age-related macular degeneration.

clouding prevents light from passing through the lens to the retina. Cataract disease is the leading cause of blindness but can be treated with surgery. Cataracts usually occur in older adults.

2014

50 years after the first Surgeon General's Report on smoking, 18% of American adults smoke, compared to 42% in 1964.



We've made a lot of progress, but there's still more to do.

THE NEXT 50 YEARS

IF WE COULD HELP EVERY SMOKER TO QUIT SMOKING AND KEEP YOUNG PEOPLE FROM STARTING IN THE FIRST PLACE, THE RESULTS WOULD BE STAGGERING.

**1/2
MILLION**
PREMATURE DEATHS
could be prevented every year.



AT LEAST
**\$130
BILLION**
in direct medical costs for adults
could be saved every year.



**5.6
MILLION CHILDREN**
alive today who ultimately will die early
because of smoking could live to a
normal life expectancy.



MORE THAN
**16
MILLION PEOPLE**
already have at least one disease from smoking.
We could prevent that number from growing more.



Despite all our progress, there is more work to be done. Every day 3,200 youth under 18 smoke their first cigarette, and another 2,100 youth and young adults who have been occasional smokers become daily smokers.

AT LEAST
88
MILLION AMERICANS

who continue to be exposed to the dangerous chemicals
in secondhand smoke could breathe freely.



1 OUT OF **3**
CANCER DEATHS
in this country could be prevented.



AT LEAST
\$156
BILLION

in losses to our economy—caused when
people get sick and die early from
smoking—could be prevented.



Saving Millions of Lives

There are many ways to reduce smoking rates quickly and dramatically.

Among the strategies proven to work are:

- Affordable smoking cessation treatments that are easily available to people who want to quit;
- Comprehensive smokefree and tobacco-free policies in public places that protect nonsmokers and make smoking the exception rather than the norm;
- Higher prices on cigarettes and other tobacco products that discourage young people from starting in the first place and that encourage adult smokers to quit;
- Continued mass media campaigns that inform people of the dangers of smoking and tell them about resources to help them quit; and
- State and community programs that help integrate tobacco control into medical, retail, education, and public health environments that reach groups of people who might not otherwise be exposed to tobacco control initiatives.

Ending the Tobacco Use Epidemic

Smoking has been the number-one cause of preventable death and disease in this country for decades. Although we have cut smoking rates in half since 1964, the current rate of progress is not fast enough. The death and disease from tobacco—which claim nearly 500,000 lives each year—are overwhelmingly caused by cigarettes and other burned tobacco products. To stop these deaths, we need to rapidly eliminate their use.

We can break the cycle of sickness, disability, and death caused by smoking if we:

- Extend proven programs and policies to more states and cities to make smoking less accessible, less affordable, and less attractive;
- Help everyone who wants to quit by providing cessation resources that are readily available and affordable;
- Make cigarettes less addictive and less appealing to youth by using federal regulatory authority; and
- Work to rapidly eliminate the use of cigarettes and other forms of burned products.

These steps can save millions of lives in the coming decades and eliminate smoking as the leading preventable cause of death and disease.

APPENDIX I: US DEPARTMENT OF HEALTH AND HUMAN SERVICES/CDC

Smoking and Tobacco Use Facts: Updated August, 2017

https://www.cdc.gov/tobacco/data_statistics/fact_sheets/youth_data/tobacco_use/index.htm

Health Effects

Smoking leads to disease and disability and harms nearly every organ of the body. More than 16 million Americans are living with a disease caused by smoking. For every person who dies because of smoking, at least 30 people live with a serious smoking-related illness. Smoking causes cancer, heart disease, stroke, lung diseases, diabetes, and chronic obstructive pulmonary disease (COPD), which includes emphysema and chronic bronchitis. Smoking also increases risk for tuberculosis, certain eye diseases, and problems of the immune system, including rheumatoid arthritis.

Secondhand smoke exposure contributes to approximately 41,000 deaths among nonsmoking adults and 400 deaths in infants each year. Secondhand smoke causes stroke, lung cancer, and coronary heart disease in adults. Children who are exposed to secondhand smoke are at increased risk for sudden infant death syndrome, acute respiratory infections, middle ear disease, more severe asthma, respiratory symptoms, and slowed lung growth.

In addition:

- Smoking leads to disease and disability and harms nearly every organ of the body.¹
- Smoking is the leading cause of preventable death.
- The tobacco industry spends billions of dollars each year on cigarette advertising and promotions.⁴
- Smoking costs the United States billions of dollars each year.^{1,5}
- State spending on tobacco prevention and control does not meet CDC-recommended levels.^{1,6,7}
- 15.1% of all adults (36.5 million people): 16.7% of males, 13.6% of females were current cigarette smokers in 2015.⁸
- Thousands of young people start smoking cigarettes every day.¹
- Many adult cigarette smokers want to quit smoking.

Youth and Tobacco Use

- Youth use of tobacco in any form is unsafe.

- If smoking continues at the current rate among youth in this country, 5.6 million of today's Americans younger than 18 will die early from a smoking-related illness. That's about 1 of every 13 Americans aged 17 years or younger alive today.¹

Preventing tobacco use among youth is critical to ending the tobacco epidemic in the United States.

- Tobacco use is started and established primarily during adolescence.^{1,2}
 - Nearly 9 out of 10 cigarette smokers first tried smoking by age 18, and 98% first tried smoking by age 26.¹
 - Each day in the United States, more than 3,200 youth aged 18 years or younger smoke their first cigarette, and an additional 2,100 youth and young adults become daily cigarette smokers.¹
- Flavorings in tobacco products can make them more appealing to youth.³
 - In 2014, 73% of high school students and 56% of middle school students who used tobacco products in the past 30 days reported using a flavored tobacco product during that time.

Cigarettes

- From 2011 to 2016, current cigarette smoking declined among middle and high school students.^{4,5}
 - About 2 of every 100 middle school students (2.2%) reported in 2016 that they smoked cigarettes in the past 30 days—a decrease from 4.3% in 2011.
 - 8 of every 100 high school students (8.0%) reported in 2016 that they smoked cigarettes in the past 30 days—a decrease from 15.8% in 2011.

Electronic cigarettes

- Current use of electronic cigarettes increased among middle and high school students from 2011 to 2016.^{4,5}
 - About 4 of every 100 middle school students (4.3%) reported in 2016 that they used electronic cigarettes in the past 30 days—an increase from 0.6% in 2011.
 - About 11 of every 100 high school students (11.3%) reported in 2016 that they used electronic cigarettes in the past 30 days—an increase from 1.5% in 2011.

Hookahs

- From 2011 to 2016, current use of hookahs increased among middle and high school students.^{4,5}
 - 2 of every 100 middle school students (2.0%) reported in 2016 that they had used hookah in the past 30 days—an increase from 1.0% in 2011.
 - Nearly 5 of every 100 high school students (4.8%) reported in 2016 that they had used hookah in the past 30 days—an increase from 4.1% in 2011.

Tobacco Use Among Middle and High School Students—United States, 2011-2016

Smokeless Tobacco

- In 2016:
 - About 2 of every 100 middle school students (2.2%) reported current use of smokeless tobacco.
 - Nearly 6 of every 100 high school students (5.8%) reported current use of smokeless tobacco.

All Tobacco Product Use

- In 2016, about 7 of every 100 middle school students (7.2%) and about 20 of every 100 high school students (20.2%) reported current use of some type of tobacco product.⁴
- In 2013, nearly 18 of every 100 middle school students (17.7%) and nearly half (46.0%) of high school students said they had ever tried a tobacco product.⁶

Use of multiple tobacco products is prevalent among youth.³

- In 2016, about 3 of every 100 middle school students (3.1%) and nearly 10 of every 100 high school students (9.6%) reported current use of two or more tobacco products in the past 30 days.⁴
- In 2013, more than 9 of every 100 middle school students (9.4%) and more than 31 of every 100 high school students (31.4%) said they had ever tried two or more tobacco products.⁶

Factors Associated With Youth Tobacco Use

Factors associated with youth tobacco use include the following:

- Social and physical environments^{2,7}

- The way mass media show tobacco use as a normal activity can promote smoking among young people.
- Youth are more likely to use tobacco if they see that tobacco use is acceptable or normal among their peers.
- High school athletes are more likely to use smokeless tobacco than their peers who are non-athletes.⁸
- Parental smoking may promote smoking among young people.
- Biological and genetic factors^{1,2,9}
 - There is evidence that youth may be sensitive to nicotine and that teens can feel dependent on nicotine sooner than adults.
 - Genetic factors may make quitting smoking more difficult for young people.
 - A mother's smoking during pregnancy may increase the likelihood that her offspring will become regular smokers.
- Mental health: There is a strong relationship between youth smoking and depression, anxiety, and stress.^{2,9}
- Personal perceptions: Expectations of positive outcomes from smoking, such as coping with stress and controlling weight, are related to youth tobacco use.^{2,9}
- Other influences that affect youth tobacco use include:^{2,7,9}
 - Lower socioeconomic status, including lower income or education
 - Lack of skills to resist influences to tobacco use
 - Lack of support or involvement from parents
 - Accessibility, availability, and price of tobacco products
 - Low levels of academic achievement
 - Low self-image or self-esteem
 - Exposure to tobacco advertising

Reducing Youth Tobacco Use

National, state, and local program activities have been shown to reduce and prevent youth tobacco use when implemented together. They include the following:

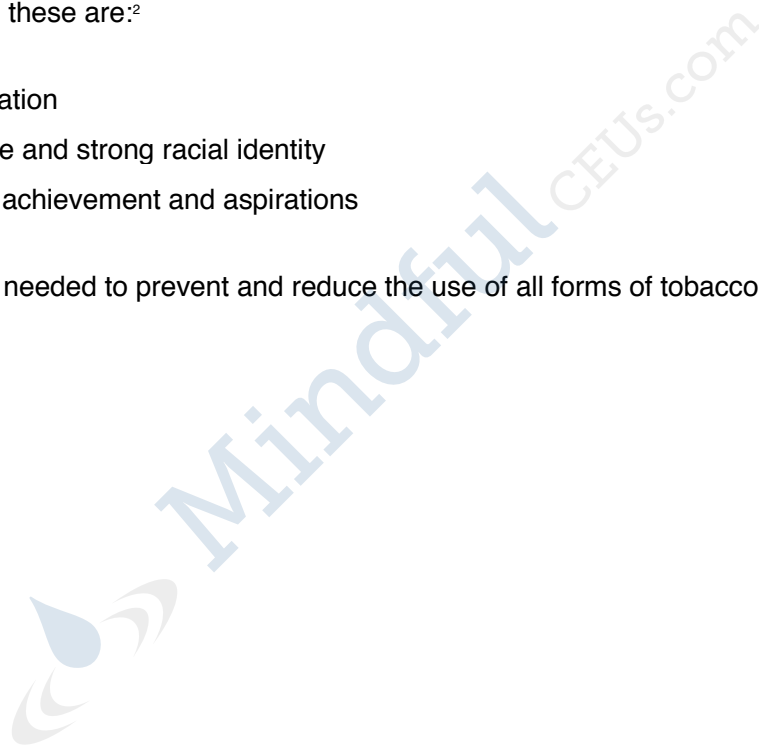
- Higher costs for tobacco products (for example, through increased taxes)^{2,7,10}
- Prohibiting smoking in indoor areas of worksites and public places^{2,7,10}

- Raising the minimum age of sale for tobacco products to 21 years, which has recently emerged as a potential strategy for reducing youth tobacco use¹¹
- TV and radio commercials, posters, and other media messages targeted toward youth to counter tobacco product advertisements^{2,7,10}
- Community programs and school and college policies and interventions that encourage tobacco-free environments and lifestyles^{2,8,10}
- Community programs that reduce tobacco advertising, promotions, and availability of tobacco products^{2,7,10}

Some social and environmental factors have been found to be related to lower smoking levels among youth. Among these are:²

- Religious participation
- Racial/ethnic pride and strong racial identity
- Higher academic achievement and aspirations

Continued efforts are needed to prevent and reduce the use of all forms of tobacco use among youth.





Mindful
Continuing Education

“This course was developed from the public domain documents: LET’S MAKE THE NEXT GENERATION TOBACCO-FREE: Your Guide to the 50th Anniversary Surgeon General’s Report on Smoking and Health – Centers for Disease Control and Prevention (CDC) 2015.”