

SMOKING -ATTRIBUTABLE DEATHS IN VIRGINIA

Cigarette smoking is the leading preventable cause of death in the United States. Each year, smoking causes approximately 400,000 deaths in the United States plus 38,000 deaths from exposure to secondhand smoke.¹ This is one-in-five deaths in the U.S.

Smoking causes more deaths each year than HIV, illegal drug use, alcohol use, motor vehicle injuries, suicides, and murders combined.

According to the CDC and the National Cancer Institute, cigarette smoking increases your risk for developing and dying from several diseases, including cancer, heart disease, and lung diseases (see below).

For every one person who dies from smoking, there are 20 people who have smoking-caused disease and disability.

Approximately 8.6 million people suffer from a smoking-related chronic disease in the United States.

Cancer

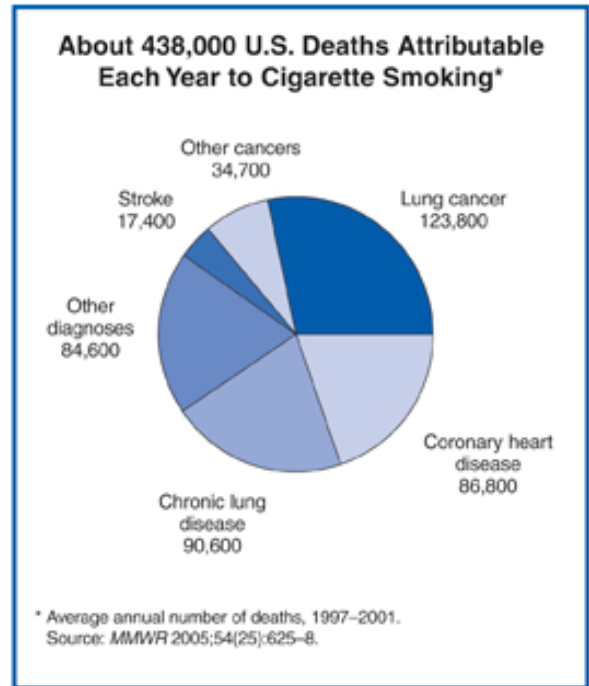
Nationally, smoking causes 123,800 deaths from lung cancer and 34,700 deaths from other cancers each year. Cancer is the second leading cause of death in the U.S. and Virginia. In Virginia, about 4,100 people will die from cancer yearly, with the majority of these cases being lung cancer.

Cigarette smoking is the leading risk factor for lung cancer, causing 87 percent of all lung cancer deaths. Men who smoke were **23 times** more likely to die from lung cancer than male non-smokers, and women who smoke were **13 times** more likely to die from lung cancer than female non-smokers.

Inhaling secondhand smoke can increase your risk of getting lung cancer by up to 30 percent. In the U.S., there were 3,000 lung cancer deaths each year from secondhand smoke.

Smoking accounts for 30 percent of deaths from other cancers. Smoking increases the risk of getting these cancers:

- Lip, oral cavity, and pharynx
- Larynx
- Trachea, lung and bronchus
- Esophagus
- Stomach
- Pancreas
- Cervix
- Kidney and renal pelvis
- Urinary bladder
- Acute myeloid leukemia



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Heart Disease

Nationally, smoking causes 86,800 deaths from coronary heart disease and 17,400 deaths from stroke each year. Twenty-one percent of all coronary heart disease and 18 percent of all stroke deaths in the U.S. are attributed to smoking. Heart disease and stroke are, respectively, the first and third leading causes of death in the U.S. and Virginia. In Virginia, about 1,783 people will die from heart disease and 449 will die from stroke yearly.

Thirty-five percent of smoking-related deaths are from cardiovascular disease in the U.S. (34% in Virginia), which includes the following:

- Ischemic heart disease (incl. heart attack)
- Other heart disease
- Cerebrovascular disease (incl. stroke)
- Atherosclerosis
- Aortic aneurysm
- Other arterial disease

Smoking is a major contributing risk factor for developing and dying from heart disease. Smoking has the following effects on the body:

- 1) Buildup of low-density lipoproteins, or LDL (“bad cholesterol”), and decrease in high-density lipoproteins, or HDL (“good cholesterol”), in the bloodstream.
- 2) Increased risk of atherosclerosis, or plaque buildup (also referred to as “hardening of the arteries”).
- 3) Increased risk for blood clotting, or thrombosis, especially where plaque accumulates in the blood vessels.
- 4) Constricted blood vessels and decreased blood flow to vital organs, including the heart (possibly resulting in heart attack) and the brain (possibly resulting in stroke).
- 5) Increased heart rate, which strains your heart and puts you at higher risk for heart attack and stroke.
- 6) Increased blood pressure (hypertension) which can also cause damage to the heart and other vital organs including the kidneys

All of these health conditions can result in heart attack, stroke, and congestive heart failure.

Cigarette smokers are 2-4 times more likely to develop coronary heart disease, and have the double the risk of having a stroke. Smoking triples the risk of dying from heart disease, especially among middle-aged men and women.

However, if a person quits smoking, she reduces her risk of having a stroke to that of a non-smoker within 5 to 15 years after quitting.

Respiratory Disease

Smoking damages bronchial airways and lung alveoli (air sacs), which can lead to chronic lung disease. Smoking-related respiratory diseases include:

- Pneumonia, influenza
- Chronic bronchitis and emphysema
- Chronic airway obstruction

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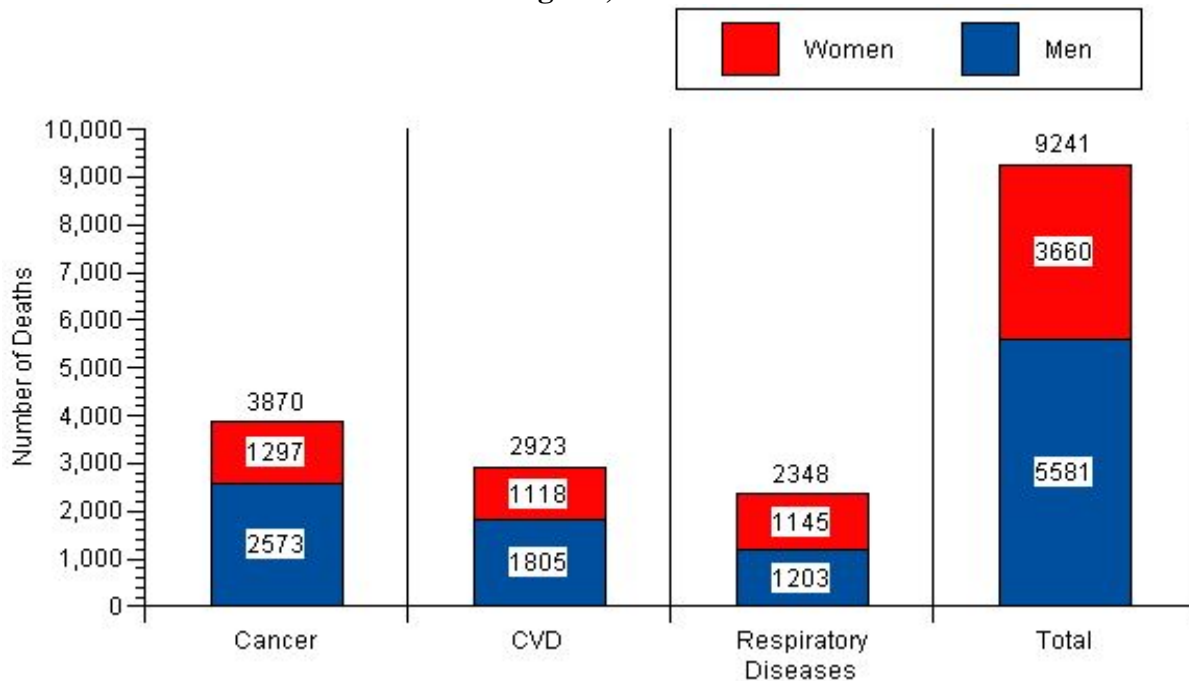
Chronic bronchitis, emphysema, and, in some cases, asthma comprise chronic obstructive pulmonary disease, or COPD. Main symptoms of COPD are wheezing, shortness of breath, and chronic cough. COPD is the fourth leading cause of death in the U.S. and Virginia. Other findings:

- Ninety percent of COPD deaths are caused by smoking or secondhand smoke.
- Smokers have 10 times the risk of dying from COPD than non-smokers.
- Women's rates of dying from COPD have increased over the last 20 years, mainly from increases in smoking.
- Smoking (or secondhand smoke) increases your risk of developing asthma, acute and chronic sinus infections, and pneumonia

Smoking-Attributable (SA) Deaths in Virginia

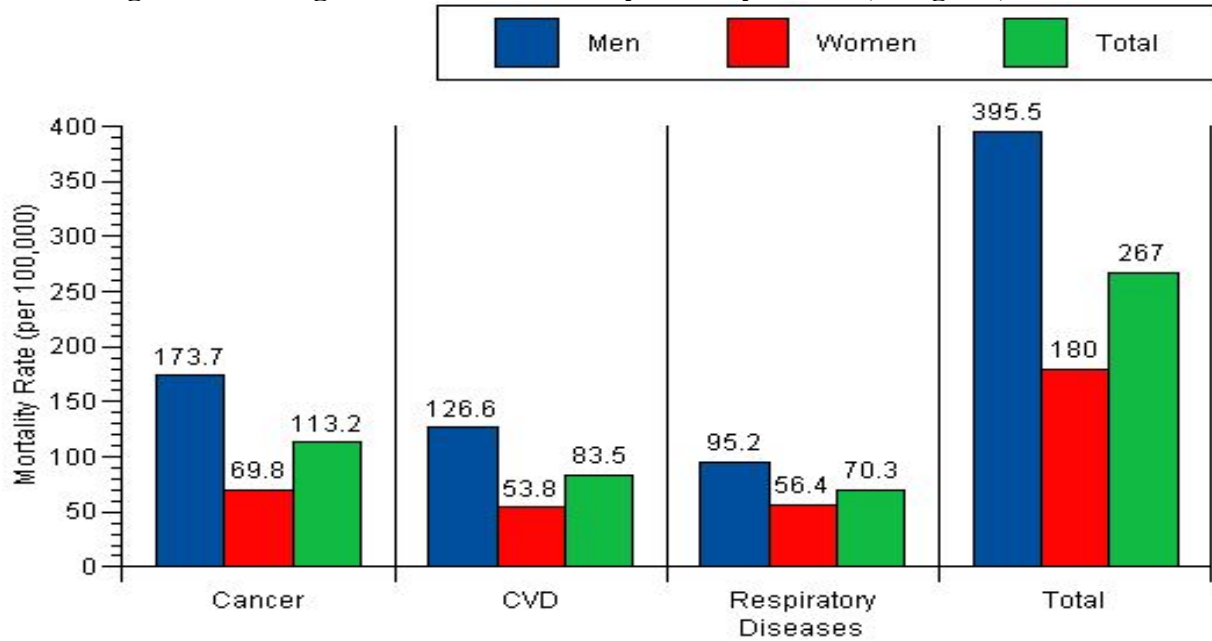
Between 2000 and 2004, there were an estimated 9,200 deaths attributable to smoking among adults ages 35 and older in Virginia. The age-adjusted mortality rate from smoking-related diseases was 267 deaths per 100,000. Men had a higher rate of death (395.5 per 100,000) than women (180 per 100,000).² Men had higher counts and rates of death in all three disease (cancer, cardiovascular disease, respiratory disease) categories (Figures 1 & 2).

Figure 1. Average Annual Number of Deaths Attributable to Smoking, By Gender, Virginia, 2000-2004



Source: Smoking-Attributable Mortality, Morbidity, and Economic Costs (SAMMEC) Program. (<http://apps.nccd.cdc.gov/sammecc>). The counts are for deaths among adults ages 35 and older, and excludes burn and secondhand smoke deaths.

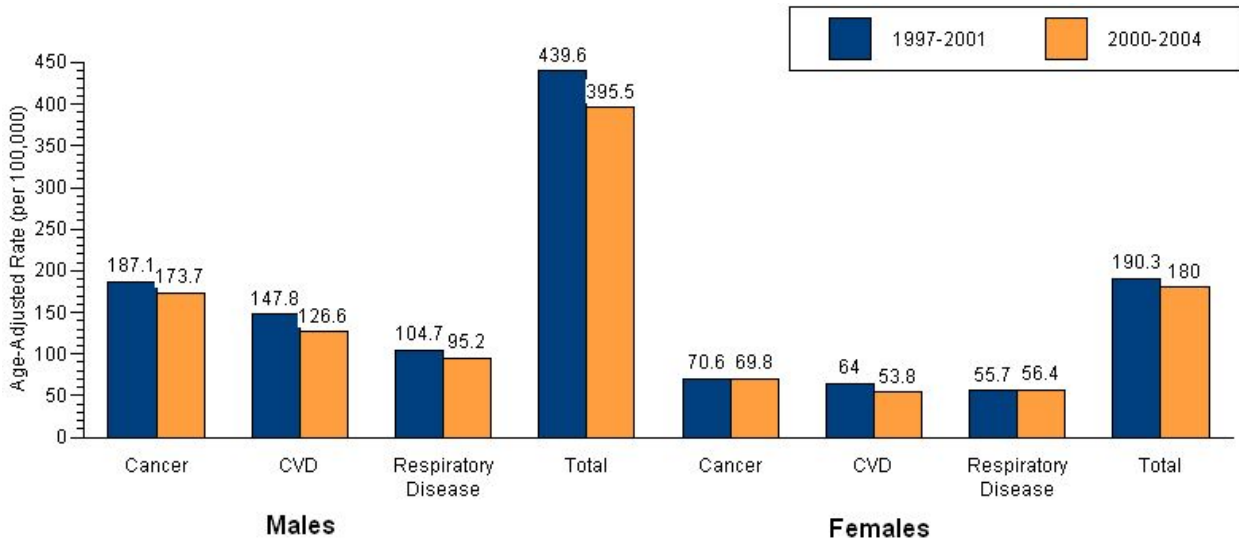
Figure 2. Average Annual SA Mortality Rate By Gender, Virginia, 2000-2004



Source: SAMMEC. Rates for deaths among adults age 35 and older; excludes deaths due to burns/fires or secondhand smoke.

Comparisons to a previous reporting period (1997-2001) indicate that the current number of SA deaths declined by 5% and the overall SA mortality rate declined by almost 8% from 288.7 per 100,000 to 267 per 100,000 (Figure 3). The biggest declines were among men—for women, there were no changes in terms of death rates from cancer and respiratory diseases. Overall, the death rate from cardiovascular disease declined from 98.7 to 83.5 per 100,000.

Figure 3. Average Annual SA Mortality Rate By Gender, Virginia: 1997-2001 vs. 2000-2004



Source: SAMMEC. Rates for deaths among adults age 35 and older; excludes deaths due to burns/fires or secondhand smoke.

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Deaths from Secondhand Smoke

Nationally, an estimated 38,000 people die each year from secondhand smoke. This figure includes infant deaths. According to the Campaign for Tobacco-Free Kids, as many as 1,720 people die each year from secondhand smoke in Virginia (includes infant deaths due to maternal smoking).³

Infant Deaths and Maternal Smoking

The rate of maternal smoking—that is, the rate of smoking among pregnant women—has been declining over the last few years. In 2003, the rate was 7.4 percent of all live births. The rate in 2006 was 6.5 percent.⁴

Maternal smoking may result in the following conditions affecting newborns and infants:

- Short gestation and/or low birth weight
- Sudden Infant Death Syndrome (SIDS)
- Respiratory Distress Syndrome (among newborns)
- Other respiratory conditions

Smoking is also a major cause of spontaneous abortion (miscarriage) and stillbirths.

Based on 2004 maternal smoking rate (7%), life expectancy at birth, and number of deaths, there were an estimated 16 deaths among infants in Virginia in 2004 that are attributed to mother's tobacco use.⁵

*If the smoking rate in Virginia declined by one percentage point, there would be...*³

- 58,800 fewer current adult smokers, and 4,300 fewer current high school smokers
- 18,200 fewer kids alive today who will become addicted adult smokers
- 5,800 kids saved from dying prematurely each year from smoking
- 15,600 fewer adults dying prematurely from smoking each year
- 371 fewer heart attacks and 199 fewer strokes over five years
- 5,390 fewer smoking-affected births over five years
- \$559 million saved in future healthcare costs from adult smoking declines, and \$319 million saved in future healthcare costs from youth smoking declines
- \$27 million savings from fewer heart attacks and strokes over five years
- \$9.2 million savings from fewer smoking-affected births over five years.⁶

For more information and estimates of smoking-related deaths, go to:
CDC *Smoking-Attributable Mortality, Morbidity and Economic Costs (SAMMEC)*
(<http://apps.nccd.cdc.gov/sammec/>)

CDC State Tobacco Activities Tracking and Evaluation (STATE)
(<http://apps.nccd.cdc.gov/StateSystem/index.aspx>)

¹ Does not include burn injuries and deaths from secondhand smoke.

² Smoking-attributable deaths and death rates were calculated using the CDC Smoking-Attributable Mortality, Morbidity and Economic Costs (SAMMEC) program (<http://apps.nccd.cdc.gov/sammec/>). The program uses current smoking prevalence rates, census data, and death certificate data to compute counts and age-adjusted rates. Since the

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relative risk of death from smoking is unknown for Blacks and other racial minority groups, estimated numbers of deaths and mortality rates were not computed for those groups. For more current estimates, the CDC recommends computing five-year averages of counts and rates.

³ Source: Campaign for Tobacco-Free Kids, *Benefits & Savings From Each One Percentage Point Decline in Virginia Smoking Rates Fact Sheet*, October 2008.

⁴ Source: Virginia Division of Health Statistics, birth certificate data.

⁵ Source: SAMMEC, CDC.

⁶ Source: SAMMEC, CDC. Annual number of deaths and cost savings increase substantially from the first year to the fifth year. Five-year counts represent cumulative totals.