

Slide 1 - Chronic Disease and Tobacco: Effects of Cigarette Smoking on Chronic Disease

Slide 2 - How Do We Conclude That Smoking Is a Cause of Disease?

The Surgeon General's Reports concludes that tobacco use is the single most avoidable cause of disease, disability, and death in the United States.

These reports have assembled the scientific data and then evaluated the data to assess whether or not smoking could be classified as the cause of a particular disease. Using this approach, almost every report since 1964 has expanded the list of diseases caused by tobacco use.

Since the first causal conclusions in 1964, there has been increasing evidence to support those earlier conclusions.

Slide 3 - How Do We Conclude That Smoking Is a Cause of Disease?

The criteria used by the Surgeon General:

In order for the Surgeon General to conclude that smoking is proven to cause a particular disease, there must be enough scientific evidence that smoking either increases the overall number of cases of the disease or makes the disease occur earlier than it otherwise would.

The reports use a number of criteria to guide their judgment:

Multiple high-quality studies must show a consistent association between smoking and disease

The measured effects must be large enough and statistically strong?

The evidence must show that smoking occurs before the disease occurs (a temporal association)

The relationship between smoking and disease coherent or plausible in terms of known scientific principles, biologic mechanisms, and observed patterns of disease

There a dose-response relationship between smoking and disease

The risk of disease is reduced after quitting smoking

Slide 4 - Effects of Smoking

Smoking harms nearly every organ of the body. Generally, smoking causes many diseases and reduces the overall health of smokers.

The adverse health effects from cigarette smoking account for an estimated 438,000 deaths, or nearly 1 of every 5 deaths, each year in the United States. More deaths are caused each year by tobacco use than by all deaths from human immunodeficiency virus (HIV), illegal drug use, alcohol use, motor vehicle injuries, suicides, and murders combined.

Slide 5 - Effects of Smoking

Diseases known to be caused by smoking, include:

bladder, esophageal, laryngeal, lung, oral, and throat cancers, chronic lung diseases, coronary heart and cardiovascular diseases, as well as reproductive effects and sudden infant death syndrome.

The list of diseases caused by smoking has been expanded to include abdominal aortic aneurysm, acute myeloid leukemia, cataract, cervical cancer, kidney cancer, pancreatic cancer, pneumonia, periodontitis, and stomach cancer.

Source: 2004 Surgeon General's Report—The Health Consequences of Smoking

Slide 6 - Effects of Smoking: Cancer

Cancer is the second leading cause of death and was among the first diseases causally linked to smoking.

Lung cancer is the leading cause of cancer death, and cigarette smoking causes most cases.

Compared to nonsmokers, men who smoke are about 23 times more likely to develop lung cancer and women who smoke are about 13 times more likely. Smoking causes about 90% of lung cancer deaths in men and almost 80% in women.

Cancer-causing agents (carcinogens) in tobacco smoke damage important genes that control the growth of cells, causing them to grow abnormally or to reproduce too rapidly.

Source: 2004 Surgeon General's Report—The Health Consequences of Smoking

Slide 7 - Effects of Smoking: Cancer

Cigarette smoking is a major cause of esophageal cancer in the United States. Reductions in smoking and smokeless tobacco use could prevent many of the approximately 12,300 new cases and 12,100 deaths from esophageal cancer that occur annually.

The combination of smoking and alcohol consumption causes most laryngeal cancer cases. In 2003, an estimated 57,400 new cases of bladder cancer were diagnosed and an estimated 12,500 died from the disease.

For smoking-attributable cancers, the risk generally increases with the number of cigarettes smoked and the number of years of smoking, and generally decreases after quitting completely.

Cigarette smoking increases the risk of developing mouth cancers. This risk also increases among people who smoke pipes and cigars.

Reductions in the number of people who smoke cigarettes, pipes, cigars, and other tobacco products or use smokeless tobacco could prevent most of the estimated 30,200 new cases and 7,800 deaths from oral cavity and pharynx cancers annually in the United States.

Source: 2004 Surgeon General's Report—The Health Consequences of Smoking

Slide 8 – Lung Cancer (Image of Lung Cancer)

Slide 9 - Effects of Smoking: Coronary Heart Disease and Stroke

Coronary heart disease and stroke, the primary types of cardiovascular disease caused by smoking, are the first and third leading causes of death in the United States.

More than 61 million Americans suffer from some form of cardiovascular disease, including high blood pressure, coronary heart disease, stroke, congestive heart failure, and other conditions. More than 2,600 Americans die every day because of cardiovascular diseases, about 1 death every 33 seconds.

Toxins in the blood from smoking cigarettes contribute to the development of atherosclerosis. Atherosclerosis is a progressive hardening of the arteries caused by the deposit of fatty plaques and the scarring and thickening of the artery wall. Inflammation of the artery wall and the development of blood clots can obstruct blood flow and cause heart attacks or strokes.

Source: 2004 Surgeon General's Report—The Health Consequences of Smoking

Slide 10 - Coronary Heart Disease (Image of Coronary Heart Disease)

Slide 11 - Effects of Smoking: Coronary Heart Disease and Stroke

Smoking-related coronary heart disease may contribute to congestive heart failure. An estimated 4.6 million Americans have congestive heart failure and 43,000 die from it every year.

Strokes are the third leading cause of death in the United States. Cigarette smoking is a major cause of strokes.

The U.S. incidence of stroke is estimated at 600,000 cases per year, and the one-year fatality rate is about 30%.

The risk of stroke decreases steadily after smoking cessation. Former smokers have the same stroke risk as nonsmokers after 5 to 15 years.

Source: 2004 Surgeon General's Report—The Health Consequences of Smoking

Slide 12 - Stroke (Image)

Slide 13 - Effects of Smoking: Respiratory Health

In 2001, chronic obstructive pulmonary disease (COPD) was the fourth leading cause of death in the United States, resulting in more than 118,000 deaths. More than 90% of these deaths were attributed to smoking.

About 10 million people in the United States have been diagnosed with COPD, which includes chronic bronchitis and emphysema. COPD is consistently among the top 10 most common chronic health conditions.

Smoking is related to chronic coughing and wheezing among adults.

Smoking damages airways and alveoli of the lung, eventually leading to COPD.

Smokers are more likely than nonsmokers to have upper and lower respiratory tract infections, perhaps because smoking suppresses immune function.

In general, smokers' lung function declines faster than that of nonsmokers.

Source: 2004 Surgeon General's Report—The Health Consequences of Smoking

Slide 14 - COPD (Chronic Obstructive Pulmonary Disorder) (Image of COPD)

Slide 15 - Effects of Smoking: Statewide Impact

The Burden of Chronic Disease

Chronic diseases—such as heart disease, stroke, cancer, and diabetes—are among the most prevalent, costly, and preventable of all health problems. Seven of ten Americans, who die each year, or more than 1.7 million people, die of a chronic disease.

Reducing the Burden of Chronic Disease

Chronic diseases are not prevented by vaccines, nor do they just disappear. To a large degree, the major chronic disease killers are an extension of what people do, or not do, as they go about the business of daily living. Health-damaging behaviors—in particular, tobacco use, lack of physical activity, and poor nutrition—are major contributors to heart disease and cancer, our nation's leading killers. However, tests are currently available that can detect breast cancer, colon cancer, heart disease, and other chronic diseases early, when they can be most effectively treated.

Slide 16 - Effects of Smoking: Statewide Impact

The Burden of Chronic Disease

Heart disease is the leading cause of death in Florida, accounting for 49,235 deaths or approximately 29% of the state's deaths in 2002. (National Vital Statistics Report 2004;53(5)).

Stroke is the third leading cause of death, accounting for 10,269 deaths or approximately 6% of the state's deaths in 2002. (National Vital Statistics Report 2004;53(5)).

According to Behavioral Risk Factor Surveillance System (BRFSS) survey results, adults in Florida reported the following risk factors for heart disease and stroke in 2006:

8.5% had diabetes

21.0% were current smokers

59.6% were overweight or obese (Body Mass Index greater than or equal to 25.0)

25.1% reported no exercise in the prior 30 days

Slide 17 - Effects of Smoking: Statewide Impact

Burden of Cancer

Cancer is the second leading cause of death and is responsible for one of four deaths in the United States. In 2004, over 560,000 Americans—or more than 1,500 people a day—will die of cancer. Of these annual cancer deaths, 40,090 are expected in Florida. About 1.4 million new cases of cancer will be diagnosed nationally in 2004 alone. This figure includes 97,290 new cases that are likely to be diagnosed in Florida.

Slide 18 - Statewide Impact (Image Showing Statewide Impact)

Slide 19 - Tobacco-Related Mortality

Tobacco use is the leading preventable cause of death in the United States. Cigarette smoking causes an estimated 438,000 deaths, or about 1 of every 5 deaths, each year. This estimate includes approximately 38,000 deaths from secondhand smoke exposure.

Cigarette smoking kills an estimated 259,500 men and 178,000 women in the United States each year.

Slide 20 - Tobacco-Related Mortality

More deaths are caused each year by tobacco use than by all deaths from human immunodeficiency virus (HIV), illegal drug use, alcohol use, motor vehicle injuries, suicides, and murders combined.

On average, adults who smoke cigarettes die 14 years earlier than nonsmokers.

Based on current cigarette smoking patterns, an estimated 25 million Americans who are alive today will die prematurely from smoking-related illnesses, including 5 million people younger than 18.6

Slide 21 - Mortality from Specific Diseases

Lung cancer, heart disease, and the chronic lung diseases of emphysema, bronchitis, and chronic airways obstruction are responsible for the largest number of smoking-related deaths.

The risk of dying from lung cancer is more than 22 times higher among men who smoke cigarettes and about 12 times higher among women who smoke cigarettes compared with never smokers.

Since 1950, lung cancer deaths among women have increased by more than 600%. Since 1987, lung cancer has been the leading cause of cancer-related deaths in women.

Cigarette smoking results in a two fold to threefold increased risk of dying from coronary heart disease.

Cigarette smoking is associated with a tenfold increased risk of dying from chronic obstructive lung disease.⁶ About 90% of all deaths from chronic obstructive lung diseases are attributable to cigarette smoking.

Slide 22 - Chronic Disease and Tobacco:

Health Effects of Cigarette Smoking and Chronic Disease

The pie chart represents the estimated annual number of smoking-attributable deaths in the United States during 1997 through 2001 by specific causes, as follows:

Lung cancer: 123,800 deaths

Other cancers: 34,700 deaths

Chronic lung disease: 90,600 deaths

Coronary heart disease: 86,800 deaths

Stroke: 17,400 deaths

Other diagnoses: 84,600 deaths

Source: CDC SAMMEC, MMWR 2005; Vol. 54, No. 25:625–8.