

# Chronic Obstructive Pulmonary Disease and Tobacco

## FACT SHEET



## Chronic Obstructive Pulmonary Disease

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Chronic obstructive pulmonary disease (COPD) is a disease in which the airways and air sacs inside the lungs are partially obstructed or destroyed. The result is that it gets hard to breathe. There are varying degrees of this illness and different names for them, but it all comes back to damaged airways and air sacs. This disease occurs when a person breathes in lung irritants of some kind: smoke, chemicals, pollution and dust. In the United States, tobacco use is a key factor in the development and progression of COPD, but asthma, exposure to air pollutants in the home and workplace, genetic factors, and respiratory infections also play a role.<sup>1</sup>

## National Facts and Trends

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- Among current smokers, chronic lung diseases (chronic bronchitis and emphysema) account for 73% of smoking-attributable conditions.<sup>2</sup>
- Among former smokers, chronic lung disease accounts for 50% of smoking-attributable conditions, followed by previous heart attack (24%).<sup>2</sup>
- Female smokers are nearly 13 times more likely to die from COPD as women who have never smoked. Male smokers are nearly 12 times more likely to die from COPD as men who have never smoked.<sup>3</sup>
- The death rate for women with COPD has more than doubled in the last 20 years.<sup>3</sup>
- Smoking causes 80% to 90% of COPD cases, and smokers are 10 times more likely than nonsmokers to die of the disease.<sup>4</sup>
- About 10 million people in the United States have been diagnosed with COPD, which includes chronic bronchitis, emphysema and asthma.

## Maine Facts and Trends

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- In Maine, 150.2 out of every 10,000 adults age 45 and older die of COPD annually.<sup>5</sup>

# The Story Behind the Facts: Why Is this Information Important

- Evidence is sufficient to infer a casual relationship between smoking and COPD morbidity and mortality.<sup>6</sup>
- COPD is associated with high medical utilization rates, including office visits and hospitalization.<sup>6</sup>
- Chronic obstructive pulmonary disease, also known as chronic obstructive lung disease or chronic lower respiratory disease, is a major public health problem. It is projected to rank fifth in 2020 as a worldwide burden of disease.<sup>7</sup>
- COPD is currently the fourth leading cause of morbidity and mortality in the United States.<sup>8</sup> COPD is also the only major disease that is rising in prevalence and mortality while all other major causes of death are declining.<sup>9</sup> Prevalence and mortality data greatly underestimate the total burden of COPD because the disease is usually not diagnosed until it is clinically apparent and moderately advanced.<sup>10</sup> Mortality data also underestimates COPD as a cause of death because the disease is more likely to be cited as an underlying cause of death, or may not be cited at all, rather than being the attributed cause of death.<sup>11</sup>
- The association of the disease with smoking has also attributed to its lack of importance, since, until recently, it was seen as a self-inflicted consequence of a bad habit, rather than the tragic outcome of an addiction. There is also confusion around the term COPD among patients and healthcare professionals, which complicates epidemiologic studies of COPD. Patients may be diagnosed with smoker's lung, emphysema, bronchitis, chronic bronchitis, chronic obstructive bronchitis or obstructive lung disease and not identify with the term COPD.

## References:

<sup>1</sup> U.S. Centers for Disease Control and Prevention (CDC), *Chronic Obstructive Pulmonary Disease: Facts About Chronic Obstructive Pulmonary Disease*. <http://www.cdc.gov/nceh/airpollution/copd/copdfaq.htm#cause>.

<sup>2</sup> Morbidity and Mortality Weekly Report (MMWR) 52, no. 35 (Sept. 9, 2003).

<sup>3</sup> American Cancer Society's Second Cancer Prevention Study.

<sup>4</sup> American Lung Association. *COPD Fact Sheet*, October 2003. <http://www.lungusa.org>.

<sup>5</sup> Maine Office of Data, Research and Vital Statistics 2001–2005, ICD-10: J40-J47, age-adjusted to 2000 U.S. standard population (45 and older).

<sup>6</sup> Surgeon General Report 2004.

<sup>7</sup> Murray, CJL, and AD Lopez. Evidence-based health policy lessons from the global burden of disease study. *Science* (1996); 274:740–3.

<sup>8</sup> National Heart, Lung, and Blood Institute. *Morbidity and mortality: chartbook on cardiovascular, lung, and blood diseases*. Bethesda, MD: US Department of Health and Human Services, Public Health Service, National Institutes of Health; 2004. <http://www.nhlbi.nih.gov/resources/docs/cht-book.htm>.

<sup>9</sup> Higgins, MW, and T Thom. Incidence, prevalence, and mortality: intra-and inter-country differences. In: Hensley M, Saunders N, eds. *Clinical epidemiology of chronic obstructive pulmonary disease* (New York: Marcel Dekker, 1989), 23–43.

<sup>10</sup> National Heart, Lung, and Blood Institute/World Health Organization. *Global Initiative for Chronic Obstructive Lung Disease: Global Strategy for the Diagnosis, Management, and Prevention of COPD, Executive Summary*, 1998.

<sup>11</sup> Mannino, DM, C Brown, and GA Giovino. Obstructive lung disease deaths in the United States from 1979 through 1993. An analysis using multiple-cause mortality data. *Am J Respir Crit Care Med* 1997, 156: 814–8.



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