Tobacco May Cause More Deaths than Currently Estimated

ATLANTA – February 11, 2015– A new study suggests that current estimates significantly underestimate the number of Americans who die from cigarette smoking. The Surgeon General estimates that each year, smoking kills about 480,000 Americans. The study, led by American Cancer Society researchers, suggests that cigarette smoking may kill tens of thousands more from diseases that are not currently counted as caused by smoking.

Published in the *New England Journal of Medicine*, the study included data from nearly a million U.S. men and women 55 or older enrolled in five U.S. cohort studies (the American Cancer Society's Cancer Prevention Study-II, the Nurses' Health Study, the Health Professionals Follow-up Study, the Women's Health Initiative, and the National Institutes of Health-AARP Diet and Health Study). During the approximately 10 years the cohorts were followed, there were over 180,000 deaths. Researchers found current smokers, as expected, had death rates nearly three times higher than never smokers. The majority of excess deaths in smokers were due to diseases that are established as being caused by smoking, including 12 types of cancer, coronary heart disease and stroke, and chronic obstructive pulmonary disease (COPD). But investigators found that about 17% of the excess deaths in smokers were due to diseases that have not yet been officially established by the U.S. Surgeon General as caused by smoking, and so are not counted in estimates of the death toll from smoking.

In particular, smoking was associated with at least a doubling of risk of death from several causes including renal failure, intestinal ischemia, hypertensive heart disease, infections, and various respiratory diseases other than COPD. Excess risk of death from each of these diseases declined after quitting smoking. The study authors note that there is strong evidence that smoking is a cause of death from these five diseases, even though they are not currently included in estimates of deaths caused by smoking. Smoking was also linked with smaller increases in risk of death from other causes not formally established as caused by smoking, including breast cancer, prostate cancer, and cancers of unknown site.

The authors conclude that a substantial portion of excess mortality among smokers may be due to diseases not formally established as caused by smoking, and that, if supported by future research, some of these diseases should be included in future estimates of the death toll from smoking.

"The number of additional deaths potentially linked to cigarette smoking is substantial," said Eric J. Jacobs, PhD, co-author of the study. "In our study, many excess deaths among smokers were from disease categories that are not currently established as caused by smoking, and we believe there is strong evidence that many of these deaths may have been caused by smoking. If the same is true nationwide, then cigarette smoking may be killing about 60,000 more Americans each year than previously estimated, a number greater than the total number who die each year of influenza or liver disease."

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