
Foreword

This volume presents a detailed and comprehensive picture of the disease consequences that result directly from smoking cigarettes. Concern about the disease risks associated with the use of tobacco dates back two centuries. According to one medical historian, Dr. John Hill (1716?-1775) should be credited with the first report documenting an association between tobacco use and cancer for his work *Cautions Against the Immoderate Use of Snuff*. Others credit J.J. Holland for noting a relationship between cancer of the lip and tobacco use. Soemmering, in 1795, made a similar observation.

By the early part of this century, tobacco use was strongly suspected as a cause of cancer of the mouth because most cases were found among people who either smoked or chewed. However, at the beginning of the 20th century, the disease burden produced by tobacco use was largely unknown, and the staggering epidemic of disease that would be produced by cigarettes was yet to occur. The first successful national marketing of a modern blended cigarette, Camels, occurred in 1913. These new blended cigarettes quickly became the tobacco product of choice among consumers, and the deeper inhalation of tobacco smoke into the lungs that characterized the use of these products transformed the pattern of disease in the United States. Over a relatively short interval, the addictive nature of cigarettes and their widespread acceptance by society resulted in cigarette smoking becoming the largest preventable cause of death and disability in the United States and most of the developed world.

By 1930 a majority of males were already regular cigarette smokers, most having switched to cigarettes around the time of World War I; moreover, the popularity of smoking among females was increasing steadily as social taboos about females smoking gave way in a more “enlightened” era. Lung cancer deaths also began to increase, first among males and then, some 20 to 30 years later, among females. Before 1930 lung cancer was a rare disease not listed on the International Classification of Disease system in the United States. However, by the end of the 1930’s a rapidly increasing lung cancer death rate among males had been noted by several scientists, including Dr. Harold Diehl and cancer surgeon Dr. Alton Ochsner of Tulane University. Dr. Ochsner recalled being aroused from his bed as a third-year medical student to witness a rare medical event that, according to his professors, he would probably not see again in his lifetime—an autopsy of a man who died of lung cancer. As a young cancer surgeon, he saw six lung cancer patients in a single year and concluded that an epidemic of lung cancer must be under way. All these patients were male, and all had a history of heavy cigarette smoking. This observation was among the first to link lung cancer and the new U.S. epidemic of lung cancer.

In 1950 four separate retrospective epidemiological studies demonstrated a clear link between cigarette smoking and lung cancer, and in 1951 two

major prospective mortality studies were initiated in an effort to resolve the remaining scientific questions. Sir Richard Doll and Sir Austin Bradford Hill, under the auspices of the Medical Research Council, enrolled 40,000 British physicians in a prospective study. This cohort now has been successfully followed for 40 years. In the United States, Drs. E. Cuyler Hammond and Daniel Horn, under the aegis of the American Cancer Society (ACS), enrolled 187,783 white males residing in 9 States at the beginning of 1952. In time, a total of 11 prospective mortality studies would form the cornerstone of our knowledge about the disease risks that accompany cigarette smoking. The most recent data from five of these studies are presented in this volume; they once again establish the overwhelming nature of proof that smoking is the largest preventable cause of cancer and other chronic diseases.

Thousands of scientists have contributed to the body of evidence that proves smoking causes disease, including the authors and scientific editors of this volume, but I would like to single out one for his singular dedication and seminal contributions to this field of research.

Assisting Hammond and Horn in their first prospective study was a young scientist named Lawrence Garfinkel. Larry began working for the American Cancer Society in 1947, where he was directly responsible for coordinating much of the field work, including training the thousands of ACS volunteers in data collection techniques. When ACS decided to undertake an even larger study in 1959 by enrolling 1 million people in its Cancer Prevention Study I (CPS-I), Larry's role changed from that of research support to co-principal investigator. He became increasingly involved in both data analysis and publication of results, and in 1961 he coauthored, with Cuyler Hammond, the article "Smoking Habits of Men and Women," which appeared in the August issue of the *Journal of the National Cancer Institute*. This article reported some of the first results from CPS-I.

During the 1960's Larry Garfinkel contributed to more than two dozen major papers on the relationship between smoking and health. (See pages xxvii - xxxiii for a complete chronological list of Mr. Garfinkel's publications.) Along with colleagues Cuyler Hammond and Oscar Auerbach, Larry coauthored the reported results of some of the first studies that combined epidemiology with pathology. These study results appeared in a series of articles in the *New England Journal of Medicine* and provided some of the earliest evidence of smoking's histological damage to the lung. During the 1970's and 1980's Larry wrote more than 70 papers advancing our knowledge of the effects of cigarette smoking on life expectancy, coronary heart disease, and stroke; benefits of quitting smoking; and risks of smoking cigarettes with different tar and nicotine yields.

When Cuyler Hammond retired from ACS in 1979, Larry became director of the ACS research program, and under his guidance, ACS initiated CPS-II, which included participants from all 50 States, the District of Columbia, and Puerto Rico. CPS-II remains the largest epidemiological study of its kind ever attempted in the history of medical science. In 1988 Larry Garfinkel and coauthor Steve Stellman published results on females from CPS-II that

shocked many in public health. Their analyses demonstrated that the lung cancer mortality rate among smoking females in CPS-II had increased nearly fivefold compared with females who smoked in CPS-I. The data for nonsmoking females showed no increase in lung cancer between the two studies—thus providing convincing evidence that lung cancer was almost exclusively a disease found among smokers. Larry Garfinkel is not only a contributor to this monograph; he is also one of its scientific editors.

In closing, I would like to take this opportunity to personally recognize Larry Garfinkel for his lifelong contribution to this important field of scientific inquiry. Few individuals have contributed as much to our knowledge about the disease consequences of smoking as Larry Garfinkel. He has played critical roles in this process of discovery, from organizing the earliest prospective studies to the work that forms the basis of the current volume and all the steps in between. I know I speak not only for the National Cancer Institute but also for the entire scientific community in recognizing Larry's leadership in combating this Nation's most important health problem.

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