

*(c) Multiple Causes*

The Committee clearly recognizes that cigarette smoking is not the only cause of any disease, and to suggest this would indicate a lack of understanding that chronic degenerative diseases have multiple causative factors. Cancer, chronic respiratory disease and coronary heart disease occur in non-smokers although at lower rates than in cigarette smokers. This fact does not contradict the conclusion that cigarette smoking is an important contributory factor in these diseases.

Environmental as well as constitutional factors would appear to have a role in the production of lung cancer and chronic bronchitis and emphysema. However, cigarette smoking seems to be the dominant factor in these diseases. Unfortunately, it is at this time impossible to identify those who will not develop these respiratory diseases if they smoke and it is necessary to assume that everyone is at risk when he or she smokes and that the risk is greater for heavy smokers.

Similarly, the fact that every smoker does not acquire lung cancer or chronic bronchitis and emphysema does not argue against smoking as a cause. Only a few persons exposed to polio virus, for example, develop manifest disease, even though many will show evidence on blood testing that they have been exposed.

Similarly, the Committee was informed that several factors are now regarded as contributors to heart attacks,—high blood pressure, high blood cholesterol, obesity, physical inactivity, and cigarette smoking, as examples. Heart attacks occur predominately in males especially before the age of fifty. The ratio of the heart attack death rate for cigarette smokers to that of non-smokers is higher in the younger age groups. However, the differences in death rates between smokers and non-smokers increase with increasing age.

“Cigarette smoking has been shown to be an important risk factor in the development of coronary heart disease. It is important both by itself and in the presence of other significant risk factors. In combination with certain other risk factors, the joint effects appear to be even greater than those accounted for by those risk factors independently.”<sup>31</sup>

*Age-Adjusted Morbidity Ratios For Coronary  
Heart Disease Among Smokers and Non-Smokers  
According to Level of Serum Cholesterol*<sup>32</sup>

Serum Cholesterol Level	Non-Smokers of Cigarettes	Cigarette Smokers
Low	1.0	1.8
High	2.0	4.5

<sup>31</sup> The Health Consequences of Smoking, 1969 Supplement to the 1967 United States Public Health Service Review.

<sup>32</sup> From Framingham and Albany Study as reported in The Health Consequences of Smoking, A United States Public Health Service Review, 1967.