

It would be useful to know if the occurrence of lung cancer and asbestosis was related to whether or not men were still employed in asbestos textile plants as of January 1, 1948. This is shown in Table 5 for 1,042 men at ages under 65 who were still alive on January 1, 1948. As shown in Table 3, 106 of these were still employed in asbestos textile plants while 995 had left that employment. For those still employed on January 1, 1948, 17 or 16% died during the next 15 1/2 years, while for the 995 not still employed, but apparently alive on January 1, 1948, 122 or 12% died within the next 15 1/2 years. Part of the difference in mortality relates to age differences as shown in Table 3. However, this does not account for all the mortality difference.

For those still employed a large number of asbestosis deaths occurred and it is, in fact, striking that in the period 1958-63 over half of the deaths (6 out of 11) were due to either lung cancer or asbestosis, with 2 out of 11 or 18% due to lung cancer. Recalling that lung cancer accounts for only about one out of every twenty deaths in the general population of males, and that asbestosis deaths are extremely rare, the importance of long-term exposure to high doses of asbestos is clearly demonstrated.

Among the group of men who left the asbestos products industry prior to January 1, 1948 and who may have had only brief exposure to high levels of asbestos dust, there is definitely an excess of lung cancer deaths some twenty years after these men were first observed, with seven out of 48 deaths or 15% due to lung cancer during the period 1958-63. On the other hand, there was only one death due to asbestosis in this cohort during this period.

From Table 5 it can be concluded that large doses of asbestos dust over fairly short periods of time are important in producing lung cancer but do not produce much asbestosis. Large doses over extended periods of time produce a great deal of asbestosis but with no appreciable increment in lung cancer. Men who left employment in an asbestos textile plant experienced an excess in lung cancer (15% of total deaths) some twenty years after the first exposure not much different from those who stayed (18% of total deaths). By contrast, men who left employment had relatively little asbestosis (3 out of a total of 122 deaths) as compared with those who stayed (7 out of a total of 17 deaths).