

Goodman, 1981). An effect of smoking on the prevalence of X-ray abnormalities was also found in this study with both parenchymal and pleural abnormalities found more among ex-smokers than nonsmokers and more frequently among current smokers than ex-smokers. The age standardized data for the overall X-ray readings are shown in Table 14a.

Table 14b lists the percentage distribution of smoking histories according to job category. As the unexposed group contains 25% more current smokers than the other exposure groups, the X-ray results, where possible, should be standardized for cigarette smoking as well as for age. This can be done for major work categories, but is unreliable for most subcategories because of the absence of data in some smoking-age cells. The standardization procedure follows that of age standardization and utilizes the overall smoking histories of the study group (31.6% were smokers; 42.4%, ex-smokers; and 26.0% nonsmokers).

Standardized X-ray abnormalities by work activity

Table 15 lists the age and smoking standardized percentages of X-ray abnormalities among those with no identified asbestos exposure, those engaged in brake maintenance and repair, and those with probable asbestos exposure, including auto body repair work. The overall percentage of abnormal X-rays among individuals with probable asbestos exposure differs significantly from those unexposed ($P < 0.005$, two sided). The difference is particularly significant ($P < 0.0002$) for pleural abnormalities. This occurs because pleural abnormalities often appear from relatively low asbestos exposures and can exceed parenchymal abnormalities in prevalence at long times from onset of exposure. (See Anderson, et al. 1976, e.g.) As many of the individuals in this "probably exposed" category worked during World War II in shipyards, we are observing effects in this group after 35 years from onset of exposure.

Table 16 lists the age and smoking standardized percentages of abnormalities according to garage activity and union. There is relatively little difference between the percentages of abnormal X-ray for the auto workers of UAW Local 259 while a large and significant ($p < 0.05$)