"The effects of exposures occurring in the 1970's probably will not be known until the end of the century; but the high mortality rates of today suggest what may be expected in the future."

such irritants. But asbestos fibers are indestructible in lung tissue. The phagocytes form a heavy coating around the fibers. In time, a dumb-bell shaped structure known as a ferruginous body begins to form.

Asbestosis develops when the scar tissue that forms around asbestos fibers slowly spreads throughout the lung and pulls it out of shape. The working space for air exchange is reduced, and blood flowing through the lungs is not replenished with a sufficient amount of oxygen. Breathlessness becomes pronounced, and in advanced stages can be disabling. Other symptoms are loss of weight, coughing, weakness, and pain in the chest or between the shoulders. The strain on the heart caused by the lack of oxygen may cause heart failure.

Recent studies indicate that asbestos also may be a potent carcinogenic, or cancer-producing agent. A major stumbling block to researchers in establishing the connection between asbestos and cancer has been the length of time between exposure to the substance and the appearance of cancer symptoms. But in the last few years, studies have shown that workers exposed to asbestos die of lung cancer at more than five times the expected rate. Although most cancers linked to asbestos develop in the lower portions of the lungs, where the concentration of fibers is heaviest, cancer may also develop in the gastrointestinal tract.

The peril of lung cancer from asbestos exposure is increased by smoking. Tests conducted by Selikoff and Hammond have shown that asbestos insulation workers who smoke have 90 times the incidence of lung cancer compared to smokers with no asbestos exposure.

Mesothelioma, formerly a rare cancer afflicting only one out of 10,000 people, is now appearing at an unprecedented rate. Researchers are linking it to asbestos exposure, however slight. This fatal cancer attacks the pleura (the membrane lining the lung and chest cavity) or the peritoneum (the lining of the abdominal cavity). In his study, Selikoff noted that 10 out of 124 deaths of insulation workers were caused by mesothelioma.

Workers in many occupations encounter serious asbestos exposures. Among the establishments most likely to have asbestos risks are those manufacturing asbestos textiles, value packings, asbestos



***Wrong:** Spraying asbestos mixtures on steel girders releases vast amounts of asbestos dust into the atmosphere. Asbestos insulators who smoke have 90 times more lung cancer than smokers with no asbestos exposure.*

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