

2. EFFECTS

2.1 Effects on Humans

Asbestosis (a diffuse pulmonary fibrosis), pleural calcification, pleural plaques, lung cancer, and pleural and peritoneal mesotheliomas can result from exposure to asbestos. Asbestos bodies are commonly found in the lungs of persons exhibiting these complications. Diagnosis of any of these or finding "asbestos bodies" in the lungs signifies the need to review the case history for previous asbestos exposure. Surveys of people living or working near asbestos mines and factories have revealed that many nonoccupational cases of asbestosis and mesothelioma have occurred either from the polluted air or from asbestos carried home on the workers' clothing.^{175,176,178} However, in many cases no exposure to asbestos can be established.

The fate of the asbestos fiber once it is inhaled* and deposited in the lung is still questionable. The short fibers, $<0.5 \mu$ in length, have been pathologically ignored, probably because they are much too narrow to be visible under a light microscope. The longer fibers which are encrusted in an iron-bearing protein (asbestos bodies) become easily visible. Wagner and Skidmore²²⁸ and Morris *et al.*¹⁷² have shown that rats which have inhaled asbestos lose the asbestos (probably the short fibers) from their lungs. The biological half-life

*A discussion on respirable fibers is presented in Appendix B (page 92).

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