

Evidence Discussion (CH 9.1)

Asbestos Exposure Evidence Summary

Several well-conducted epidemiologic studies of occupationally exposed workers, family contacts of workers, and persons living near asbestos mines have demonstrated that exposure to asbestos is associated with an increased incidence of asbestosis, lung cancer, mesothelioma, as well as other neoplasms. Asbestosis is a fibrotic lung disease caused by accumulation of asbestos fibers in the lungs. The diagnosis of asbestosis is most commonly made based on a history of exposure to asbestos, the presence of characteristic radiologic abnormalities, end-inspiratory rales, and other clinical features.

A chest xray of an individual exposed to asbestos may show pleural plaques, pleural calcifications, pleural fibrosis, or small irregular parenchymal opacities. Lung cancer risk is not elevated among individuals with asbestos-related pleural plaques in the absence of asbestosis.

Chest xray is currently indicated to screen for lung changes resulting from asbestos exposure and is recommended for those who have had relatively heavy exposure to asbestos. However, chest xrays lack specificity. When a chest xray abnormality is indeterminate, High Resolution CT Chest (HRCT) is useful in revealing characteristic parenchymal abnormalities. There is a lack of consensus among experts regarding the value of HRCT for screening of asbestos-related pulmonary disease.

OSHA, Occupational Safety and Health Standards, Medical surveillance guidelines for asbestos, 1910.1001 App H. https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=9995

Banks DE, Shi R, McLarty J, et al. American College of Chest Physicians consensus statement on the respiratory health effects of asbestos. Results of a Delphi study. *Chest*. 2009;135(6):1619-1627. doi:10.1378/chest.08-1345

Agency for Toxic Substances and Disease Registry. Asbestos. Updated 2011. <https://www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=4>.