

Asbestos



Clinical Screening Guidelines for Asbestos-Related Lung Disease

Introduction

A physician with expertise in the evaluation and management of asbestos-related lung diseases should screen patients who are now or have been in the past:

- Workers involved in:
 - Mining of asbestos or minerals contaminated with asbestos
 - Manufacturing or using asbestos-containing products
 - Custodial, maintenance and repair work in asbestos-containing buildings, or
 - Direct contact with asbestos-containing waste or dust emissions
- People:
 - Living in the vicinity of asbestos mines and asbestos-related industries such as a vermiculite processing plant
 - In direct contact with asbestos-containing waste or dust emissions

Medical history

The medical history interview should include:

- Reason for visit
- Past medical history
 - Include general respiratory, tuberculosis, lung infection and cardiac history, rib fracture, thoracic surgery
- Current respiratory health history
 - Progressive dyspnea on exertion, dry cough, fatigue, weight loss, tachypnea at rest
- Smoking history
 - Include history of past attempts and/or willingness to quit, need for intervention

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**Medical history
(continued)**

- General asbestos exposure history
 - Any direct contact with asbestos
 - Source, intensity, and duration of exposure
 - Age at first exposure and years since first exposure
 - Occupational exposure history
 - Asbestos and other chemical exposures on the job or from hobbies
 - High-risk occupations such as construction, demolition, remodeling, mining, and shipbuilding
 - Source, intensity, and duration of exposure
 - Age at first exposure and years since first exposure
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**Comprehensive
physical
examination**

The physical exam should include:

- Auscultation of heart and lungs
 - End-inspiratory basilar rales
 - Abdominal examination
 - Extremity examination (including clubbing, pulses, peripheral edema, and cyanosis)
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**PA chest
radiograph**

Note that radiological evidence is typically not present until at least 5 years after first exposure. In addition to a clinical evaluation, the use of a B-Reader is recommended for radiographic rating of lung changes. The radiograph reader should look for:

- Pleural changes
 - Thickening and possible calcification of the parietal and visceral lung pleura
 - Benign pleural effusion
 - Interstitial changes
 - Small, irregular opacities in lower lung fields, “ground glass” appearance
 - Diffuse, bilateral interstitial fibrosis
 - Lung carcinoma/pulmonary nodules
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**Simple pulmonary
function test (PFT
or spirometry)**

- Include FVC, FEV1, and FEV1/FVC ratio.
- Asbestosis and some diffuse pleural disease may be characterized by restrictive changes. Among smokers, a mixed pattern may be noticed.
- Consider pre- and post-bronchodilator, especially if obstructive component is evident.

Criteria for further evaluation

- If x-ray is normal or inconclusive and exposure history is positive, repeat x-ray in subsequent years as needed. Lateral and/or oblique view recommended for inconclusive pleural changes.
- Consider referring patients with possible restrictive lung disease, significant radiographic or pulmonary function abnormalities, or those with uncertain significance, to a pulmonary specialist for complete pulmonary function tests and further evaluation.
- CT scan: NOT a screening tool; recommended only if exam/PFT results suggest disease but x-ray does not correlate or if findings of uncertain significance are found on chest x-ray.
- CT may assist in differentiating pleural plaques from soft-tissue densities, cancer versus rounded atelectasis.

Some of the information is from the Minnesota Department of Health's *Clinical Screening Guidelines for Asbestos-Related Lung Disease*
