

Lungs from urban areas contain typical asbestos bodies in small numbers. Depending on whose figures you read, asbestos bodies may be found in from 50 percent to 100 percent of the lungs which are examined. One complicating factor here is that other mineral fibers can become coated in the same manner and maybe this is why the term ferruginous bodies is preferred by some.

(Next Slide) I thought you might be interested in some of the theories of the pathogenesis of asbestosis, i.e. how it occurs or why it occurs. Originally there was the theory of physical irritation and this means simply what it says. That is, the presence of asbestos fibers in the terminal air spaces causes irritation and damage to the walls of the alveoli of the lungs leading to fibrosis. However, this theory is not generally accepted today. Then there is the solubility theory which says that fibrosis is due to the effects of the silic acid and metal ions leaching out from the asbestos fibers. Again this is not a widely accepted theory on the pathogenesis of asbestosis.

Then there is the autoimmune theory. There are two concepts here. First, the presence of asbestos in lungs and its reaction with phagocytes or fibroblasts produces or localizes abnormal globulin leading to fibrosis. Phagocytes and fibroblasts are kinds of cells which may be found in the lungs. Phagocytes are of particular interest because they are the cells that engulf or scavenge foreign materials that enter the lungs.

The second concept under the autoimmune theory is that there is lysis of trapped phagocytes. They would be phagocytes which have picked up asbestos fibers and they release a substance that is not accepted by the