Reaction in Mice. Out of 20 white mice used in this experiment, 11 lived a year or more in dust and died or were sacrificed without showing an appreciable degree of pulmonary infection. The reaction to the inhaled dust was limited to phagocytosis by mononuclear cells. Usually these were widely scattered through the air spaces; a limited number were grouped about the terminal bronchioles producing some thickening of their walls. There was no suggestion of fibrosis.

Numerous asbestosis bodies were observed in animals killed late in the experiment. Thus, these animals exhibited asbestosis bodies without fibrosis.

Summary and Interpretation of Inhalation Experiment with Long-Fiber Asbestos Dust. The purpose of this experiment was to evaluate the importance of long fibers in the tissue response to inhaled asbestos. The results, in comparison with previous investigations, indicate strongly that long fibers are chiefly responsible for asbestosis. Thus, the reaction in guinea pigs developed earlier and became more extensive in this experiment than in previous experiments in spite of a smaller concentration of atmospheric dust and a lower mineral content of the lungs. Furthermore, a typical peribronchiolar fibrosis was produced in cats although in a previous experiment with short-fiber dust peribronchiolar fibrosis did not develop in this species.

The cause of the cellular fibrosis in the lymph nodes of the guinea pigs is not clear. It did not occur in other inhalation experiments with asbestos.