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## ACTION ON ASBESTOS

ASBESTOS workers are unintentional victims of industrial progress. They are at risk of pulmonary fibrosis, pleural calcification, mesotheliomas and lung cancer. Asbestos exposure is now widespread, involving not only air but also drinking water, wine and beer.<sup>1</sup> Fibers have been found in the lungs of people without industrial asbestos exposure. Whatever the exact nature of asbestos or ferruginous bodies may be, there is no doubt that electron microscopy of the lungs of urban dwellers has shown the presence of chrysotile asbestos.<sup>2</sup> Although there is no evidence of asbestos-linked disease in the general population at this time, the presence of asbestos in their lungs is disturbing. Asbestos is relatively resistant to destruction by most chemical and physical means and can float freely in the atmosphere for prolonged periods. Asbestos diseases have a long latent period, 20 years or more. We therefore believe that more sweeping decisions on the control of asbestos must be made now, on the basis of "reasonable probability" rather than after a delay for a precise definition of dose-response relations.

These thoughts are reinforced by the work of Murphy and associates in this issue of the *Journal* (p 1271). Their studies of pipe coverers involved in new ship construction include better than usual exposure data and indicate a high incidence of asbestosis (38 per cent after 20 years) at what have been previously regarded as "safe" dust concentrations. A second study of Murphy et al.<sup>3</sup> reports two cases of pleural disease (one mesothelioma) in workers who sanded asbestos floor tiles. Since the degree of asbestos exposure was unknown, the authors simulated the working conditions and found concentrations of 1.3 fibers per milliliter of room air. This concentration is less than 1/5 of currently used threshold limit values. A fiber per milliliter of room air means that a worker breathing 15 liters per minute for eight hours inhales some 10<sup>7</sup> fibers every work day. Although only a fraction of the inhaled fibers remains in the lung, these figures suggest that an alarming number will still accumulate over a 10-year period.

A recent Committee report prepared by a National Academy of Sciences panel<sup>4</sup> has called for control of asbestos emissions at the source and for protection of those who are exposed in their occupations. The report also calls for further research on the biologic effects and the physical characteristics of asbestos fibers; such data are urgently needed "if a range of safe exposure is to be established with confidence." Although we endorse these recommendations, we want to underline the urgent need for technical controls based on existing knowledge. Epidemiologic monitoring, physical studies of asbestos and other fibers and analysis of their effects on cells and tissues are important and must be con-