

Asbestos as an Environmental Hazard

IRVING R. TABERSHAW, M.D.

*Dr. Tabershaw is Professor of Occupational Medicine,
School of Public Health, University of California, Berkeley
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IN FEBRUARY OF THIS YEAR Cooper, in a paper entitled, "Asbestos as a Hazard to Health,"¹ commented as follows: "We often try to emphasize that part of the challenge of our field is that it is at the forefront of medicine and technology where environmental hazards can first be detected in view of the relative levels of exposure and the opportunities to study populations at risk. But when the relationships are actually suspected and gradually established, very real and practical consequences become apparent. So the speculations, call them fancies if you will, that are part of the normal processes of developing new knowledge in other fields become menacing and are misused and misunderstood."

You have heard today that in industries using asbestos as a basic material, that is mining, milling, fabrication and installation, that a relationship has been established between asbestos exposure and fibrosis of the lung, lung cancer, and possibly with an increase in the incidence of mesothelioma and gastrointestinal malignancies. The incidence and severity of the pulmonary fibrosis (asbestosis) are apparently dependent on dose. This dose-response relationship in asbestos workers will probably be proven in time to be true also for the neoplasia of the lung, pleura and gastrointestinal tract. Concern, however, has been expressed that asbestos in ambient air may constitute a real threat to the entire public and not just to those occupationally exposed.

This grave implication is summarized in an article by Thomson,² who raises the question of "whether a small amount of asbestos in the lung bases or in the adjacent pleura or peritoneum is an effective carcinogen or co-carcinogen in humans, if it is present there for 30 years or more." This concern is reiterated by Selikoff and his co-workers³ in a lengthy editorial with the statement: "The neoplasms now encountered associated both with industry and environment are consequent upon inhalation of asbestos associated with the limited asbestos production of some 30 years ago. The neoplasms associated with current utilization and exposure to asbestos will not be evidenced until 1990."

If this is true, it changes the order of magnitude of the hazard and places asbestos in the forefront of public health problems. It is to this allegation that I wish to address myself. A good deal of the information on which this potential threat is postulated is in the realm of "speculation" and it is not always possible to separate the "fact" from the "fancy."