High Dust Levels Found in Homes

While these home concentrations are high, the dust levels are still much less than those in occupational circumstances. However, since the exposure of people at home can be for longer periods of time, elevated levels may be important.

Children at Risk

Children may be especially at risk from low level asbestos contamination. The fibers that enter their lungs at an early age can remain in their tissues to do damage throughout their lifetime. Moreover, the possibility cannot be ruled out that tissues of children, especially infants, may be more sensitive than those of adults.

Two reports in the medical literature have also indicated the existence of a health hazard to the family members of asbestos workers. In a 1965 study of all cases of mesothelioma found in the pathology files of the London Hospital, Dr. Muriel Newhouse found that 12% (nine of 76) of the cases were in members of families of individuals who worked with asbestos.

The usual history of these family mesothelioma cases was that of a wife who washed her husband's work clothes. Similar results were found in the United States by Drs. J. Lieben and H. Pistawka who described three family cases of mesothelioma in Pennsylvania, one of which was in a three year old child of an engineer who worked in an insulation plant.



Chrysotile asbestos fibers found in the home air of an asbestos worker. The fibers are magnified 7000 times here.



Diatomaceous earth found in the settled dust of the home of an insulator. The photograph is magnified 7000 times.

In each of the above studies cases were also found in individuals who simply lived in the neighborhood of asbestos manufacturing facilities.

Because mesothelioma is such a rare disease in the general population the documentation of these cases has taken on special significance. In the absence of any direct or indirect asbestos exposure, mesothelioma may be the cause of death in one in 10,000 deaths. In insulation workers and asbestos factory workers nearly one death in 15 is from mesothelioma.

These data, the rarity of mesothelioma in the general population and the strong association with asbestos exposure, have allowed scientists to attribute these family and neighborhood cases to a low, but unknown, level of asbestos exposure.

While the information is absent on the air concentrations at which asbestos disease may occur, it is clear that mineral fiber do no good in human lungs. Every precaution should be taken to prevent their inhalation.



Chrysotile asbestos fibers (C) and a fragment of diatomaceous earth (DE) found in the tissue of an insulation worker's daughter who had a lung tumor removed.

At the present time the asbestos insulation worker receives little help in his attempts to prevent asbestos contamination from being carried home. The results of the survey of insulation workers on the health practices in the industry show that approximately 40% of the men work on job sites with no facilities for clothes change available. Between June 7, 1972 and December 6, 1972 only 25% of more than 5,000 Union members routinely had such facilities. (See Table.)

Procedures Available

Procedures for preventing the undesired movement of materials from the job site to the home are well-known and have been in use for many decades in some industries. In gold and uranium refineries, for example, very effective decontamination procedures are used to prevent dust from being carried home on workers' clothes.

In some shipyards and asbestos production plants in Great Britain a double locker system is used. All street clothing (including shoes) is deposited in one locker in a clean room and all work clothes kept in a locker in a separate room. Access to the clean room and a workman's street clothes is only through a shower facility. Periodically all contaminated work clothing is removed from the dirty room and laundered in special facilities.

These provisions are indeed effective but are not suitable on most construction sites or other transient operations. While less ideal measures must be used, the most important item in preventing spread of contamination is to confine the dust to the job site. *If it*

(Continued on fourth page)