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Q. Dr. Selikoff said once that the incidence or the occurrence of the cancer in the non-smokers is extremely low -- is that correct --almost non-existent. Lung cancers, other cancers not turning out to be dormant - apparently with smokers and non-smokers.

Q. I would like to ask this of Dr. Selikoff, as Dr. Harries also did, as to whether there are any indications of hypersusceptibility or susceptibility to mesothelioma. Are the people at special risk? This was in your last slide.

A. I think that Dr. Harries is on to something. I think he's got a sense of something. We had one asbestos worker in Local 32 in Newark, a man who developed a left pleural mesothelioma and died. He came into the trade in 1928. His brother, three years younger came into the trade in 1931. This is a father-son-brother-brother union. You can't get into this union. (laughter). He came into the trade three years in 1931 rather than 1928. He died three years later of a left pleural mesothelioma. He worked in the same conditions and Dr. Chury tells me that he cannot tell the logical sections apart, they look identical. So that there is now some suspicion on the basis of these clinical impressions that there may be some susceptibility factor. Nature is trying to tell us something. We are too dense so far to find out.

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- Q. I was going to ask you a question on the spraying of asbestos. Most of the formulations that contain asbestos are 9 to 15% asbestos that are sprayed by and large many cities and states have banned the spraying of asbestos. On the other hand, they substitute synthetic fibers that essentially have the same formulation and that gives us some concern.
- A. Let me enlarge on the father-daughter, father-son syndrome in unions. Perhaps the unions will now wish to either have their daughters take on them jobs or else give it to somebody else's kids. The first breakthrough I've seen here where the union fathers may not bring their kids into the union. Doctors do this also. Stay with me and ^{an equal rights} don't get excited. In discussion here I recently pointed out that a union man rarely ever brings their daughters into the union, but one sees a great many sons. So equal opportunity hasn't really broken through, but perhaps with asbestos and these things in the picture, they may choose to mix. Are there questions of the speaker?
- Q. Dr. Harries, I had the privilege of meeting with you the other day, and would you elaborate on that change procedure. If I followed you correctly, and correct me if I'm wrong, the worker comes into the locker room area. He removed all these garments including his undergarments and placed them in a locker. He was issued other garments to put on, including the coveralls and the safety paraphernalia.

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always does. And what we talked about is breaking that chain and that's what you're talking about, of course, isn't it? Are there questions back there?

Q. I would like to know, Dr. Harries, if the pictures that you show _____ must have been for a rip out of the material and bagging, transporting and disposing of it and so on. And you also indicated that the -- while you were waiting for me I lost my train of thought. Anyway, I'll get to my point here. Do you require any type of respiratory or protective clothing protection for installation of non-asbestos material?

A. Yes, the answer is yes. We are not absolutely certain that the mainly calcium silicate type of material we are now using is going to be safe in the long term. Therefore, we provide a dust respirator and usually a brine nylon overall for work using these materials and the respirator is optional, if the dust concentration is less than 5 milligrams per cubic meter.

But you try to make it obligatory when it is about five milligrams per cubic meter and this means that it is obligatory during all rip-out procedures.

Thank you.

We are now imposing on the next sets of speakers. Would you give us a good hand of applause.

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He went to the job site. He accomplished his job and at the end of the shift he removed all these garments and left them in the change room in a clean room atmosphere, showered, picked up his garments and went on home, and when he came back all the garments that he wore the day before were laundered and put into the receptical for use the following day. O.K. I want to be sure of that, because I think that it personally as far as I'm concerned a step ahead. You had one question, Doctor, I would like to comment on that you weren't quite sure about the source of asbestos that that banker had. One of my colleagues suggested that he might have been moonlighting and that may be your source of answer and I would also like to comment on the father-son ban and to lay aside a learned colleague about the daughter. I had two daughters. They didn't get in the business but they married two young men that did get into the business. So it's all in the family.

Of course, it is, and of course, this is the breakthrough the chain. _____ when you make them launder the stuff at work. The little lady whose X-rays on my desk at the office is the wife of the guy that ran a business for 40 years. He died of a very peculiar cancer which the pathologists couldn't quite classify three years ago. She's got all this classic stuff which you've been showing me the last 24 hours. And she never went near the damn plant, but she'd been laundering her stuff, as a good housewife

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ASBESTOS TOXICOLOGY REPORT

It has been known for years that some persons working in asbestos production were prone to develop a disabling lung disease. In time, this condition became known as asbestosis and was related to exposure to high concentrations of asbestos dust. With further experience, it was found that men could work with asbestos without development of lung disease if dust concentrations were kept below a certain level.

It has been generally accepted that a worker will not develop asbestosis if he is exposed to no more than 5 million particles per cubic foot of air, even if this exposure continues for his entire working lifetime. Although no cases of asbestosis are known to have occurred when exposures have been maintained at or below this level, the ACGIH (which sets the ~~recommended limit value~~ in the U. S. A.) has indicated they intend to lower the TLV for asbestos to 2 million particles per cubic foot in an effort to increase the safety factor incorporated in the limit. The U. S. Department of Labor has already issued a regulation under the Walsh-Healy Act placing the TLV for asbestos at 2 million particles per cubic foot for public contracts in which they have jurisdiction. This concentration of dust is generally not visible in the average work area unless a

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beam of light causing a Tyndall effect is present. Usually the dust concentration must be from 8-10 million particles per cubic foot (MPPCF) before its presence is visible in average lighting conditions.

Several years ago, it was reported that there was an increase in the incidence of cancerous tumors, especially of the lung, associated with asbestosis. Recently there have been reports of some cancers occurring in individuals exposed to asbestos dust, but who have not developed clinical asbestosis. It is believed by most authorities that these cases have been associated with exposures significantly exceeding the Threshold Limit Value.

A type of cancer named mesothelioma has been noted to be associated with asbestos exposure in recent years. These tumors, while rather few in number to date, may occur in individuals with histories of only slight exposures, and that as much as twenty to forty years earlier. There is considerable evidence that crocidolite is most frequently associated with mesotheliomas. From the data available it appears that the TLV of 5 MPPCF is not low enough to protect against mesothelioma, and it is quite possible that 2 MPPCF is not, either. Research on the problem continues.

Control of asbestos dust exposure is therefore necessary. The control methods are the same as those used for other dusts, and include such measures as wetting of dust operations, local exhaust systems, and the use of protective clothing.

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