

MAY 23 1974

JOHN J. HANRAHAN 6/22

Mr. Henderson,

For your information.

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Polyvinyl chloride

By Dr. Thomas F. Mancuso

An IAM member in Pennsylvania writes to ask about working with polyvinyl chloride (PVC).

"My wife works in a local plant making ducts, tanks, and baskets from PVC and two other types of poly chemicals. There is no air renewal in this plant, so all the women breathe these fumes all day long.

"They weld these pieces together using electric heat guns and PVC spline, also there is nitrogen coming out of the tip of the gun in the area of the weld. The result is they get a very heavy concentrated amount of fumes into their lungs.

"My wife had an operation in the area of her gall bladder. They took a biopsy piece of her liver and found that the cells in some areas were dead. If she quits this job will her liver recuperate? She doesn't smoke or drink. She has worked at this job 9 years."

The destruction of the liver cells could be due to a virus, viral hepatitis, or could be due to toxic chemicals at work. It is most important to differentiate. Your wife's medical records must be studied carefully and the work place investigated. It is necessary to find out whether any other workers there have developed liver damage or other types of illnesses.

As of now, there are no scientific reports of liver damage among workers exposed to the decomposition fumes when PVC material was exposed to very high temperatures. So far, respiratory symptoms have been identified as an illness called "Meat Wrapper's Asthma," which occurs when fumes are inhaled while PVC plastic film is being cut with hot wire.

The working conditions and exposures that you described are different. The concentration of fumes, the length of continuous work exposure for nine years, the vaporization of the PVC at extremely high temperatures, and the actual chemical composition of the fumes liberated, would represent a different complex of work exposures.

The amount of vinyl chloride that could be released from industrial PVC was probably much greater years ago, but may still be a problem. Further, there were a number of other chemicals put into the industrial plastic, so potentially harmful exposure and effects could occur.

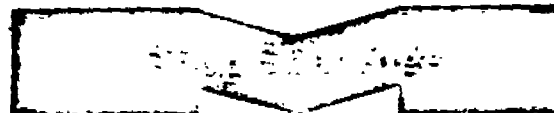
We do not know the nature and extent of the effects of these fumes. That is the focus of the

present research. Because of what you have reported on your wife, I would want to know immediately if any other IAM workers have sustained liver damage.

Although all the attention has been on the liver, cancer of the liver (angiosarcoma), and cirrhosis of the liver, other organs and systems of the body may be affected. Experimental findings in animals have demonstrated damage to the brain, kidney, lung, salivary glands, as well as the liver. The fact that the brain may be damaged should alert IAM members to any possible neurological changes—numbness or weakness of hands, arms, or legs, or changes in sensation or loss of balance.

It is also probable that, with further investigation, cancers of other parts of the body may be discovered. Consequently, IAM members should report what illnesses they have observed among their fellow workers.

Dr. Mancuso will write about specific health problems encountered by IAM members in their work. If you have a problem, send the details in a letter to Dr. Thomas F. Mancuso, c/o THE MACHINIST, 909 Machinists Bldg., Washington, D.C. 20036.



A lady approached an information booth in the station and asked, "Can you tell me which platform to go to for the train to Boston?"

The sharp young man promptly replied, "Just turn to the left and you'll be right."

"Young man, don't be so smart-alecky," the offended lady snapped. So he retorted: "Okay, lady, then just turn right and you'll be left."

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This week's brain twister: The auto mechanic's son is a promising soap box racer. In one recent derby there were eight entrants, their cars being numbered 2, 3, 4, 5, 6, 7, 8, and 9. At the finish, the three cars that came in first, second and third had numbers equaling the five trailers. Of the three top cars, the winner had the lowest number; the second, one number higher. What were the numbers of the three top cars? (Answer on page 2.)

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