Mesothelioma Study
Higher rates for taconite workers, but no definitive reasons why

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Mesothelioma Study
Dr. David Perlman reports the results of the University of Minnesota's Respiratory Health Survey during a public forum to announce the results of a study looking at the causes of mesothelioma in taconite mine workers Monday evening at the Memorial Building in Hibbing.

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HIBBING — A years-in-the-making final report on the Taconite Workers Health Study presented Monday showed higher rates of lung cancer, mesothelioma and cardiovascular disease among Iron Range taconite workers, although the causes are unclear.

The study, performed by researchers at the University of Minnesota (U of M) School of Public Health and the U of M-Duluth Natural Resources Research Institute (NRRI), found that a miner’s chances of developing mesothelioma increase the longer they work in the mines. The increase can be measured as a 3 percent higher likelihood of mesothelioma frequency for every year spent working in a mine.

Researchers knew the commercial usage of asbestos has a link to the rare cancer, but couldn’t definitely say whether the instances are also tied to dust generated in processing techniques.

Miners have long been interested in the exact cause of the mesothelioma cases, as spikes in cancer found on the Iron Range in 2006 were what prompted the study to be commissioned by local lawmakers.

"We cannot tell you exactly which EMP (elongated mineral particle) is causing this relationship," said Jeffrey Mandel, principal investigator of the study.

The presentation was given to a crowd of about 70 — mostly former miners and local legislators — at the Memorial Building with a question-and-answer session following the presentation.

Findings in the presentation included:
• Higher than expected death rates from mesothelioma, lung cancer and heart disease, when compared to general public of Minnesota.
• Length of time worked in the industry was linked to higher levels of mesothelioma.
• Exposure to EMPs was linked to the mesothelioma cases, but not lung cancer.
• Workers with above average exposure to dust containing EMPs were twice as likely to develop mesothelioma.

The final report presented Monday is the last of annual updates given by the researchers, although recommendations were made for next steps.

Among the recommendations were calls for more data collection, steps to reduce controllable risk factors for cardiovascular disease and reducing exposure to EMPs and other kinds of dust, including more use of respirators.

"Given the known hazards in mining, the process of avoiding exposures generated in the mining and processing of taconite ore is critical," the report said.

The study also recommends a further look at the impact on worker’s spouses, although initial findings show the group of spouses studied had instances of lung scarring similar to what would be expected in the broader general public.

Even with the increase in mesothelioma cases among the iron miners, the cancer is still rare, the report said. Among a group of 1,000 miners who work in the industry for 30 years and live to be 80, only about 3.3 cases of mesothelioma will occur.

The figure is still more than twice what would be expected from the same number of workers in the general populace, but the cause remains undetermined.