

New Findings Suggest Increased Monitoring Needed to Prevent Lung Disease in Underground Coal Miners

MAY 04, 2023

DENVER — For the past two decades, there has been a major resurgence in progressive massive fibrosis (PMF), (also known as black lung) among coal miners, leading researchers from National Jewish Health and across the country to examine what job duties might be putting them at risk. Current federal regulations require routine monitoring of dust levels in specific “high risk” jobs in underground coal mines, mainly jobs near the coal seam where coal is mined from surrounding rock. During the study, crystalline silica, a component of coal mine dust, was found in the lungs of coal miners whose jobs had not been targeted for exposure monitoring based on current regulations during their working lives. Silica is a particular concern since it causes severe and irreversible lung scarring. These findings were published in the [Journal of Occupational and Environmental Medicine](#).

Researchers examined lung tissue from deceased coal miners and compared findings across specific mining job duties to see which miners were at risk for severe black lung disease. They found that more recent coal miners with PMF (born after 1930 and working primarily with modern mining technologies) had worked significantly fewer years than historic miners (born before 1930) with PMF. They also found that scarring from silica dust exposure was more common in contemporary miners, even those whose job duties were not prioritized for dust sampling in current federal regulations such as electricians and foremen.



“Our findings show the importance of monitoring silica exposure in coal miners whose job duties weren’t previously considered high risk,” said National Jewish Health researcher Lauren Zell-Baran, MPH, who was the lead author on the study.

“Severe black lung disease is incurable, disabling and entirely preventable,” said Cecile Rose, MD, MPH, occupational pulmonologist at National Jewish Health and co-senior author of the study. “This study underscores the need to control silica dust exposure for all coal miners.”

National Jewish Health is the leading respiratory hospital in the nation. Founded 124 years ago as a nonprofit hospital, National Jewish Health today is the only facility in the world dedicated exclusively to groundbreaking medical research and treatment of patients with respiratory, cardiac, immune and related disorders. Patients and families come to National Jewish Health from around the world to receive cutting-edge, comprehensive, coordinated care. To learn more, visit the [media resources page](#).

Media Contacts

Our team is available to arrange interviews, discuss events and story ideas.

Jessica Berry

303.398.1082

berryj@njhealth.org