

UN prioritizes tuberculosis prevention in high-risk occupations

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This photomicrograph reveals *Mycobacterium tuberculosis* bacteria using acid-fast Ziehl-Neelsen stain; Magnified 1000 X. The acid-fast stains depend on the ability of mycobacteria to retain dye when treated with mineral acid or an acid-alcohol solution such as the Ziehl-Neelsen, or the Kinyoun stains that are carbolfuchsin methods specific for *M. tuberculosis*. Credit: public domain

The United Nations General Assembly is now calling for the establishment of prevention programs to reduce Tuberculosis (TB) among miners and other workers exposed to silica dust. This declaration

was released in advance of the first ever UN General Assembly High-level Meeting on TB on September 26, 2018.

Occupational Knowledge International (OK International) spearheaded this effort at the UN to recognize the need for TB prevention in the workplace for the first time. The organization estimates that 300,000 new cases can be prevented each year with appropriate workplace interventions.

Miners and others working in dusty environments have a four times greater risk of acquiring active TB. Also, reducing [silica dust](#) in the workplace with improved ventilation, water spray misting, and personal protective equipment is an effective strategy to reduce the incidence of TB in high burden countries. These measures also help to prevent cases of silicosis, lung cancer, and other autoimmune diseases among workers.

Perry Gottesfeld, Executive Director of OK International said, "The UN General Assembly is taking an important step in highlighting the need for governments and global health funders to invest in primary prevention to reduce [silica](#) dust hazards in high-risk workplaces. This UN action recognizes that we can take action to prevent TB and not just treat it."

"Treatment costs for a single case of the most drug resistant TB can exceed \$40,000 per patient in Africa and hundreds of thousands of dollars in the U.S." he added.

The UN TB declaration specifically asks countries to commit to "implementing primary prevention in high-risk occupations by reducing silica dust exposures in mining, construction and other dusty workplaces." There are 230 million workers exposed to silica dust on the job and the majority are in countries with the highest prevalence rates of TB.

An editorial published today in conjunction with the UN meeting in the Journal *Lancet Global Health* called on governments to enact regulations to reduce silica dust exposures in mining, construction, and other high-risk occupations (See [http://www.thelancet.com/journals/langlo/article/PIIS2214-109X\(18\)30313-9/fulltext](http://www.thelancet.com/journals/langlo/article/PIIS2214-109X(18)30313-9/fulltext)).

Dr. Eric Goosby, the United Nations Special Envoy on Tuberculosis and a co-author of the editorial, said, "It is imperative that Governments and donors invest in workplace controls to prevent new cases of TB among the most vulnerable workers with the highest reported prevalence of TB."

The UN declaration also highlights the link to HIV. Workers that are HIV positive with silicosis face a near death sentence as the combination increases the risk of acquiring active TB by 15 times. In fact, TB is leading cause of death among those living with HIV.

Dr. Roberto Lucchini, Director of the Division of Occupational Medicine at the Icahn School of Medicine at Mount Sinai, New York said, "This is the first time there has been recognition among governments that we can actively prevent cases of TB among workers who are at greatest risk. Given the difficulty and cost of treating even a single case of multi-drug resistant TB, the UN action can save lives but is also cost effective," he added.

Earlier this year, the International Commission on Occupational Health (ICOH) published a statement titled "Preventing Tuberculosis Among Silica Dust Exposed Workers" which outlined specific recommendations for governments, global health funders, and private sector employers. The full statement is available at: <http://dx.doi.org/10.1136/oemed-2018-105315>.

Dr. Sophia Kisting, the Executive Director of the National Institute for Occupational Health (NIOH) in South Africa said, "This UN action should be a wakeup call for countries in our region to begin to enact and implement the necessary regulations and programs to significantly reduce silica dust exposures among miners, construction workers, and others at risk."

Although the U.S. recently updated its workplace silica standard for the first time in 45 years, many countries have no occupational exposure limit for silica [dust](#).

More information: [DOI: 10.1136/oemed-2018-105315](https://doi.org/10.1136/oemed-2018-105315)

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