

McIntyre Powder Project: Updates from OHCOW

March 2023 Newsletter

Introduction

Thank you for participating in the McIntyre Powder Project (MPP) at the Occupational Health Clinics for Ontario Workers, Inc. (OHCOW). This newsletter gives updates on OHCOW's work with the McIntyre Powder-exposed mine workers who have registered since our initial Intake Clinics in Timmins and Sudbury in 2016. Of the more than 600 workers registered to date, 525 have so far completed the full intake process, providing detailed demographic, health, work history and exposure information. OHCOW's database of working conditions, health issues, lifestyle and genetic factors guides our ongoing work with the MPP group.

Our multidisciplinary team is comprised of Physicians, Nurses, Occupational Hygienists, Ergonomists, administrative support staff, and leadership. Our team investigates possible links between work-related exposures and health issues found among the MPP group, for individuals as well as groups of workers with similar medical conditions. Although McIntyre Powder aluminium inhalation is the one common factor for the whole group, OHCOW considers all workplace exposures when reviewing individual files.

Individual Client Files

Our team continues to gather and review available medical and work history records for individual MPP clients. We also research and review available evidence from scientific studies and clinical literature of health conditions that have links to workplace exposures to chemicals, lubricants, solvents, fumes, dusts, carcinogens, vibration, ionizing radiation, diesel engine exhaust, and many other toxic hazards. We provide individual medical and/or occupational hygiene reports to workers or their surviving next-of-kin regarding workplace injuries and occupational diseases. OHCOW reports have been used as supportive evidence for workers' compensation claims made to the Ontario Workplace Safety and Insurance Board (WSIB).

Workers' Compensation (WSIB)

In addition to dozens of WSIB claims that were filed with the assistance of the Office of the Worker Adviser (OWA) at the 2016 MPP Intake Clinics, OHCOW has assisted 153 workers or their Estates to complete the initial paperwork to start 171 new individual WSIB claims, and request reconsideration for 7 previously denied claims. Decisions are still pending on some of the claims, but 125 have been accepted, resulting in financial compensation and benefits for workers and surviving family members. Claims that WSIB has accepted specifically related to McIntyre Powder exposure include Parkinson's and Chronic Obstructive Pulmonary Disease (COPD).

Claims that WSIB has accepted related to other mining exposures include lung cancer, bladder cancer, prostate cancer, thyroid cancer, kidney cancer, multiple myeloma, silicosis, COPD, interstitial lung disease, pulmonary

fibrosis, UIP fibrosis, rheumatoid arthritis, hand-arm vibration syndrome, and two cases of dementia (one as a consequence of Parkinson's, and one due to a head injury suffered in the mines).

For information on making claims related to McIntyre Powder, including frequently asked questions, please see the enclosed article published by the Steelworkers Organization of Active Retirees (SOAR). For additional information and assistance regarding making WSIB claims related to McIntyre Powder or any other mining exposures, please contact Janice Martell at OHCOW at 1-800-461-7120.

Please note that free assistance is available through the **Office of the Worker Adviser (OWA)** to represent workers or their next-of-kin for WSIB claims, including for the appeal of denied claims.

We want to hear from you

If you have any new health issues, changes in your contact information, or any other updates to provide OHCOW, we want to hear from you. Please see our "Contact Us" section at the end of this newsletter.

Research and Reports

Our team continues to gather and review available medical and work history records for individual MPP clients. We also conduct investigative reviews into health conditions that are common to a number of workers within the MPP group, or health conditions that may be associated with worker exposures to toxic elements found in the mining industry. This work, both within our multidisciplinary OHCOW team and in collaboration with external scientific researchers, has resulted in the production of OHCOW reports that are available to you on our website or can be mailed to you by request, as well as the publication of articles and research papers in a number of journals. Our work is ongoing in this regard, as summarized in more detail below.

Cancer

Mine workers are exposed to numerous cancer-causing agents (carcinogens) in the mining industry, such as diesel exhaust, crystalline silica dust, arsenic, asbestos, benzene, welding fumes, acid mists, ionizing radiation, and many other carcinogens. Lung cancer is particularly prevalent for workers in both uranium and gold mining. Other types of cancers, such as kidney cancer, bladder cancer, thyroid cancer, blood cancers (leukemia, multiple myeloma, etc.), pancreatic cancer, prostate cancer, and others also have known associations with exposures found in the mining industry. OHCOW is presently finalizing an in-depth report on lung cancer and mining exposures.

Currently available OHCOW reports on cancers and mining exposures:

- Bladder cancer and exposure in Ontario mines
- Pancreatic cancer and exposures in Ontario mines
- Kidney cancer and exposures in Ontario mines

Neurological Disorders

In March 2020, the Occupational Cancer Research Centre (OCRC) completed its report on McIntyre Powder (MP) exposure and neurological disorders. The OCRC matched medical records for over 36,000 Ontario mine workers and compared the rates of diagnosed neurological disorders found in mine workers who received MP aluminum inhalation treatments, mine workers who did not, and the general population of Ontario. The study found higher risk for Parkinson's among MP-exposed workers, and higher risk for Alzheimer's and motor neuron disease among mine workers in general. In 2022, MP-related Parkinson's was formally recognized as an occupational disease under Schedule 3 of the *Workplace Safety and Insurance Act*. This makes it much easier for workers or their surviving families to succeed in WSIB claims for Parkinson's linked to MP exposure.

OHCOW is working with experts in neuro-toxicology and occupational toxicology to dig deeper into the findings involving motor neuron disease (particularly amyotrophic lateral sclerosis, or ALS) and Alzheimer's. This will include a follow-up to an initial report that preceded the OCRC study that is available on OHCOW's website:

- Aluminum dust exposure and evidence for impairment of cognitive functioning (report of Dr. Tee Guidotti, for OHCOW)

Cardiovascular Disease (CVD)

Cardiovascular Disease (CVD) involves diseases of the heart or blood vessels. Examples of occupational risk factors for CVD in mining work include heat stress, shift work, and exposure to fine particulate matter (PM_{2.5}) and ultrafine particulate matter (nanoparticles). In 2019, OHCOW staff, in collaboration with Health Canada and other researchers conducted an analysis of McIntyre Powder and determined that its particle size falls within the PM_{2.5} range, which makes it important to study the effects of McIntyre Powder on CVD risk.

One of our OHCOW staff members, Andrew Zarnke, is currently completing his doctoral thesis (PhD) involving McIntyre Powder, including a specific study focused on MP exposure and CVD risk. The results of this study are anticipated to be published in 2023, which will help guide our ongoing work for CVD cases found among our MPP worker group. Current published literature from our OHCOW staff relevant to CVD and MP exposure:

- McIntyre Powder and its potential contributions to cardiovascular disease risk: A literature review through the McIntyre Powder historical lens [*American Journal of Industrial Medicine*, July 21, 2022]
- Physical and chemical characterization of McIntyre Powder: An aluminum dust inhaled by miners to combat silicosis [*Journal of Occupational and Environmental Hygiene (JOEH)*, September 18, 2019]

McIntyre Powder

In 2019, OHCOW staff assisted with a pilot study that was conducted by McMaster University researchers to measure bone aluminum content in 15 volunteers from the MPP worker group. Accompanied by OHCOW staff, study participants travelled from Timmins to Hamilton, Ontario for in vivo neutron activation analysis testing at the university. In 7 out of the 15 mine workers, bone aluminum levels were significantly greater than zero, more than 40 years after their McIntyre Powder exposure ceased. Full published study results are available:

- Bone aluminum measured in miners exposed to McIntyre Powder [*JOEH*, May 4, 2022]

Respiratory Conditions (Lungs / Breathing)

Due to numerous types of vapours, dusts, gases, fumes, drill oil mists, and other mining exposures, mine workers are at higher risk of developing lung diseases. Examples of lung diseases found among mine workers are silicosis, interstitial lung disease, pulmonary fibrosis, COPD (including chronic bronchitis and emphysema), and occupationally-induced or occupationally-aggravated asthma. Over half of the accepted WSIB claims among the MPP worker group are for respiratory conditions. If you are a mine worker with a diagnosed lung condition (or their next-of-kin) but no WSIB claim for your lung condition (or a denied WSIB claim), please contact our office to discuss your options. Mine workers with no diagnosis, but who have shortness of breath or other respiratory symptoms are encouraged to speak with their family physicians for assessment and diagnosis.

WSIB policies, guidelines, and practices on occupational disease claims

In some circumstances, WSIB guidelines, policies, and practices for deciding workers' compensation claims for occupational diseases do not appear to reflect the current knowledge and findings available in published scientific research and clinical literature dealing with occupational causes for certain health conditions. This often results in denied WSIB claims for specific health conditions, in accordance with established WSIB policy guidelines.

In response, OHCOW conducts updated critical reviews of specific WSIB policies in light of the current state of research knowledge. We are currently finalizing reports concerning Idiopathic Pulmonary Fibrosis, the WSIB Lung Cancer in Uranium Miners policy, and the WSIB guideline regarding COPD and cumulative dust exposure. Currently available OHCOW reports relating to WSIB policy guidelines:

- Background and development of the WSIB Lung Cancer – Gold Miners Policy 16-02-07
- Chronic Obstructive Pulmonary Disease (COPD): Occurrence and association with occupational exposures and smoking

Sarcoidosis

Sarcoidosis is a rare disease caused by an immune reaction in the body that causes the formation of small nodules in various organs of the body such as lungs, lymph nodes, heart, skin, liver, eyes, and spleen. Despite being a rare disease, 12 cases of sarcoidosis were found among the MPP mine workers registered with OHCOW. WSIB claims made by these workers for sarcoidosis were denied as not being work-related.

Members of our team conducted a review of more recent published literature regarding occupational causes of sarcoidosis. Increased risk associations for developing sarcoidosis were linked to occupational exposures to silica and silicates, World Trade Centre dusts and metal dusts. With the voluntary participation of these workers, our team wrote a non-identifying case series describing the sarcoidosis cases found among our mine workers. Our work on sarcoidosis and occupational exposures continues.

Current published articles from our team on sarcoidosis:

- Sarcoidosis: An Occupational Disease? (*CHEST Journal*, June 5, 2021)
- Sarcoidosis in Northern Ontario hard-rock miners: A case series (*American Journal of Industrial Medicine*, February 14, 2022)

Ontario Apologizes to MPP Mine Workers and their Families

On November 30, 2022, the Ontario Legislative Assembly (all elected Members of the Ontario Provincial Parliament) officially apologized to the more than 25,000 Ontario mine workers who were exposed to McIntyre Powder and their families. The apology was a culmination of efforts made by Sudbury Member of Provincial Parliament Jamie West to secure the apology. The date chosen for the apology was meaningful, because the first recorded use of McIntyre Powder at McIntyre Mine in Schumacher, Ontario was on November 30, 1943, such that the apology occurred on the 79th anniversary. Although McIntyre Powder was used in mines throughout northern Ontario, across Canada, and in worksites globally, it was named after McIntyre Mine where it was developed, produced, and distributed to industrial licensees worldwide.

The Ontario apology is symbolic and does not result in general compensation for affected workers, although workers with health conditions related to McIntyre Powder or other work exposures can make WSIB claims.

Formal statements of apology were read publicly during the official Legislative Assembly of Ontario proceedings at Queen's Park on November 30, 2022 by Ontario Minister of Labour, Immigration, Training and Skills Development, Monte McNaughton, Sudbury Member of Provincial Parliament Jamie West, and Kingston and the Islands Member of Provincial Parliament Ted Hsu. The portion of the online publication of the Ontario Hansard (official transcript of the Legislative Assembly of Ontario) that deals with the McIntyre Powder apology is enclosed with this newsletter.

Affected mine workers and family members travelled to Queen's Park to hear the apology in person, thanks to generous support for transportation costs from the United Steelworkers (USW District 6, Local 6500, Local 2020) and the Sudbury Mine Mill and Smelter Workers' Union Unifor Local 598. Since it was not possible for most of the surviving workers and families to be present in person for the apology, photos of McIntyre Powder-exposed mine workers were collected with worker or Estate permission and assembled into photo collages that travelled to Queen's Park on banners that read "Our Hearts Travel With You". (See photo, last page)

Contact Us

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McIntyre Powder Apology - November 30, 2022



McIntyre Powder- exposed mine workers at the Legislative Assembly of Ontario (Queen's Park, Toronto)

(Left to right): Minister Monte McNaughton, Ken Brezenski, Max Plouffe, Robert Olmstead, Gary Zarichney, Roger Genoe, Ron Tough, Sudbury MPP Jamie West

It's a working man I am

And I've been down underground

And I swear to God if I ever see the sun

Or for any length of time

I can hold it in my mind

I never again will go down underground

(from the song "Working Man" by Rita MacNeil)