

Health assessment information for coal mine workers

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Queensland
Government

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Protecting Queensland's coal mine workers

This booklet is designed to provide Queensland coal mine workers with information regarding mandatory health assessments. It is important for coal mine workers to understand the role of health assessments in the early detection of occupational health conditions such as coal mine dust lung disease.

The Department of Natural Resources and Mines is committed to the health and safety of all coal mine workers. We are actively working with stakeholders to improve dust management and health screening, as per the recommendations of the Monash University review.

Coal mine workers are advised that the content in this booklet is subject to change as a result of these ongoing improvements.

Contents

Do I need a health assessment?	1
Dust hazards in mining	1
Health issues as a result of dust exposure	2
Coal workers' pneumoconiosis	3
What health assessments am I entitled to?	8
What can I expect from my health assessment?	9
How health assessments work	9
Level of service	12
Medical records	13
Improvements to health screening.....	14
What should I do if I'm diagnosed?	15
Safety net for affected workers	15
Workers compensation.....	16
What if I'm planning to retire soon?.....	17
Retirement examinations	17
More information	19

DO I NEED A HEALTH ASSESSMENT?

Dust hazards in mining

Exploration, mining, maintenance or processing activities can result in the release of dust particles into the air. Exposure to respirable dust in mining and quarrying continues to be a risk to the health of workers.

Dust particle size comparison



Breathing in dust from occupational exposure, such as coal dust, silica dust and other finely powdered materials, can damage the lungs and airways. The risk to health varies depending on the size and nature of the dust particles.

Effective dust control procedures can vary from mine to mine, and it is the responsibility of the mine's senior site executive to determine the most effective method for dust control at that mine following risk assessment and ongoing monitoring.

The most effective protection from harm is through elimination, by preventing the hazard from occurring in the first place.

More information on dust and dust hazards can be found in the Department of Natural Resources and Mines (DNRM) guide on *Airborne dust exposure in coal mines: protection and control*.

Health issues as a result of dust exposure

Coal mine workers are at risk of developing a range of occupational coal mine dust lung diseases (CMDLD) as a result of long-term exposure to high levels of respirable coal and silica dust (typically for 10 years or more).

Occupational respirable dust exposure to dust can cause irritation to the eyes, skin and respiratory tract, and prolonged exposure can lead to a range of CMDLD's including:

- coal workers' pneumoconiosis
- silicosis
- chronic obstructive pulmonary disease.

Coal workers' pneumoconiosis

Coal workers' pneumoconiosis (CWP) is a type of CMDLD caused by long-term occupational exposure to respirable coal dust.

If a worker is exposed to high concentrations of respirable coal dust over several years, respirable dust can collect in the alveoli (air sacs) within the lungs. This causes a reaction that results in scarring of the lung tissue, reducing the elasticity of the lung. If enough scar tissue forms, lung function can be reduced, impacting worker health.

CWP may take several years to develop, commonly 10 years or more, and the disease can manifest in different ways in different individuals, depending

on the composition of the dust, the duration of exposure and other individual factors.

There are two stages of CWP—simple and complicated. The symptoms and impact to health and quality of life vary significantly depending on the stage.

Simple CWP

In the early stage of the disease, small scars called nodules (often between 1 mm and 2 mm in size) begin to form. A chest X-ray can identify the presence and number of these nodules to determine how advanced the disease is. In the early stages, it may be difficult to differentiate small nodules from other lung conditions, or even other normal structures in the lungs such as blood vessels.

Possible symptoms can include:

- shortness of breath
- chronic cough.

In many cases there are no symptoms.

Of the reported CWP cases in Queensland, the majority have been classified as simple CWP.

Complicated CWP

Progression to complicated CWP, may occur in some workers if they remain exposed to high concentrations of respirable coal dust over a long period of time.

In cases of complicated CWP there are large masses of dense fibrosis (scar tissue) in the lungs. Workers with complicated CWP will have significantly decreased lung function, and the condition can be terminal. Symptoms include:

- shortness of breath
- chronic cough
- black sputum (phlegm)
- lung dysfunction
- pulmonary hypertension
- heart problems.

Diagnosis

CWP is detected by a chest X-ray and by testing lung function (spirometry test). CT scans are often required to assist with a diagnosis. In rare cases, a lung biopsy may be recommended. Often CWP does not show symptoms and X-ray changes can be subtle or similar to other lung conditions, which can make diagnosis difficult.

Prevention

All forms of CMDLD—including CWP—are caused by long-term exposure to high levels of respirable dust. Effective control of respirable dust is the most effective way to prevent these diseases. This requires control of the level of dust that coal mine workers are exposed to and, when required, the use of personal protective equipment to prevent inhalation of dust.

Control of respirable dust in coal mines is regulated under the Coal Mining Safety and Regulation 2001 through the mine's safety and health management system.

Treatment

There is no specific medical treatment for CWP, other than managing any symptoms. Scarring of the lungs cannot be reversed.

Workers diagnosed with the disease should avoid further exposure to high concentrations of respirable coal dust. As smoking can contribute to the condition, it is strongly advised that any diagnosed person stops smoking.

The key to managing CWP is early detection, which is why regular health assessments are important to ongoing respiratory health.

WHAT HEALTH ASSESSMENTS AM I ENTITLED TO?

Under the Coal Mining Safety and Health Regulation 2001, employers must ensure a health assessment is carried out for each person who is to be employed, or is employed, as a coal mine worker for a task other than a 'low-risk' task.

Health assessments are required:

- before a person starts working as a coal mine worker
- periodically, as required under the regulation, according to the worker's individual circumstances
- if the employer's nominated medical adviser decides it is necessary.

In some instances if a person changes employers, a new health assessment may be required.

Employers must arrange and pay for their workers' health assessments and a copy of the report.

WHAT CAN I EXPECT FROM MY HEALTH ASSESSMENT?

How health assessments work

Health assessments are conducted by the employer's nominated medical adviser using the DNRM approved health assessment form.

This form has four sections:

Section 1 is completed by the employer. It includes information about:

- the nominated medical adviser
- the employer
- the worker's position
- similar exposure groups
- the health risks associated with employment.

Section 2 is completed by the worker. It documents the worker's personal details, as well as work and medical history. This information allows for an understanding of the worker's exposure to respirable dust and any possible pre-existing conditions.

Section 3 is completed by an examining medical officer and details clinical findings of the examination. This can include results from spirometry tests.

Section 4 (the health assessment report) is completed and signed by the nominated medical adviser and details:

- fitness for duty
- any work restrictions
- any requirements for a subsequent follow-up and assessment of the worker.

Only the health assessment report (section 4 of the form) is forwarded to the employer.

If a worker requires a chest X-ray, the nominated medical adviser will refer them to a registered radiologist. They will be asked to complete a consent form for a dual chest X-ray reading to the International Labour Organization (ILO) International Classification of Radiographs of Pneumoconioses.

The International Labour Organization provides a rigorous process for reporting on the presence of the disease and, if present, describing its stages.

Once the first report is returned, the nominated medical adviser provides the X-ray result, consent form and International Labour Organization classification form to DNRM by secure file transfer.

DNRM sends the X-ray for a second report and forwards the results back to the nominated medical adviser.

When the health assessment is complete, the nominated medical adviser sends:

- the completed health assessment form and all medical reports to DNRM
- a copy of section 4 of the health assessment report to the worker and employer.

If the employer requires an explanation of a health assessment report (section 4 of the form) from the nominated medical adviser, the employer must obtain the worker's agreement and ensure that the worker is present.

Level of service

Medical examinations are to be completed by a suitably qualified medical professional or nominated medical adviser.

Coal mining companies have agreed to transition to the use of doctors and medical providers who have been registered with DNRM and who meet a set criteria. This register aims to ensure that doctors and medical providers completing coal mine worker health assessments are suitably qualified.

Doctors who are not nominated medical advisers can undertake health assessments and retirement examinations, provided they are under the supervision of a nominated medical adviser. However, only the nominated medical adviser can complete and sign the health assessment or retirement examination report.

Medical records

Following an employment health assessment, medical results should be provided to the worker by the nominated medical adviser and a copy sent to DNRM.

Support is available to help obtain copies of historical medical records. Copies of past health assessments can be obtained from either the nominated medical adviser or DNRM (copies can usually be provided within 5 days).

For assistance, please call DNRM on (07) 3818 5424.

Improvements to health screening

Since 27 July 2016, every coal mine worker's chest X-ray is being examined:

1. by an Australian radiologist listed on the Royal Australian and New Zealand College of Radiologists Register for CWP Screening
2. by at least two US-based National Institute for Occupational Safety and Health approved readers (called B-readers).

X-rays are read to the International Labour Organization International Classification of Radiographs of Pneumoconioses.

The Queensland Government will be progressively moving to have X-rays read twice in Australia by qualified B-readers.

WHAT SHOULD I DO IF I'M DIAGNOSED?

Workers diagnosed with CWP should avoid exposure to dust and have their respiratory health monitored on an ongoing basis by a specialist physician.

It is important to note that with appropriate management, simple CWP is not life-threatening and workers can live a normal life.

Safety net for affected workers

To provide a safety net for workers with CMDLD, WorkCover Queensland has established a dedicated team to assess and manage compensation claims. This specialised team will assist workers during the claims process, and make sure all claims are processed in a timely manner.

Workers compensation

Strong laws are in place to protect workers' rights and entitlements. Coal mine workers diagnosed with CMDLD can submit a claim for compensation to WorkCover Queensland or the relevant self-insured company.

Learn more about making a workers' compensation claim and the support available for workplace injuries at www.worksafe.qld.gov.au.

WHAT IF I'M PLANNING TO RETIRE SOON?

Retirement examinations

Workers permanently retiring from the coal mining industry can request a retirement examination from their employer.

This new employer obligation commenced 1 January 2017 and provides retiring coal mine workers with the opportunity to voluntarily undergo a retirement examination (consisting of respiratory function and chest X-ray examinations).

Employers must organise and pay for a retirement examination for any eligible retiring coal mine worker who requests one.

Eligible workers

Any retiring coal mine worker who has worked in the coal mining industry for at least 3 years, and who has not already undergone such an examination as part of a routine health assessment during the past 3 years, is eligible.

Examination process

Workers can ask for a retirement examination within a 6-month period, which starts 3 months before they retire. The retirement examination is conducted by the nominated medical adviser within this 6-month period using the DNRM retirement examination form.

The process for retirement examinations is the same as a health assessment (refer to pages 9–11 of this booklet).

More information

To keep up to date with the latest advice on health assessments and other mine safety information, visit the Department of Natural Resources and Mines website at www.dnrm.qld.gov.au.



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