

# Occupational Lung Disease – coal workers’ pneumoconiosis and mine dust diseases



Occupational lung diseases are conditions of the respiratory system caused by workplace exposure to dusts, gases, fumes, vapours, mists and microorganisms.

## What diseases can coal dust cause?

If a worker is exposed to and breathes in coal dust over a long period of time they could develop:

- pneumoconiosis
- progressive massive fibrosis, and
- chronic obstructive pulmonary disease.

Mine dust diseases are caused by long-term exposure to high concentrations of respirable dust, generated during mining and quarrying activities.

## What is coal workers’ pneumoconiosis?

Pneumoconioses are a group of interstitial lung diseases caused by breathing in dust particles.

Coal workers pneumoconiosis (also referred to a black lung disease and miners’ lung) is caused by breathing in coal dust.

Pneumoconiosis can be simple or complicated – it can cause a small amount of scar tissue or nodules. If it is complicated, it can cause progressive massive fibrosis.

## What causes coal workers’ pneumoconiosis?

Workers can develop coal workers’ pneumoconiosis by breathing in coal dust, often in large amounts, over a long period of time (chronic inhalation).

Mine dust can lead to pathological changes in the lungs – which can be fibrotic or nodular such as coal workers’ pneumoconiosis or mixed dust pneumoconiosis. Or they can be non-nodular such as lung cancer.

## Who is at risk of coal workers’ pneumoconiosis?

Workers in the mining industry or anyone who is exposed to coal and dusts associated with mining work.

Workers may be at increased risk of developing coal workers’ pneumoconiosis if they smoke and are exposed to a high level of coal dust over a long period of time.



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### What you must do as a person conducting a business or undertaking (PCBU)

PCBUs must eliminate the risks of respirable coal dust or if this is not reasonably practicable, minimise the risks so far as is reasonably practicable.

Under the model WHS laws, amongst other things, as a PCBU you have duties to:

- identify the hazard (coal dust)
- control the risk of exposure to coal dust
- ensure the workplace exposure standard is not exceeded
- conduct air monitoring if you are not certain the airborne concentration of coal dust exceeds the exposure standard
- provide health monitoring for workers who have been exposed or are at risk of exposure to coal dust

The workplace exposure standard for coal dust varies between states and territories. Contact your [WHS regulator](#) or mining regulator to find out the laws that apply in your state and territory.

### References:

- <https://www.mja.com.au/journal/2016/204/11/coal-workers-pneumoconiosis-australian-perspective>
- <https://www.business.qld.gov.au/industries/mining-energy-water/resources/safety-health/mining/accidents-incidents-reports/mine-dust-lung-diseases>
- <https://www.hopkinsmedicine.org/health/conditions-and-diseases/pneumoconiosis>

### Further information:

Under the model WHS Regulations, PCBUs have specific duties to eliminate the risks to health and safety so far as is reasonably practicable. If it is not reasonably practicable to do so, PCBUs must minimise those risks so far as is reasonably practicable. This includes the risks of diseases caused by hazardous chemicals like coal dust. Contact your [WHS regulator](#) to find out the laws that apply in your state or territory.