# Whole body vibration in mines and quarries

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Whole body vibration (WBV) is vibration transmitted to the whole body by the equipment or plant being operated. It can cause lower back pain, and long-term exposure can cause neck and shoulder problems, herniated discs and early spine degeneration.

Exposure to WBV may contribute to other health effects including cardiovascular, respiratory, neurological, endocrine and metabolic changes, digestive problems, reproductive organ damage and impairment of vision, balance or both.

Follow these four simple steps to reduce risk of exposure.

## Identify

Identify sources of WBV (refer list below)

## Assess

Assess worker exposure to WBV

## Control

Use controls listed below to reduce the risk of exposure

## Monitor

Regular inspection of equipment, worker feedback

## Sources of whole body vibration

Excavators < 25 tonnes

Front end loaders

Underground loaders > 25 tonnes

Rigid and articulated dump trucks

Graders

Dozers, especially ripping

Scrapers

Telescopic handlers

## Some facts about whole body vibration

Consult workers about their experiences with vibration as a first step to assessment of exposure

If you suspect workers may be exposed to excessive WBV, engage a qualified ergonomist or human factors professional to conduct a WBV assessment

Further information can be found in Bad-Vibrations - A Handbook on WBV exposure in Mining on the MinEx website.

## Controls include:

- **Vehicle and seat design**
- **Road and vehicle maintenance**
- **Managing speed around the site**
- **Operator training and awareness**
- **Regular rest breaks and operator rotation**

For more information see A guide to Worker Health in Extractives on the MinEx website.