

Gold Mining

These are the most common injuries and hazards for people working in the gold mining industry, as shown by injury claims.

Face/Eye/Ear

Hearing loss from exposure to industrial/machine noise. Lacerations to face and chipped teeth from tools/equipment bouncing back and hitting face (eg bolt cutters, pipes).

Shoulder

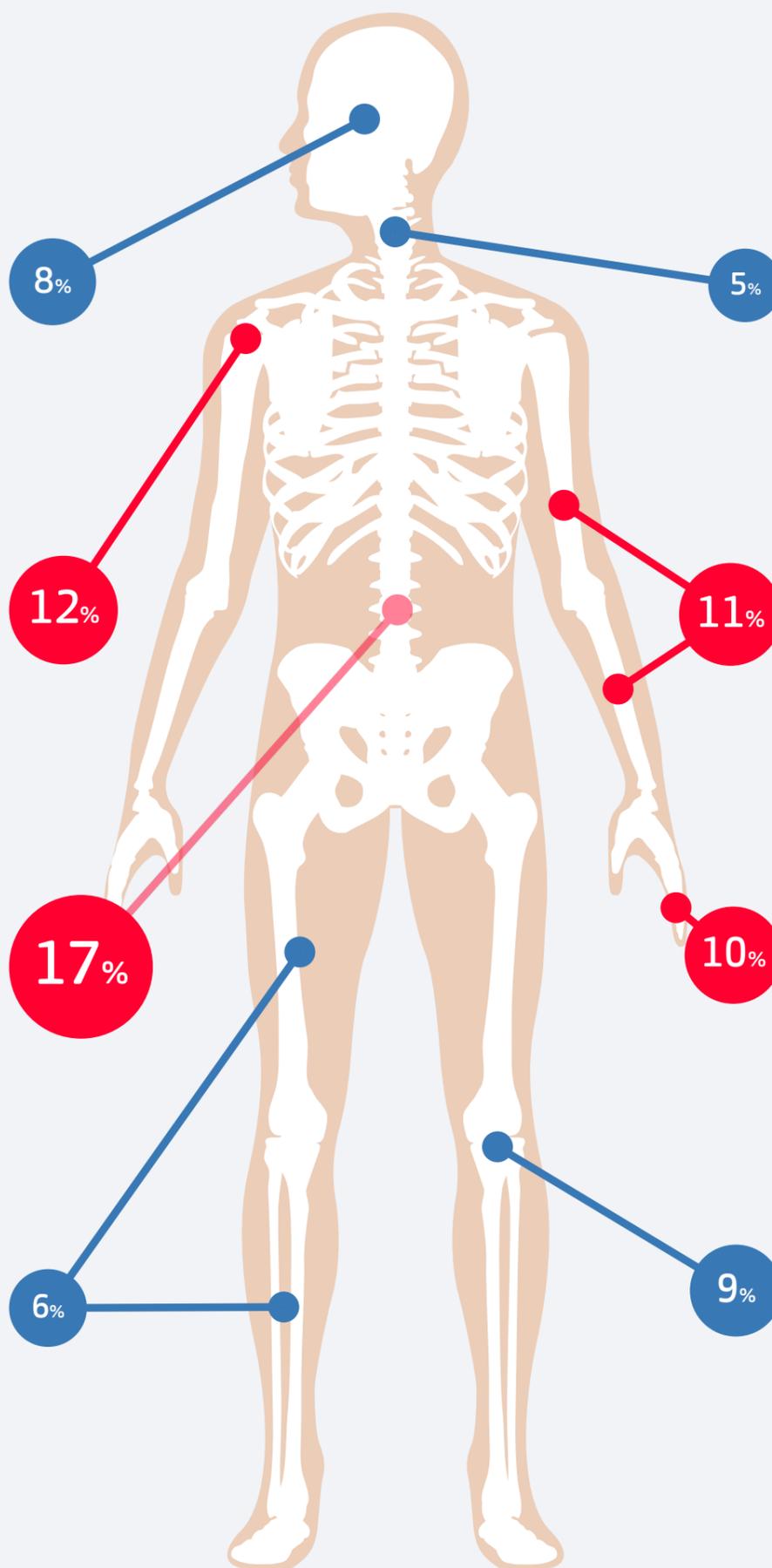
Muscle and tendon injuries from heavy lifting and use of heavy equipment (eg sledge hammers, drills), repetitive movements (eg shovelling, lifting objects above head height), or tripping/falling due to uneven and rocky surfaces, getting in and out of vehicles.

Back

Muscle stress/strain from heaving lifting (eg air pumps, drill rods), repetitive movements (for example, shovelling), driving, getting in/out vehicles, or operating plant.

Leg

Muscle stress/strain and fractures from getting in and out of vehicles, tripping on uneven and rocky ground, or slipping on wet/muddy surfaces. Wounds and lacerations from shards of metal hitting leg whilst hammering, dropping objects.



Neck

Muscle sprains and strains from operating vehicles and plant (eg drilling, reversing vehicle, dropping dirt/rocks bucket too quickly, collisions with other vehicles, or jolting from rough and bumpy surfaces).

Arm

Muscle stress/strain from heavy lifting, repetitive movements and awkward movements (for example, twisting and turning). Fractures from trips and falls.

Hand/Fingers

Muscle and tendon injuries from continuous vibration caused by hand-held equipment. Crush injuries and lacerations from rocks falling on hands, fingers being trapped between objects, or from equipment (eg drills, hose blasters).

Knee

Muscle stress/strain from getting in and out of vehicles, tripping on uneven or rocky ground, or slipping on wet/muddy surfaces.

Safety solutions

WorkSafe expects employers to have safety solutions in place to protect workers from injury and illness.

Below are some common solutions known to reduce the risk of injury. Employers should work together with their employees to determine the most effective solutions for their workplace.

Hotspots

Solution

Exposure to hazardous substances, dust, fumes, gases, and other airborne substances

- Eliminate or reduce health risks by designing work and the workplace to prevent contact with hazardous substances (eg using extraction, dust suppression including water carts and sprays, and ventilation in underground environments).
- Provide dust capturing equipment in dust-producing processes.
- Prevent people from entering the mine after blasting until safe (for example, ventilation and monitoring).
- Ensure appropriate placarding is installed, material safety data sheets (MSDS) are made available, hazardous substances are properly stored, and all controls are maintained.
- Conduct atmospheric and personal air monitoring to determine employee exposure levels and undertake health surveillance.
- Provide appropriate personal protective equipment (for example, respiratory protection). Ensure fit test to face is undertaken.

Heavy lifting, repetitive movements, pushing/pulling objects and awkward postures

- Back
- Shoulder
- Arm

- Mechanise repetitive work and work involving high force such as drilling, hammering or pounding by using rig or vehicle mounted powered equipment.
- Provide appropriate powered mechanical aids and equipment (eg automatic in-feed, forklifts, carryalls) to assist in moving heavy objects (for example, air pumps) or when undertaking repetitive work that involves high force, and ensure they are used and maintained in accordance with manufacturer specifications.
- Where manual handling is required, locate frequently used objects at waist height, and minimise loads by reducing the size and or weight of objects or use mechanical aid including trolleys, conveyors or lifting aids.
- Ensure plant controls are positioned for easy use/reach.
- Provide such information, instruction, training or supervision to employees as is necessary in the selection and use of any manually held or stabilised mechanical equipment and aids, and safe handling methods (eg work is done between shoulder and mid-thigh height and with the elbows close to the body, work upright where possible).
- Ensure employees are not exposed to repetitive work for long periods (eg by using job rotation, work variation, breaks).

Noise

● Face/Eye/Ear

- Ensure employees are not exposed to noise that exceeds the exposure standard by implementing risk control measures.
- Eliminate the source of the noise. If this is not reasonably practicable then reduce the noise level so far as is reasonably practicable (eg buy the quietest tools/machinery available, enclose or isolate noisy machinery, reduce vibration, use barriers or screens, use silencers on air exhausts).
- Arrange for a noise assessment if employees are exposed to excessive noise (for example, workers have to raise their voices to communicate over a distance of one metre) and there is uncertainty as to whether employees exposure may exceed the noise exposure standard.
- If hearing protectors are required to ensure the employee exposure to noise does not exceed the noise exposure standard, the employer must clearly identify by signs, labelling of plant or other appropriate means, when and where hearing protectors are to be worn.
- Separate noisy and quiet processes.
- Implement job rotation to limit employee exposure.
- Provide hearing protection and ensure it is worn at all times, and provide employees with audiometric testing.

Operating vehicles and mobile plant

- Back
- Hand/Fingers
- Knee
- Leg
- Neck

- Construct haulage roads with appropriate material type and size, and maintain roads including filling in potholes to reduce vibration/jarring through vehicles.
- Ensure that all vehicles and powered mobile plant (eg forklifts, trucks, diggers, bulldozers) are used and maintained in accordance with manufacturer specifications, including regularly servicing vehicles to minimise vibration and sudden shocks.
- Ensure plant is set up in a stable manner on firm, level ground, within working radius.
- If guards are used to control risk in relation to plant, ensure so far as is reasonably practicable, that guarding will prevent access to the danger point or area of the plant (for example, moving parts).
- Ensure that seatbelts are installed and operable. Where practicable seatbelts should be interlocked to the vehicle.
- Ensure all operating levers, controls and instruments are suitably identified to indicate their nature and function and located to be readily and conveniently operated.
- Ensure that vehicles and mobile plant access is the appropriate height to reduce strain when getting in and out of vehicle.
- Ensure that any fall from height risks when accessing plant are controlled by using handrails or other appropriate fall prevention systems where practicable.
- Ensure grab rails/fooholds/steps are provided and maintained.
- Ensure that traffic management plans are in place and are followed by all employees and visitors.
- Train employees in the safe operation of vehicles and mobile plant, including the use of fire suppression systems.
- Develop and implement strategies to control any risk associated with employee fatigue.
- Develop and implement strategies to protect person at the mine from any risk to health or safety arising from the consumption of alcohol or the use of drugs by any person.

Slips, trips and falls

- Shoulder
- Arm
- Knee
- Leg

- Ensure floor surfaces in work areas are even, well drained and kept clear of obstructions/debris.
- Provide adequate lighting for work areas and walkways.
- Regularly undertake ground inspection, maintenance, and housekeeping.
- Ensure there are no uncovered openings.
- Keep emergency exits unobstructed.
- Ensure all stairs and steps have handrails and appropriate slip resistance.
- Equip mobile plant with non-slip steps to prevent slips and falls.
- Ensure employees use three points of contact when entering/exiting vehicles.

Using machinery and hand-held equipment

- Hand/Fingers
- Face/Eye/Ear
- Leg

- Assess if a fixed, rig or vehicle mounted powered equipment could be used instead of a hand held tool.
- Provide appropriate powered tools (eg ergonomically designed handheld power tools that are lightweight or able to be supported, low vibration, noise restricted, fitted with safety guards) and ensure they are used and maintained in accordance with manufacturer specifications.
- Ensure cranes and lifting equipment is used and maintained in accordance with manufacturer specifications, and is suitable for the task.
- Provide appropriate personal protective equipment (eg hard hats, gloves that absorb impact energy, welding masks, hearing protection, respiratory protection, safety boots, suitable eye protection) and ensure it is worn.
- Ensure plant controls are positioned for easy use/reach.
- Powered equipment should be selected to provide minimal vibration and be supported during use.
- Install and maintain warning systems (for example, start-up of conveyors).
- Develop and implement strategies to control any risk associated with employee fatigue.

Visit www.injuryhotspots.com.au
WorkSafe Advisory Service Toll-free 1800 136 089

Your health and safety contact is:

You must consult with the people who will be affected by changes before any changes affecting their occupational safety or health are put in place. If someone is injured at work, their employer must ensure they receive proper care and support their safe return to work. WorkSafe Victoria is a trading name of the Victorian WorkCover Authority.