

WCX3B – Whole Body Vibration

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Whole Body Vibration (WBV) – What is it?

Whole body vibration is vibration transmitted into the worker's body

- Comes from contact with a surface that is vibrating
 - i.e., from sitting in or standing on mobile plant/vehicles or other surface that is vibrating
- Frequent exposure to WBV can cause the following work related ill health:
 - Discomfort, reduce performance, aggravate or cause musculoskeletal disorders, cause issues with circulation, digestion and balance and a few other bodily systems



Whole Body Vibration – Health effects



Long term musculoskeletal health effects:

- Neck and shoulder problems
- Herniated discs (in spine)
- Early degeneration of the spine
- Increased risk of developing hearing loss

Other common short term symptoms of exposure to WBV:

- Fatigue
- Headaches
- Loss of balance
- Impairment of vision

Whole Body Vibration – factors that increase health risk

Factors
that
increase
health
risk:

Prolonged sitting with poor posture

Frequent twisting of the spine

Frequent manual handling

Unexpected movements

Cold temperatures

Stress

Whole Body Vibration – Controls / what can be done

Substitution

- Profile/pave high traffic areas (i.e., remove/improve uneven road surfaces)
- Use machinery designed to minimise vibration

Engineering

- Use vibration dampening seats in plant (sitting) / use vibration dampening mats (standing in one place)

Administration

- Scheduled rest times / work rotation – have a break from operating plant for at least 5 mins every hour or rotate through different tasks so you are not doing the same work all day
- Maintain plant as per original equipment manufacturer's specifications, check plant is operating properly prior to use, use the right plant for the job
- Implement VMPs to help manage traffic (and ensure traffic follows best route)
- Implement speed limits (particularly on uneven road surfaces)
- Encourage workers to maintain proper posture when operating plant
- Turn off plant (i.e., no idling if required to wait in place, turn plant off)

Whole Body Vibration – PPE



There isn't really any PPE for WBV...

Some shoes are available that have specialised soles that reduce the amount of vibration transmitted to a workers body and some seat cussions for plant have vibration reducing properties, but neither solution is all that effective → higher order controls are generally needed