

## Whole body vibration



Following a review of hand-arm vibration earlier this month, this article considers a variation of vibration less frequently covered; whole body vibration (WBV). Under *The Control of Vibration at Work Regulations 2005*, employers have a duty, so far as is reasonably practicable, to manage their employee's exposure to whole body vibration, just as they do hand-arm vibration.

Whole body vibration arises from the use of mobile, driveable machinery over surfaces which are generally uneven, over a significant period. The vibration is transmitted through the seat or via the feet of employees, as repeated shocks or jolts. The symptoms of WBV are commonly associated with lower back pain but may also involve musculoskeletal problems and research has even identified links between WBV and prostate issues amongst men.

Whilst little research has been conducted on landscape-specific equipment, research has shown long-term users of tractors, fork-lift trucks and earth moving machinery are at risk from WBV. What research has struggled to differentiate, however, is the effect of other factors such as long periods of time sitting down and poor posture. Both factors must also be considered when analysing use of mobile machinery.

The Health and Safety Executive (HSE) has issued useful guidance for employers and employees, which helps assess and reduce the risk from exposure to vibration. Whilst the most preferable solution is eliminating the risk by changing the work method or machine type, this may not be possible. Unlike hand-arm vibration, where machinery may be cheaper to replace or upgrade, the cost of renewing or upgrading large machinery may be prohibitively expensive.

The solution for most employers is likely to focus on:

1. Limit machinery user's daily exposure (i.e. the amount of time spent operating machinery)
2. Not exposing machinery user's to levels of vibration which exceed HSE limits (i.e. the severity of exposure)

HSE highlight the importance of reducing exposure as low as possible, which may result in measures such as spreading a task over several days or sharing amongst operatives.

## Control measures

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- Choosing equipment of appropriate ergonomic design
- Correct choice of seat – maintained correctly, adjusted correctly for user
- Correct choice of tyres – inflated correctly
- Regular and correct maintenance of vehicle
- Ensuring work schedules incorporate rest periods of a suitable length. HSE recommend incorporating a break between periods of operating mobile machinery and heavy handling
- Protecting employees from cold and damp – cold may accelerate the onset or worsen the severity of back pain

#### HSE guidance

Whole body vibration calculation: <http://www.hse.gov.uk/vibration/wbv/calculator.htm>

Advice for employers on the Control of Vibration at Work <http://www.hse.gov.uk/pubns/indg242.pdf>

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