Hand-Arm Vibration (HAV)

How can we manage vibration in the workplace?

Worker

Hazard Identification

Risk Assessment

JHSC, H&S Rep., H&S Professional Ergonomist Engineer, Manager, Supervisor, Employer

Symptoms reported to supervisor

Equipment operation (i.e. report equipment that isn't working, ensure it's maintained)

Equipment design review(i.e. procurement, change management)

Hazard(s) identified in the workplace

Consider tools, environment, exposures and existing control measures. (i.e. using a checklist)

Medical assessment

(i.e., Stockholm Sensorineural Screening Tool)

Trained professional conducts assessment

Health and Safety Professional, Ergonomist, Industrial Hygenist

 On-site vibration measurement with tool in regular operating conditions. Accelerometers to be attached to the tool. Operator works for approximately 2 hours. Post exposure analysis to determine vibration levels and comparison to the appropriate standard (listed below)

ISO Standards – Measurement & Evaluation

5349-1:2001 – Tools with 2m/s² levels, when used for 8 hours per day, lead to increased risk of HAVS

ACGIH Guidelines

Hand-arm vibration Threshold Limit Values (TLV) for a frequency-weighted, root-mean square daily (8 hours) exposure:

- Daily exposure limit value (ELV): 5m/s²
- Daily exposure action value (EAV) of 2.5m/s²

Other Standards/Guidelines:

- ANSI S2.70-2006
- EU Directive 2002/44/EC

Compare results of assessment to guidelines

GREEN

No action required (i.e. Exposure < EAV, no worker symptoms)

YELLOW

Consider further controls (i.e. Exposure > ACGIH EAV)

ORANGE

Further controls necessary (i.e. Exposure > ACGIH ELV)

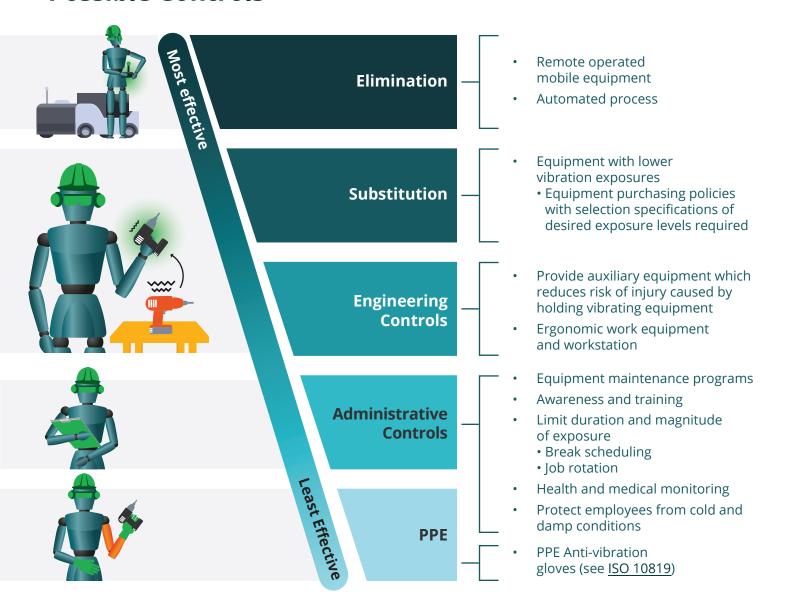
See next page for examples of controls







Possible Controls



When vibrating tools are used in the workplace, it is recommended to develop procurement procedures to purchase tools with lower vibration exposure emissions, and develop and implement regular tool maintenance schedules.



Visit msdprevention.com/ vibration

for more MSD prevention & vibration resources







