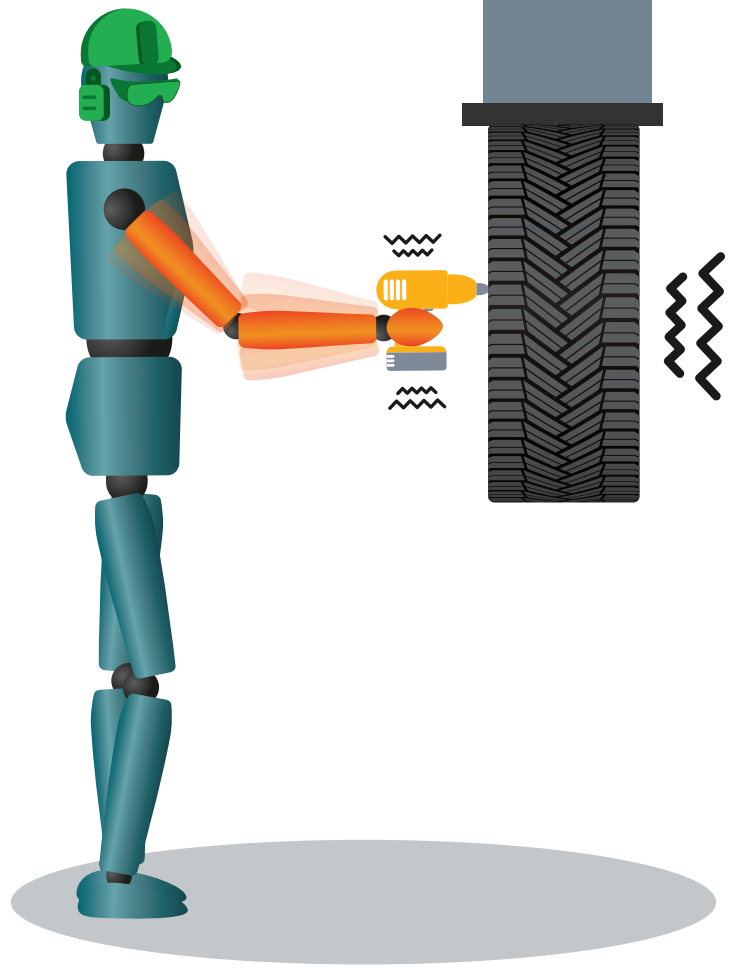


What is Vibration?

Vibration is a mechanical form of energy produced when an object moves back and forth repeatedly (i.e. oscillation). Vibration travels from an object such as a piece of equipment, hand tool, vehicles, or standing work surface into the body. Not all vibration is bad. It depends on the:

- magnitude (level) of vibration,
- body area that is exposed (i.e. hands, feet, or whole body), and
- amount of time you are exposed to vibration throughout the workday.



Vibration Exposures

Vibration can enter the body at any point where the body (i.e. hands, feet, or torso) is in contact with the vibrating surface. There are three main types of exposures, which are classified based on the body region that is in contact with the vibrating surface.

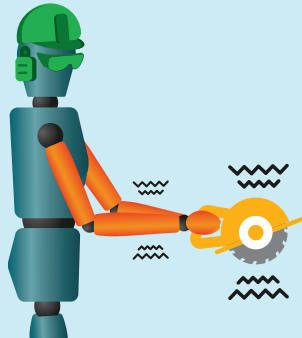
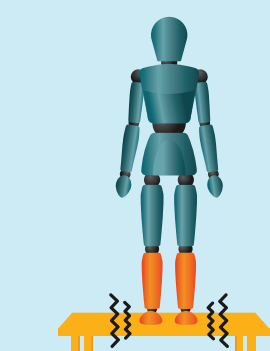



Health Risks

Vibration can cause damage to the nerves, blood vessels, and can increase the risk of musculoskeletal disorders (i.e. back pain). Each body region can tolerate different vibration frequencies. The frequencies which are known to increase risk of injury and MSD are called resonant frequencies.

Types of Vibration Exposures

● Exposure
 ● Primary contact point and at risk area
 ⋈ Vibration
 ● Personal Protective Equipment

Body Region	Common Exposures	Primary Concerns
Hand-Arm	 <ul style="list-style-type: none"> Using a hand held power tool Using hand guided equipment Operating vibrating machinery 	<p>Blood vessel and nerve damage (i.e. loss of feeling)</p> <p>Symptoms include:</p> <ul style="list-style-type: none"> Numbness and tingling where the body makes contact with the tool Loss of blood flow (i.e. finger whitening or blanching) Weak grip and decreased manual dexterity (fine motor control, ex. can't do up a button)
Foot	 <ul style="list-style-type: none"> Standing on a vibrating platform Using a foot pedal on vibrating equipment 	
Whole-body	 <ul style="list-style-type: none"> Sitting in a vibrating vehicle or machinery 	

MSD risk increases with vibration exposure and cold temperatures.
 All exposure types increase risk of noise-induced hearing loss.



Learn more at msdprevention.com/vibration

