



Vibration and Its Impact on the Industrial Worker

Two Primary Sources of Vibration



Hand-transmitted Vibration (HTV)

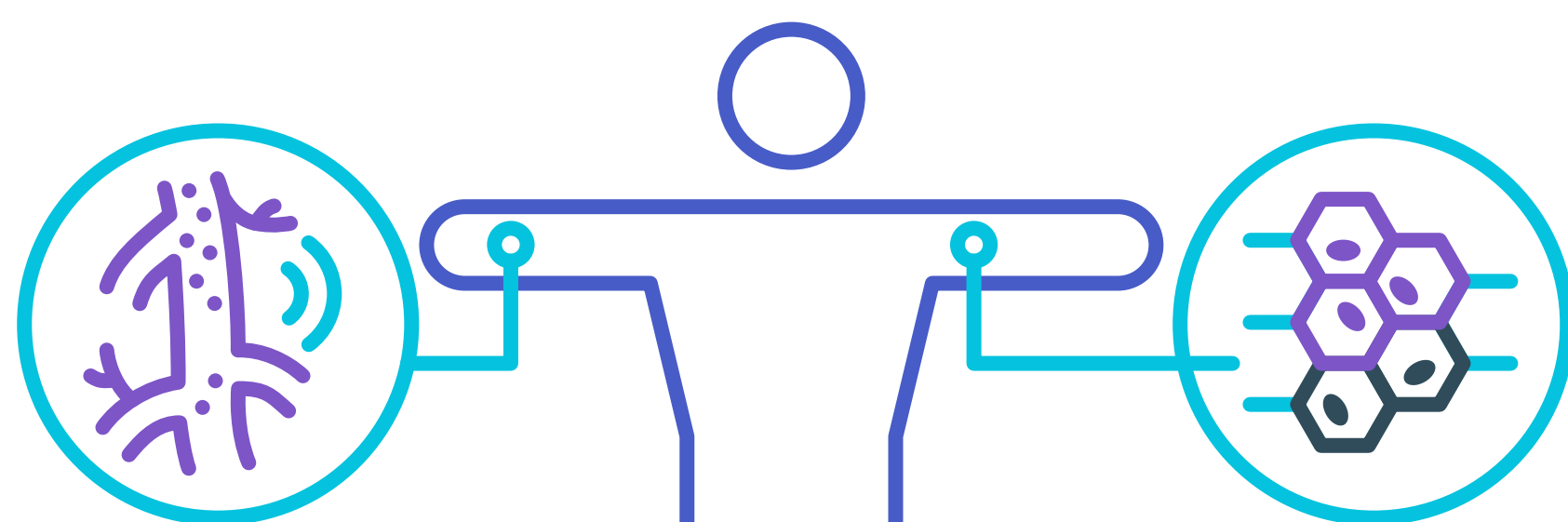
Transmitted through the hand and arm via vibratory tools used in manufacturing and construction



Whole-body Vibration (WBV)

Transmitted through the feet or pelvis when exposed over time to engines, motors, or while riding in vehicles

How Vibration Affects the Body



Vibration, even in small doses, creates brief disruptions in blood flow

When blood flow is decreased, cells and tissues die off

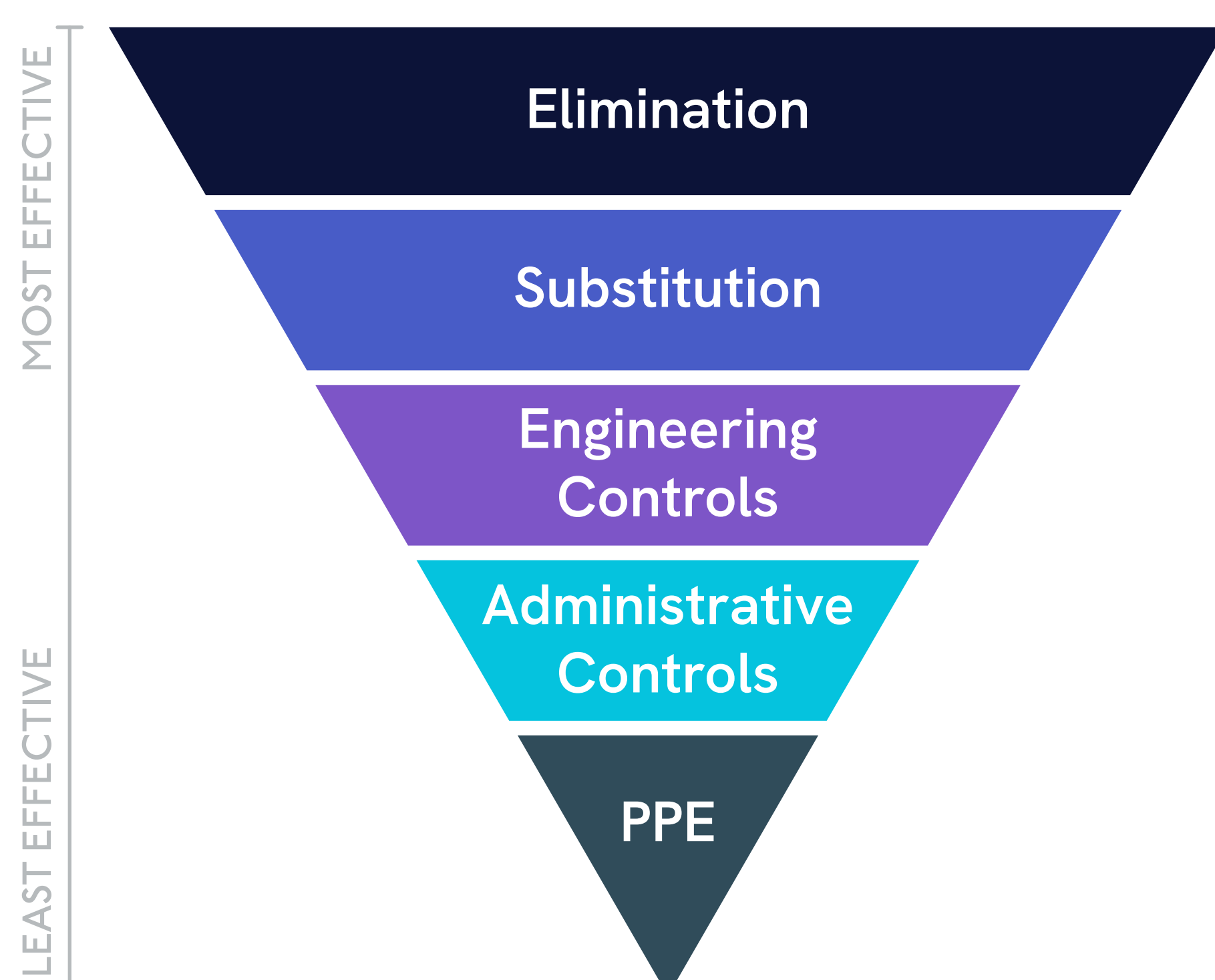
A multitude of conditions can then occur:

- Slower healing times and recovery
- MSK disorders, such as tennis elbow and carpal tunnel syndrome
- Hyposensitivity – numbness, decreased dexterity
- Hypersensitivity – increased sensitivity and/or pain outside of normal
- Increased rate of connective tissue diseases and osteoarthritis
- Increased occurrence of vasospasms and conditions like Raynaud's syndrome

Best Practice Controls

While eliminating the exposure is always best practice, other controls can decrease exposure duration, frequency, and dose.

Hierarchy of Controls



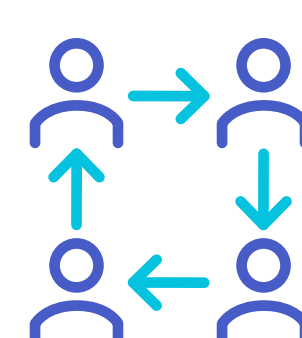
Engineering Controls

- Maintaining and replacing equipment
- Purchasing pneumatic tools with vibration dampening features built-in



Administrative Controls

- Monitoring workers with elevated exposure or higher medical risk
- Rotating workers between tools



Behavioral Controls

- Educating workers on ergonomic principles and methods to reduce risk
- Ensuring tools are used properly