



# KCA TOOL BOX TALK: Repetitive Motion Injuries

Repetitive motion injuries are caused by repeated, prolonged, or excessive strain on a particular muscle group. Some medical complications from overuse are carpal tunnel syndrome, hand & arm vibration syndrome, trigger finger, golfers elbow, and tennis elbow. *Ergonomics* help lessen muscle fatigue, increases productivity and reduces the number and severity of work-related Musculoskeletal Disorders (MSDs). Also, remember that cold muscles are less flexible and therefore much more susceptible to injury and strain from overuse.

**Causes of Repetitive Motion Injuries:**

1. Working in static or awkward positions for extended periods
2. Performing repetitive tasks, too often, too quickly, or for too long
3. Applying excessive force to lift, move, grip, use, or twist an object
4. Operating vibrating tools, equipment, or machinery

**Position**

Holding a static or awkward body position for a prolonged period of time puts unnecessary strain on the same muscles causing a muscle strain injury.

- ✓ Do not work in the same spot for long periods and choose a body position that is comfortable and relaxed (not strained) while working.

**Repetition**

Using the same muscle group over and over causes muscle fatigue. When tasks are continued despite this fatigue, they require greater effort. This forced action causes tiny tears in muscle fibers. And if sore muscles are not given enough time to rest and repair, then strain injuries can result.

- ✓ Vary or alternate job duties to allow different muscles to be used while other muscles are allowed to rest and heal.

**Force**

Force is the amount of effort our bodies use to perform a task, such as lift a box, use a tool, or move an object. Strain injuries can also happen when excessive force is used to perform a task.

- ✓ Do not work with outstretched arms or hold objects far away from the body
- ✓ Use machines or the buddy system for lifting or handling heavy, awkward sized objects
- ✓ Use proper hand grips and lifting form
- ✓ Avoid exerting high amounts of tool force (resulting in red marks or indents in the skin).

**Vibration**

Using vibrating tools causes you to exert more force than usual to control the tool, putting strain on the set of muscles required to apply that force. Failure to take appropriate measures can result in injuries like Hand/ Arm Vibration Syndrome. Similarly drivers of vibrating heavy machinery must exert greater force to turn the steering wheel / operate the controls, and engage more muscles to counter the vibrations in the seat and floor and hold their bodies in an upright position. This type of strain can result in chronic lower back pain.

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