

# Repetitive Strain Injuries

Repetitive strain injuries are a class of injuries to the musculoskeletal and nervous system of the body that can be caused or aggravated by repetitive movements, vibrations, or continual and awkward postures. Repetitive strain injuries most often affect the shoulders, elbows, forearms, wrists, hands, and fingers. These types of injuries are commonly misinterpreted since workers may not recognize that recurring movements over a period of time may cause harm.

## Symptoms

The symptoms of repetitive strain injuries start gradually and can include:

- Pain, including a burning or aching sensation
- Stiffness and weakness
- Tingling, pins-and-needles, or numbness
- Muscle cramps
- Swelling or inflammation
- Sensitivity to cold or hot

## Contributing Factors

Repetitive strain injuries may be caused by:

**Repetition, duration, and pace of work:** Using similar body positions such as reaching up, bending over, or striking awkward postures and movements over an extended period of time.

**Excessive exertion:** Forceful movements can expose workers to the risk of strains and tears when their muscles tire out. These include lifting, striking, pushing, pulling, or carrying.

**Handling objects:** Bulky or long objects that are hard to handle, including badly designed tools, can cause pain, discomfort, and injury.

**Contact stress:** Continuous pressure from a hard surface or sharp edge pressed against a part of the body may cause pain or injury. This is common with office work due to edges of a desk contacting the arm or wrist.

**Vibration:** Vibrations caused by tools and machinery may cause nerve damage and a loss of feelings in hands and arms over time.

**Poorly designed workspaces:** Poor workflow or material storage that require carrying heavy materials over long distances and other unnecessary tasks.

**Poor organization and job design:** Limited breaks between types of tasks; a fast work pace, or lack of sufficient task variability.

**Temperature:** Numbing cold may cause workers to overestimate the amount of force required for the activity and cause each body position and movement to be more strenuous.

## Preventing Repetitive Stress Injuries

- Warm up before carrying out strenuous tasks and stretch as needed throughout your workday.
- Ensure that tools are in good working order. Broken power tools cause excessive vibration. Poorly maintained hand tools may increase the effort needed to use them.
- Always use tools that are easy and comfortable to hold.
- Minimize gripping force or pressure.
- Replace hand tools with power tools whenever possible. Manual tools require the exertion of more frequent and repetitive force.
- Use mechanical material handling systems whenever possible to reduce lifting and carrying.
- Reduce the load and ask for help when required.
- Use anti-vibration power tools and anti-vibration gloves to reduce the potential for nerve damage.
- Take rest periods to avoid continuous exposure to vibration and repetitive or forceful movements.
- Avoid extreme or awkward joint or body positions. Reduce sudden or excessive movement.
- Organize the work area in a way that minimises the need to reach, bend and overextend.