

Hand, Wrist and Finger Safety

To prevent hand, wrist and finger injuries, you need to be able to recognize hazards and know a few simple precautions.

Common Injuries and Causes

- **Wrist fractures:** Are most often caused by trying to break a fall with an outstretched hand. Fractures can also occur when the wrist is caught between objects
- **Hand and finger fractures:** Are generally caused by trapping or twisting the fingers suddenly. Accidentally hitting the finger with a heavy object like a hammer or pipe can also cause a finger fracture
- **Hand sprains:** Occur when the ligaments in the hand or wrist are stretched too far and tear. These injuries can be caused by breaking a fall or handling heavy parts
- **Fingertip injuries:** Fingertips are subject to many different types of injuries: the bones can be fractured, the fleshy part of the finger may be torn, or the fingernail may be damaged. Working with sharp-edged parts increases the potential for these types of injuries
- **Lacerations:** Lacerations or cuts can cause severe bleeding and may also sever nerves, muscles or tendons. Lacerations can occur if you are not careful while handling sharp cutting tools, such as knives or saws
- **Nerve compression:** Results from a swelling of tissues that surround a nerve, causing a loss of feeling or sometimes a tingling sensation. Repetitive movements can cause the swelling of tissues

Identifying Potential Hazards

- **Mechanical hazards** shear, rotate, crush, puncture, etc.
- **Environmental hazards** include heat, sparks, cold, rough-edged materials, electricity, heavy objects, etc.
- **Contact hazards** can be chemicals, alkalis, acids, solvents, etc.
- **Poor housekeeping** increases your risk of injury and includes tools left out, substances not stored, a messy work area, etc.

Increase your awareness of the equipment, energy sources and activities going on around you. Follow your organization's procedures, including lockout/tagout procedures, and job safety analyses (JSAs).

Do NOT use your fingers or hands as brushes or brooms. Avoid contact with hazards. NEVER reach into compactors or balers. If you need to reach something that is in a machine, use an approved rod or grabber.

More Potential Hazards

- Check material for slivers, jagged edges and burrs that can nick or cut (file down, pad or tape sharp edges and wear cut-resistant gloves for added protection)
- **Cutting tools** require you to follow employer practices that may include wearing cut-resistant gloves and sleeves
- **Pinch points** are found where two metal objects come together, like when handling compressed gas cylinders or working around mesh gears, rollers and presses
- **Hazardous chemicals** (such as corrosives) can cause irritation and burns (follow employer and SDS instructions)
- Follow employer instructions for handling and PPE when you may be exposed to **pathogens** (such as bacteria and viruses, especially during medical treatment)
- **Tools and machines** can be especially dangerous because of moving parts
 - Use tools for their intended purposes and follow employer training about hand and power tool safety
 - Make sure **machine guards** are in place
 - Make sure equipment is operating properly. Know your equipment!
 - Do not wear jewelry, such as watches and rings, or loose clothing
 - Use good judgment, be prepared for anything and don't reach where you cannot see
 - Secure materials before applying power tools

Identify "hidden" hazards that could lead to injuries:

- Repetition
- Strain
- Pressure from hand tools
- Vibration from grinders, jackhammers and other vibrating equipment

Inattention can cause critical errors: eyes and mind not on hands/task; hands, wrists and fingers in hazardous areas; and losing grip. Pay attention, pause when you need to, and ask for help.

Ergonomic Factors

Repetitive motion, vibration and contact stress can harm hands, wrists and fingers. Exposure over months or years can result in serious disorders, like carpal tunnel syndrome.

Symptoms of too much strain or pressure on the hands, wrists and fingers include pain, numbness, tingling, throbbing, weakness, clumsiness and loss of dexterity.

To reduce the risk of injury, alternate different types of work; vary hand, wrist and finger movements; and use power tools instead of hand tools.

Tool Use

- Prolonged or frequent use of tools that vibrate a lot, such as jackhammers or grinders, can lead to damaged circulation, pinched nerves and stressed tendons. Take frequent breaks and wear insulated gloves

Gloves

Gloves serve as a barrier between you and the hazard when you can't eliminate the hazard through other means.

Different types of gloves offer varying levels of protection against hazards like chemicals, water, heat, pressure, vibration, dirt and cuts.

You employer will determine which gloves best protect against the exposures you may encounter using information from Safety Data Sheets (SDSs) and safety assessments. If you have questions about which gloves to wear, please ask.

Wash your hands after potential exposures, after removing gloves, and before eating, drinking, smoking or touching your face.

Other factors when wearing gloves:

- Length (some gloves protect wrists and forearms, such as for welders))
- Gloves must fit properly:
 - If they are too large, they may get caught in moving parts
 - If they are too small, they will be uncomfortable and wear out too soon

Be aware that sometimes you should NOT wear gloves

- Some machines can grab a glove and pull your hand into rotating parts

Because each glove has its own protective qualities and limitations, be sure to consult with your employer to choose the correct hand and arm protection for the job

Your employer will provide guidance about glove care, maintenance and storage.

Check reusable gloves for defects like rips or holes and follow your employer's procedure to take them out of service, replace or dispose of them.