



Finger, Hand, and Wrist Injuries

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A 5-Minute Safety Training Aid

Whether the hands are of a machine operator, lab technician or office assistant — a worker's hands are one of their most important "tools" used in work. Yet over a quarter of a million people suffer serious (and often disabling) hand injuries each year. By recognizing hand hazards, following established safety guidelines, and using protective guards, shields, gloves, and other personal protective equipment, employers and workers can save hands from injury and disability.

Recognizing Hand Hazards

One of the most serious, yet common causes of hand injuries, is the use of unprotected or faulty machinery or equipment. Failures to use push-sticks, guards, and kill-switches, or follow appropriate lockout/tagout procedures, are among the leading industrial hand hazards. Wearing jewelry, gloves, or loose-fitting clothing around moving parts can also lead to injury. Chemicals, corrosives, and other irritating substances can cause burns and skin inflammation unless appropriate hand protection is used. Temperature extremes and electrical hazards are other common causes of hand injuries. In addition, constant repetitive motion (as in assembly-line work or painting) can cause undue stress on the wrists and hands unless protective measures are taken.

Eliminating and Controlling Hand and Wrist Hazards

When planning the working day, employers and workers should use the Job Safety Analysis (JSA) process to identify the hazards in each individual phase of the job task. Hand and finger positioning is the number one cause of hand injuries. Communication and teamwork are two very important areas in determining and eliminating hazards of the job. During the JSA process, ensure that everyone is aware and knowledgeable of all hazards and risks associated with the job at hand. Taking time to identify hazards can eliminate most potential hazards for hand injuries. The following list provides guidelines for hand safety that can help protect hands from injury and disability.

- Be alert to potential hand hazards *before* an accident happens.
- Use hand tools, do not use your HAND as the TOOL.



Photo courtesy University of Wisconsin-Milwaukee, Environmental Health, Safety and Risk Management Department/David Melitz

- Perform a JSA to identify the associated hand hazards.
- Be alert to possible unguarded pinch points.
- Use push-sticks, guards, shield, and other protective devices when appropriate. Do not remove guards.
- Remove any jewelry such as necklaces, rings, ear rings, and wristwatches. Jewelry should not be worn within an arm's length of rotating or operating machinery, tools, or electrical switch areas.
- Be aware of proper body position when working around stationary and moving equipment.
- When working with chemicals, know your hazards by reading the Material Safety Data Sheets.
- Use proper Personal Protective Equipment (PPE) and position your body a safe distance from chemicals as you work with them.
- Do not wear loose clothing, such as unbuttoned shirts and sleeves, loose shirttails, ties, and unzipped pant legs on coveralls when working.
- Inspect equipment and machinery before and after tasks to make sure that it is in good operating condition.
- When working with machinery, utilize proper guarding around moving equipment. Always replace guards when any maintenance work is completed.
- When general maintenance or repair is needed, always

use proper lockout/tagout procedures specified for your work area. Ensure that all affected workers are adequately informed.

- Always wear the proper hand PPE associated with the job task. For example, wear rubber gloves when mixing chemicals, electrical gloves for any electrical work being performed, steel mesh gloves when cutting, and cotton or canvas gloves during normal daily tasks. When wearing gloves, be sure they fit properly and are rated for the specific task.
- Use brushes to wipe away debris.
- Select tools designed to keep wrists straight to help avoid repetitive motion/overuse problems.

Choosing the Right Glove

There are various ways in which fingers and hands may be injured, but the use of personal protective equipment (such as the right kind of gloves) can provide protection against many hazards.

To give adequate protection, gloves should:

- be appropriate for the job,
- fit properly, and
- be comfortable.

Choosing the right size glove will prevent the glove itself from becoming a hazard. When gloves become worn, torn, or contaminated, they should be disposed of and replaced. Remember to be alert, follow procedures, and “Never put your hand in a place that you can not see!”

For more information on Job Safety Analysis (JSA) refer to the following Texas Department of Insurance, Division of Workers’ Compensation (TDI-DWC) publications available at <http://www.tdi.state.tx.us/wc/safety/employers.html> under “Safety Resources”:

- Job Safety Analysis STP
- Job Safety Analysis and Task Training

Remember to practice safety. Don’t learn it by accident.

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