

## Keep Your Hands to Yourself!

Just about everyone that has worked on a jobsite, as well as most Do-It-Yourselfers, has experienced an injury caused by a hand tool. Most even seem to expect it to happen; assuming it will be a minor injury like a scrape or a bang on a knuckle. However, hand tools can cause very serious, career ending accidents like the loss of an eye, a finger or even a hand.

Be aware that hand tools in this context doesn't include hand operated power tools. A hand tool is a portable piece of equipment that is used to assist our hands and make a task easier and quicker to complete. These tools are designed to complete tasks that would be very difficult, if not impossible, to complete with just the hands. Hand tools can be placed into many categories based on how they assist with the completion of a task.

These categories include:

- Impact Tools like chisels, punches and hammers
- Wrenches
- Bladed Tools like knives, axes and wedges
- Pliers and Nippers
- Vises used to hold materials steady that are being worked on
- Saws
- Crowbars
- Jacks

Every trade won't have a need for tools in all these categories, but on a multiple employer site with many different trades, employees have a very good chance of coming upon most of them. The majority of injuries caused by these relatively simple tools arise from using a tool for a purpose that it wasn't specifically designed.

Pliers are often considered to a general-purpose tool and are meant for gripping and cutting operations only. However they are very often used as a substitute for wrenches. This is discouraged because the jaws of the pliers are flexible, frequently slip and don't hold the work securely like a set of pliers is designed to.

Most injuries that are caused by hand tools involve an injury to one or both hands. Each human hand is a complex engineering masterpiece. Each hand is made up of a collection of 27 bones, 17 muscles and associated tendons, ligaments, blood

vessels and nerves. These many pieces come together to allow you to perform all the varied tasks that make you a skilled and valued employee. Not only does having use of your hands allow you to accomplish tasks at work, they also allow you to live a full life; dress yourself, open a door or even just feed yourself. A hand injury may not be life threatening but will probably be life changing since these injuries can be very difficult to repair.

Injuries related to hand tools make up between seven and eight percent of all compensable injuries each year, many involve severe, permanent disabilities. Some of the more common hand tool-related injuries and possible causes are:

- Puncture Wounds- Very commonly result from the use of a screwdriver with a loose handle. This can allow the hand to slip causing the blade to cut or puncture the hand and fingers.
- Loss of an Eye and/or Vision- Using impact tools (hammers, chisels, etc) without proper eye protection. The strike of one of these tools can cause a chip or fragment to fly into the eye.
- Broken Bones- This is a common injury cause by using the wrong hammer for a task or using something other than an impact tool for that job. A very common injury caused by this is smashing and breaking a bone in the hand.
- Severed Fingers, Tendons and/or Arteries- Using a dull knife or chisel or even using a screwdriver improperly will often result in a crippling injury. Medicine is now capable of reattaching these structures but they can still be career ending.
- Bruising- This is a common injury on any jobsite but the chances of it happening are increased greatly by using hand tools incorrectly or using the wrong tool for the job.

Hand tools often contribute to what are referred to as ergonomic injuries. Ergonomic injuries are injuries to the muscles, tendons, joints and nerves, the so-called soft tissue of the body. These injuries include strains and sprains to many body parts, inflammation of tendons (or tendonitis) as well as carpal tunnel syndrome of the hands. These types of injuries can occur all at once or develop over time and may require surgery to repair.

As with any safety issue on a jobsite, prevention is the best way to keep employees safe. Using a tool only for its designed task is an easy way to prevent injuries. It is also important to visually inspect a hand tool before each use for any signs of wear or defect. Any tool that is found to be defective should be repaired or tagged as "DEFECTIVE" removed from service and replaced. At the end of each shift, hand tools should be cleaned, sharpened if necessary, and stored in a tool box or on a tool rack to help keep them in good working order.

Because of your choice of careers, your hands are your bread and butter, a necessity to your employment. Any one of these injuries can cause a permanent disability that could quite possibly end your career on a worksite. The question then becomes how you will continue to feed and care for your family. These injuries don't have to happen; they can be easily avoided by paying attention to the task at hand and using the correct tool for that task.

*For additional help with safety and OSHA compliance, take advantage of the resources available through NCMA. These resources include the NCMA Block Plant Safety Software. The software is available from NCMA at (703) 713-1900 at a cost of \$150 for up to 3 plants/year (nonmember \$450).*