# Safety Talk

# Hand Tool Safety

## Before you begin

The greatest hazards posed by hand tools result from misuse and improper maintenance. Review the history of hand tool incidents in your organization and the action plans designed to correct or avoid future possible incidents.

## Introduction

One of the key issues associated with hand tool safety is choosing and using the right tool. Unfortunately, many people use tools improperly at home, where they improvise with what they have on hand. Also, many people view hand tools as simple to use, so there is little concern for safety. In reality, a person using hand tools, no matter what they are, should always follow safety precautions and the manufacturer's instructions. Injuries range from simple cuts, contusions, and abrasions to amputations, fractures, and punctures.

The fact that nearly everyone uses hand tools in some fashion further complicates the education process. By looking at the injury statistics for your organization, you can discover valuable clues about the tools workers are misusing most often.

Perform a survey of your organization's hand tools. Locate a representative sample of the tools for the presentation. Become familiar with your organization's injury experience and know the proper way to use, inspect and store those tools. Typical hand tools workers use in your organization could include hammers, saws, pliers, wrenches, screwdrivers, and knives. Below are examples of improper use of hand tools.

- Pushing rather than pulling a wrench to loosen a tight fastener.
- Bending metal with undersized pliers, which can damage the pliers and the metal.
- Holding an item you're working on in one hand while attempting to remove a screw with a screwdriver in the other hand.
- Cutting toward your body with a cutting tool.
- Using dull cutting tools.
- Filing materials not properly secured in a vise with no handle on the file.
- Using a tool not sized properly for the job (e.g., sockets that are slightly larger than the fastener).

## Definitions

**Hand tool**: Tools that are powered manually; hand tools include anything from axes to wrenches.

**Power tool**: Tools powered by electric, pneumatic, liquid fuel, hydraulics, or powder actuated cartridges.

## Discussion

Inspect tools before each use to make sure they are in good condition. Have a qualified person repair or replace damaged tools before using them. The greatest hazards posed by hand tools result from misuse and improper maintenance. Examples include the following:

- A hammer with a chipped head and/or with a loose or broken handle.
- A screwdriver with a worn or broken tip.
- Any cutting tool with a dull surface.
- Chisels with a mushroomed head.
- Tools that have had their temper removed or modified due to excess heating.

Now that we have listed some of the problems associated with the use of hand tools, have the group discuss ideas that you can use to reduce the potential for injury while using hand tools both on and off the job.

General safety rules for hand tool usage include the following.

- Selecting the correct tool and the right sized tool for the job
- Inspecting tools for damage before attempting a task.
- Keeping tools clean and cutting tools sharp.
- Carrying tools in a manner that prevents cuts to yourself or someone else, especially if you should fall.
- Never striking a screwdriver with a hammer.
- Never using wrenches or other tools as hammers.
- Always passing tools to others handle first and never throwing tools to another person.
- Ensuring workers have proper training before using a particular tool for the first time.
- Transferring tools to a work area by rope or bucket when using a ladder or taking tools to an elevated surface by ladder.
- Storing tools with sharp edges safely in your storage device.
- Wearing proper personal protective equipment (e.g., safety glasses, face shields, gloves, etc.) when using hand tools.
- Cutting away from your body to avoid injury if the cutting device should slip.
- Taking advantage of the ergonomically shaped handles available on some tools and holding tools in a manner that minimizes stress to the hand, wrist, and arm.

## Conclusion

Make sure employees have the appropriate training for the tools they use. Five basic safety rules can help prevent hazards associated with the use of hand and power tools.

1. Keep all tools in good condition with regular maintenance.
2. Use the right tool for the job.
3. Examine each tool for damage before use and do not use damaged tools.
4. Operate tools according to the manufacturers' instructions.
5. Provide and properly use the right personal protective equipment.

Employees and employers should work together to establish safe working procedures. If a hazardous situation is encountered, it should be brought immediately to the attention of the proper individual for hazard abatement.

## Group activity

- Conduct an inspection of the hand tools within your organization and determine if they still can be used or need to be replaced or repaired.
- Discuss some areas within the organization where tools need to be stored and stored properly.
- Discuss methods for proper tool inspections for your organization (schedule, checklists, etc.).

**Resources**

OSHA: Safety and Health Topics – Hand and Power Tools
https://www.osha.gov/SLTC/handpowertools/index.html

ChooseHandSafety.org
https://choosehandsafety.org/

ISHN: Inspect Hand & Power Tools Before Using
https://www.ishn.com/articles/109516-inspect-hand-power-tools-before-using

Canadian Centre for Occupational Health and Safety: Hand Tools – General Hand Tool Operation
https://www.ccohs.ca/oshanswers/safety_haz/hand_tools/general.html