Facilities & Services
DIVISION OF SAFETY AND COMPLIANCE

Tool Box Talk
Hand Protection

How would you answer the question, "What is the most used tool in construction?" Some people would name a commonly used hand tool like a hammer or screwdriver. Others might respond with any number of power tools. But the correct answer is deceptively simple. The most used tool on any job site is the human hand.

Think of almost any task at your worksite, from sweeping up construction debris to skillfully using a finishing trowel. Your hands and fingers are the tools you use every day. Try writing without using your thumb or holding a hammer with only two fingers.

Hand protection protects against cuts, punctures, abrasions, thermal burns, vibration, chemical exposures, and electrical shock. There is not a single glove that will protect from all hazards. Selection of gloves must be based on the hazards that are present, the job task, work conditions, and the duration of use. Don't use gloves that are torn or damaged. Inspect gloves prior to each use. If gloves are to be reused, follow the manufacturer's instructions for proper decontamination and storage. It is important to note the expected service life of the glove as well, to plan for expected disposal times.

There are many hazards on construction sites that can result in a hand injury, including:

- Punctures, cuts or lacerations caused by contact with sharp, spiked or jagged edges on equipment, tools or materials
- Crushed, fractures or amputations caused by contact with gears, belts, wheels and rollers, falling objects, and rings, gloves or clothing getting caught and putting your hand in harm's way
- Strains, sprains, and other musculoskeletal injuries caused by using the wrong tool for the job, or one that is too big, small or heavy for your hand
- Burns caused by direct contact with a hot surface or a chemical
- Dermatitis and other skin disorders caused by direct contact with chemicals in products and materials

Gloves are perhaps the most commonly used type of PPE. They provide protection to fingers, hands, and sometimes wrists and forearms. Ideally, gloves should be designed to protect against specific hazards of a job being performed. Types range from common canvas work gloves to highly specialized gloves used in specific industries.

Good examples of job-rated hand protection are those items designed for work with electricity - special rubber gloves and lineworkers' rubber insulating sleeves. The gloves are made of natural or synthetic rubber and are color coded to correspond with their level of voltage protection.

Assure that the glove will provide adequate protection for the chemical to be encountered. If multiple chemical hazards exist, base the effectiveness of the glove on the chemical with the fastest breakthrough time. Rubber, vinyl or neoprene gloves are also used when handling caustic chemicals like acids, cleansers, or petroleum products. Leather gloves or leather reinforced with metal stitching useful for handling rough or abrasive materials. Metal mesh gloves are rated as being safe for use

with certain kinds of chemicals. If you select your own PPE, make sure you select the proper type of glove for the work you're doing that day.

In addition, wear only gloves that fit your hand. Proper fit is important. Gloves that are too small can tire your hands and gloves that are too large are clumsy to work with. Gloves should be worn with great caution near moving equipment or machinery parts. The glove could get caught and pull your fingers or hand into the machinery. Gloves should be given proper care and cleaning. They should be inspected regularly for change in shape, hardening, stretching, or rips.

Follow the work practices and use the equipment and gloves provided by your employer.
Gloves and safety procedures won't work if they're not used or followed. Be aware of the job tasks, equipment and materials that can create a risk for a hand injury or put your skin in contact with a chemical, and know the steps that should be taken to prevent exposures and injuries.

- Always stay alert and focused on keeping your hands safe not just at the start of work or a task
- Keep guards on machinery and power tools in place. Don't remove or reposition them
- Use tools and equipment designed for the work being performed and use them as instructed by your supervisor and/or the manufacturer
- Don't put your hands or fingers near the moving parts of a power tool or equipment. Make sure machinery, equipment and power tools are completely off before you try replacing, cleaning or repairing parts. Follow lock-out/tag-out procedures
- Identify safety features on tools and equipment before you use them, such as emergency off switches
- Check tools and equipment to make sure they are in proper working order before beginning a task
- Keep hands and fingers away from sharp edges (blades, protruding nails, etc.). Never cut toward the palm of your hand.
- Select hand tools that are ergonomic for your hand (the right size, lowest weight, and have features such as grips, anti-vibration handles, handles that allow you to work without excessive bending your wrist)
- Wear gloves that fit your hand and are right for the work being performed. Not all gloves protect against all hazards
- Do not wear rings, other jewelry or loose articles of clothing that could get caught on a moving object

References
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