

TerranearPMC Safety Share

Robert Brounstein

Week of January 15, 2018 – Hand Safety

It has been said that the human body is an engineering marvel. And that includes our hands. Yes those appendages located at the distal reaches of our arms for which we use for countless functions such as playing a musical instrument, painting or for performing daily work tasks with computers or even making a sandwich; the hands are indeed, sophisticated engineering mechanical devices. They consist of 27 bones, with countless ligaments, muscles, tendons, nerves, blood vessels, skin and nails (ten of those!). Working in unison, they provide strength and dexterity which enable us to perform a multitude of motions from routine tasks to complex actions.

Because of their tremendous versatility, hands are susceptible to many types of injuries. These include strains and sprains from excessive force, excessive repetitive motion, awkward posture, contact with surface conditions, skin irritation from contact with hazardous substances; burns from exposure to electricity, chemicals and hot substances, punctures from tools and other sharp objects, lacerations, cuts - ranging from minor to major if tendons or nerves are severed - fractures, broken bones from being crushed or falling and amputations, resulting in a loss of part or all of the hand. Wow, that's a lot of potential injuries! So, not surprisingly, hand injuries represent nearly a third of all reported workplace incidents. Approximately 75% of industrial injuries that cause partial disability involve the hands; over 16 million individuals seek emergency care each year for hand injuries. As a matter of fact, a hand injury occurs in the workplace every 32 seconds.

As with accidents in general, the key to hand injury prevention is YOU. Of course, there are safety regulations and corporate procedures written to help protect us from injury, but the bottom line is *Safety* is a personal responsibility; you are responsible and accountable for your safety and that of your co-workers. And as is the case with so many accidents, hand injuries are preventable. It requires a respect for the hazard and complete commitment on your part; you need to be conscientious of where your hands are at all times.

The consequences of injuring your hand by coming in contact with a hot object may be strong enough to change or control your actions for a couple of weeks, but in six to eight months, will it be forgotten? What about removing the guard on a piece of equipment to unclog a jam? If you lost a finger, would it change your respect for the potential hazard?

Hand injury prevention begins with a recognition and respect for the hazards. Because we use our hands so frequently, we can start to take them for granted and not truly respect the potential risk we place on them.

An interesting point to note is that many hand injuries involve your feet! Workers, who lose their balance, slip on surfaces or trip over hazards can sustain wrist and hand injuries. Poor housekeeping is a contributing cause to these types of injuries. Proper housekeeping is an essential element in a safe work environment.

A common hazard for hands is when we use hand tools. These are non-powered tools, which can include hammers, screw drivers, chisels, knives, wrenches and more. The greatest hazard posed



TerranearPMC Safety Share

by hand tools results from the improper use and maintenance of the tool. Use the tool only for its designed purpose. Hand tools should be inspected before each use; make sure they are clean and in working order. A defective tool should be repaired before use or removed from service.

One of the most common causes of hand injuries is blunt trauma; this usually occurs around machinery and moving equipment when established procedures are not followed or are bypassed. Because of the weight and force often involved, the consequences can be severe. The best way to prevent these kinds of injuries is to isolate energy sources and lock out equipment before placing your hands in potential points of contact. A staggering number of workers are injured each day due to failure to properly lock out and tag out equipment. When working around mechanized equipment loose clothing or jewelry can get caught in equipment and pull your hands in. In these situations, gloves can be a hazard rather than a help! Make sure guards are in place while reporting any missing guards to your supervisor.

When properly selected and used, gloves can help reduce hand injuries. However, using the wrong glove can result in serious injury. The wrong size glove can cause extra stress on the hands. The wrong type can provide a false sense of protection, and used in the wrong situation, can create a safety hazard.

Different types of gloves provide different types of protection. As with any type of PPE, it is important you know the purpose and limitations of the glove you use. Be familiar with the types of tasks you perform and the substances you may be exposed to. Gloves can provide protection against sharp objects, electrical burns, hot objects, chemical exposure and environmental elements. And remember to inspect gloves before each use, examining them for excessive wear, cracks and other signs of defects that may compromise their protective ability is your responsibility. Remember it is the user that will suffer the consequences of improper PPE.

Contact with chemicals can cause burns, rashes and skin irritation. Use the right glove for the chemical hazards you are exposed to; the container label and Safety Data Sheet can provide valuable information for proper selection.

Musculoskeletal disorders, MSD's, also referred to as repetitive motion injuries are caused by excessive force, excessive repetition and awkward posture. These types of injuries are beneath the skin to the muscles, tendons, and ligaments of the hand and wrists. MSD's are not the result of a single event like other hand injuries, but are the result of cumulative exposures. Common symptoms can include pain, numbness, tingling sensation, swelling and tenderness to the touch. Preventive measures to reduce your exposure to musculoskeletal disorder risk factors include proper tools selection, proper posture and work organization. Select tools that reduce the required force and awkward wrist positions.

Injuries occur because your hands were in the wrong place at the wrong time; don't allow that to happen to you. You control the safety of your hands. You have a choice; don't compromise your safety to save a few minutes. Respect the risk and keep your hands out of harm's way.

And those who were seen dancing were thought to be insane by those who could not hear the music - Friedrich Nietzsche

