

Preventing Hand Injuries In Construction

The classic Hollywood hand tool gag—where a worker hits his thumb with a hammer—is more than an on-screen laugh line. It happens on construction sites often. Many workers don't report these types of injuries unless they need first aid. And the same goes for most injuries from utility knives, screwdrivers and other manual hand tools. Yet even with workers' tendency to underreport injuries to the hand, fingers or wrist, these made up 25 percent of all non-fatal construction injuries in 2004 and cost employers more than \$11 million in claims.

Fortunately, a simple, low-tech item can reduce hand injuries: task-appropriate gloves. While no glove can protect against a hammer strike, a study by the Liberty Mutual Research Institute for Safety shows that wearing gloves lowers the risk of acute occupational hand injuries by 60 percent to 70 percent.

To adequately protect workers, don't purchase discount center garden gloves. Evaluate the tasks workers perform and determine what ANSI/ISEA 105 cut-resistance level of glove is required. For example, a glove rated ANSI/ISEA Level One can take up to a pound of force and works best for light work. At the other end of the spectrum, a Level Five-rated glove can endure more than eight pounds of force. Vendors can even recommend the right glove for specific chemical use.

Construction workers often wear leather gloves, rated ANSI/ISEA Level Two or Three. But there are different grades of ruggedness in leather gloves and many are not puncture-resistant. Workers should test a variety of gloves to see which ones are right for the job.



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PROTECT AGAINST ALL HAZARDS

Workers using hammers are not the only ones at risk for hand injury. Simply handling materials around the worksite—moving sheet metal, using knives or other hand tools—results in 45 percent of all hand injuries. Using gloves at all times on the worksite helps reduce the inevitable wounds caused by the sharp, unfinished edges and tight squeezes involved in construction.

Other common worksite hand injuries include:

- Sliced thumbs when interior finish workers draw a utility knife across the top of a scoring square. While pulling the knife away from the body can protect against this, wearing a glove on the nondominant hand offers protection when workers forget and pull toward their hands.
- Lacerated or burned hands when roofers handle and cut membrane shingles. Using a brush or applicator is not enough to prevent chemical burns—gloves provide cut and burn protection for roofers.
- Cut fingertips when plumbers or pipefitters apply flux. It's easy to apply flux with a finger, but it leaves workers vulnerable to the unexpected sharp edges of new copper pipe.
- Brushed and cut hands when workers improperly use adjustable wrenches. Pulling against the adjustable head rather than the fixed jaw, not fitting the wrench squarely and not properly seating the wrench can result in the tool slipping and hitting the worker's hands.

Gloves alone are not a cure-all. Once the right gloves are chosen for the job, supervisors should conduct a hand tool safety refresher course.

First, require that workers report all injuries no matter how small. The absence of data on the near hits can send worksite safety changes in the wrong direction. For example, a worker wielding a three-pound hammer on a cold chisel to break apart rock and stone has arm fatigue after about 20 swings. And that's when the worker is more likely to hit his hand or wrist. If these injuries go unreported, the company doesn't know about the problem and won't invest the money.

To further the worksite safety message:

- Remind workers that it's dangerous to

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hammer with tools not designed for hammering, such as wrenches and locking pliers;

- Ask workers to perform a daily inspection of their striking tools for problems such as loose hammer heads or split handles which can break during use, wavy screwdriver heads that can turn out of the screw and puncture the hand, and mushroomed chisel heads that have weak edges which can break when struck.
- Discard damaged tools; and
- Discourage shortcuts that are accidents waiting to happen, such as using cheater bars on wrenches or pliers to exert torque.

Workers may complain that wearing gloves is inconvenient. And, in many cases, they are right. In fact, workers should never wear gloves on their free hands when using a power saw, drill, planer or portable cutting tool with teeth.

But the protection that gloves provide against manual hand tools far outweighs the inconvenience.

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