



WORKPLACE HAND INJURY RESEARCH STUDY: FINDINGS AND ANALYSIS

In late 2015, Majestic Glove and DSM Dyneema partnered with the American Society of Safety Engineers in a research project on hand safety, and more specifically, workplace hand injuries. This effort is the first new research related specifically to hand injuries in the workplace that has been completed in the last 10 years. This whitepaper highlights key findings from that research, interprets the data, and discusses the implications for safety professionals.

In an effort to understand the incidence of and contributing factors to workplace injuries—and in particular workplace hand injuries—Majestic Glove and DSM Dyneema partnered with the American Society of Safety Engineers to conduct an online survey of safety professionals. Of the more than 400 safety professionals who participated in the study, respondents were primarily safety directors/chiefs/departments heads (42 percent), safety specialists/engineers (33 percent), and brand/regional/district safety managers (17 percent). Twenty-nine percent of respondents represented the manufacturing industry, 17 percent represented the construction industry, and 14 percent represented the oil/gas/petrochemical industry—with the remaining respondents covering everything from agriculture to mining and healthcare. Company size ranged from less than 50 employees to more than 1,000. And nearly half of respondents—41 percent—have worked in the safety field for 25 years or more.

The study covered hand safety topics ranging from how often injuries occur in the workplace and what's causing those injuries to personal protective equipment complaints and strategies for compliance. Though individual data points may raise eyebrows, the most interesting finding of all is how little the injury numbers and safety protocols have changed over time, despite improvements in technology and increased regulations.

KEY HIGHLIGHTS FROM THE DATA

Workplace Injuries: How Often & Where

When it comes to frequency of injuries, more than a quarter of respondents, 27 percent, reported having more than 30 work-related injuries occurring in their company in the last 12 months. Twenty-eight percent admitted to having between 10 and 30 injuries over that same time period.

Survey respondents also ranked upper extremities as the most commonly injured body part. Second was lower extremities, followed by trunk and head with neck ranking last, or least common.

Breaking that data down further, the hand was ranked as the most commonly injured part of upper body extremities—nearly twice as likely as the arm, shoulder, or wrist. In fact, more than 33 percent of survey respondents reported having 10 or more work-related hand injuries over the last 12 months. And 12 percent reported having more than 30!

Hand Injuries: Types & Causes

Looking closer at the types of hand injuries, survey respondents were asked to rank which of the following were most common: cuts/punctures, sprains and strains, fractures, burns (thermal, chemical), or other. Forty-one percent of respondents ranked cuts or punctures as the most common hand injury type. Essentially, four out of every ten hand injuries are cuts or punctures.

In addition to identifying the most common type of injury, survey respondents also disclosed their top three reasons why these injuries occurred. The top reason, cited by 40 percent of respondents, was lack of personal protective equipment or cut-resistant gloves. Improper training was ranked second with 20 percent of respondents citing it as a culprit for



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cuts and punctures. "Other option" ranked third, followed by worn out personal protective equipment and machine/equipment failure. "No availability of hand protection" was ranked last.

THREE BIG TAKEAWAYS

In general, when looking at workplace injury data over time, the numbers tell a positive story. For example, the Employer-Related Workplace Injuries and Illnesses Report for 2014—released by the U.S. Bureau of Labor Statistics at the end of October 2015—shows a promising chart of the decline of nonfatal occupational injury and illness incidence rates by case type. One can clearly see the incident rate per 100 full-time workers drop from 5.0 in 2003 all the way down to 3.2 in 2014.

But the data from this study does not suggest so much progress when it comes to hand injuries. In fact, it raises some red flags as to where employers are failing to protect employees and where workers are deliberately putting themselves at risk. Here are three top takeaways from the new data:

- (1.) Cut and puncture hand injuries are still very much an issue and that issue is primarily caused by not wearing gloves;
- (2.) Comfort plays a significant role in encouraging employees to wear gloves; and
- (3.) Safety leadership can do more to encourage employees to wear gloves.

Workplace Hand Injuries Still an Issue

The U.S. Bureau of Labor Statistics has been reporting data on nonfatal workplace injuries by body part affected for over a decade. Consistently, upper extremities tops the list with hand injuries making up the largest sub-section of that part of the body. The data in this study is consistent with those numbers; findings here show that hand injuries occur nearly twice as often as other upper body extremity injuries. One-third of respondents reported 10 or more hand injuries within the last 12 months alone, and 12 percent reported more than 30 hand injuries over the same time period.

Even as hand injuries remain an issue, study after study reports that wearing gloves dramatically reduces the likelihood of this type of injury—some suggest by as much as 70 percent! And yet still, in this new research, the most common type of hand injury continues to be cuts or punctures and the number one most common reason those cut or puncture injuries occur is not wearing cut-resistant gloves.

If hand injuries are an issue, and wearing gloves can prevent that issue, then why aren't workers wearing them? Here's a closer look at those numbers.

Comfort Comes First

Respondents who reported "Not wearing PPE (e.g. cut protection gloves)" as the most common reason for the occurrence of cut or puncture hand injuries were also asked to report why this is the case.

Thirty percent responded that "There are no repercussions for employees who don't wear cut protection gloves." Twenty-one percent cited lack of comfort. Failure to educate workers on the importance of wearing gloves was cited by another 21 percent. And carelessness was cited by 19 percent of respondents.

When provided an opportunity to share specific feedback regarding what would motivate employees to wear gloves while working, "comfort" and "dexterity" were the only statistically significant, repeated factors. Furthermore, when asked the most common complaints heard about the gloves employees use, lack of dexterity, retention of heat, and lack of grip were the top three most common complaints.

The bottom line is workers are opting out of wearing gloves to prevent cut and puncture hand injuries in the workplace due to lack of comfort. This means one of two things is happening:

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- (1.) Employers aren't investing in gloves made out of industry-leading materials, such as Ultra-High Molecular Weight Polyethylene (UHMwPE), which deliver top-level cut resistance without compromising comfort or grip.
- (2.) Or employees don't realize how comfortable and effective quality cut-resistant gloves can be.

This leads directly in to the next takeaway: education is essential to safety success.

Education is Essential

Respondents who said not wearing gloves/PPE is uncommon in their facilities were asked to report why this is the case. Forty percent responded that "Education of workers succeeds in showing the importance of wearing cut protection gloves" while just ten percent reported that "Cut protection gloves are comfortable and easy to work with." This shows two things:

- (1.) Even in top performing organizations, there exists an opportunity for introducing more comfortable protective gloves.
- (2.) In poor performing organizations, education could go a long way in encouraging workers to wear gloves consistently.

Moreover, 30 percent of survey respondents said the reason employees don't wear gloves is because "There are no repercussions for employees that don't wear cut protection gloves" and another 21 percent said it's because "Education of workers does not succeed in showing the importance of wearing cut protection gloves." Putting those data points together, the takeaway is this: Training is essential for PPE compliance. Combining some type of penalty for non-compliance with proper education on why gloves are critical to preventing workplace injuries can significantly impact whether or not workers wear cut-resistant gloves.

CONCLUSION

In the first research study of its kind in over 10 years, Majestic Glove, DSM Dyneema, and the American Society of Safety Engineers uncovered that there's much work left to be done when it comes to preventing workplace hand injuries. Hand injuries remain one of the most common workplace injury types, and lack of PPE compliance continues to be the leading contributing factor behind cut and puncture injuries. Providing comfortable gloves, requiring hand safety and glove training, as well as creating enforceable penalties for non-compliance can all help in increasing proper use of cut-resistant gloves and reducing the most common type of hand injuries in the work place.



Reliability in Safety

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