

FOR IMMEDIATE RELEASE:  
August 16, 2010

CONTACT:  
Mary Watters [mwatters@cpwr.com](mailto:mwatters@cpwr.com)  
301/495-8523/o, 301-919-4627/c

## **RESEARCHERS IDENTIFY INCENTIVES AND BARRIERS TO ADOPTION OF BACK-SAVING BEST PRACTICES AMONG MASONRY CONTRACTORS**

*Masonry industry has highest rate of back injuries among all trades;  
contractor awareness and use of interventions vary by region*

Researchers working with industry stakeholders found that while products, equipment and work practices are already in use by masonry contractors to reduce the rate of musculoskeletal disorders (MSDs) among masonry workers, the decentralized nature of the industry and prevalence of small contractors has led to regional differences in their use and barriers to widespread adoption. More effective dissemination of information on best practices can lead to greater utilization, which will improve productivity and worker safety by reducing MSDs, according to a study funded by CPWR – The Center for Construction Research and Training, and reported in the August issue of the *Journal of Occupational and Environmental Hygiene*.

These findings are significant because bricklayers have the highest rate of back injuries with time away from work and mason tenders have the highest rate of overexertion injuries in the construction industry.

“It is not uncommon for a bricklayer to handle 200 concrete masonry units per day, and they each weigh 38 lbs or more,” said Jennifer Hess, PhD, the lead author of the journal article. “That means a bricklayer handles about 7,600 lbs of block during an 8-hour work day. In a week of this work, he lifts the equivalent of more than five Ford F-350 pick-up trucks. Both bricklayers and mason tenders perform physically demanding work, day after day.”

Dr. Hess’ work drew from a 2004 meeting the National Institute for Occupational Safety and Health (NIOSH) held with masonry contractors, workers, occupational health and safety specialists, contractor association representatives, ergonomics consultants, and representatives of state workers’ compensation programs to identify “Best Practices” to reduce the risk of work-related MSDs. The top “Best Practices” identified were the use of: mortar silos; grout delivery systems; mechanical scaffolding; half-weight cement bags; H-Block and A-Block; light-weight block; Autoclaved Aerated Concrete; half-size pallets; and two-person lift teams. While participants were in general agreement regarding the factors that create the greatest risks for workers, there was evidence of regional variations in the utilization of the equipment, materials and work practices identified as best practices.

To explore and document the regional differences, Dr Hess conducted a national telephone survey of 183 masonry contractors, representing 16 states in four regions: Northeast, Southeast, Midwest, and West Coast. Contractors were asked about the advantages and disadvantages, and their utilization, of

each of the best practices. The survey findings confirmed the regional differences identified in the NIOSH meeting.

“For example, we found that contractors in the Northeast were less likely to use mortar silos, but had a higher utilization of half-size pallets than the other regions, and contractors on the West Coast had the highest utilization of mortar silos and H-block,” said Hess.

Through the survey, researchers found that the main advantage driving use of an innovation was time savings, followed closely by increased productivity. Increasing safety usually ranked third in the reasons for using an intervention, except for the use of two-person lift teams with 12-inch block and half-weight cement bags, where safety was the most important advantage.

“This is important, because it indicates that some contractors have already found these best practices to be cost effective, as well as safer,” said Hess. “Greater contractor awareness of the advantages of these best practices could increase their use nationwide.” She also believes that greater awareness by safety professionals of the barriers to adoption, such as building codes and regional work norms, will help them tailor dissemination efforts.

The study recommended several specific ways to spur adoption of best practices through more effective dissemination of information tailored to individual practices and regional differences. “Our findings suggest that use of ergonomic equipment, materials and work practices can benefit both contractors and workers, and when the safety of workers is at stake, there’s an added incentive to get the word out as quickly as possible,” said Hess.

-30-

View the two-mason lift team in action at: <http://www.elcosh.org/en/video/20/a000048/two-mason-lift-technique.html>

CPWR is a 501(c)3 nonprofit research institution dedicated to improving the safety and health of construction workers through research, training and service to workers, contractors and other industry stakeholders. Founded by the Building and Construction Trades Department, AFL-CIO, CPWR began its research agenda in 1990. Research

for this release was made possible by grant OH008307 from the National Institution for Occupational Safety and Health (NIOSH). The contents are solely the responsibility of the authors and do not necessarily represent the official views of NIOSH.