



Drywall Handling Tools, Teams and Low Back Strain

The impact of drywall handling tools on the low back

*Jennifer A. Hess, Laurel Kincl, and Kermit Davis.
Applied Ergonomics, March 2010.*

Overview

Carpenters and other construction workers who install drywall suffer high rates of strains and sprains to the low back and shoulder. Drywall is heavy and awkward to handle, resulting in increased risk of injury for individual workers manually lifting and handling drywall. Researchers evaluated several low-cost tools with the potential to reduce awkward postures in drywall installers, combining worker feedback with data from a Lumbar Motion Monitor (an instrument that measures trunk kinematics and allows calculation of probability of developing a low back disorder). All the tools researchers evaluated offered some benefit, but manually lifting drywall in two-person teams appeared to be the safest method of lifting and moving drywall. Given that carpenters are skeptical about using equipment that can get in the way or get lost, promotion of two-person manual lifting is a practical recommendation.

Key Findings

- Only four of the fourteen carpenters surveyed indicated that they had used some type of tool to lift or carry panels.
- Posture and motion data indicated that workers who moved drywall manually by themselves are at high risk of developing a low back disorder, while use of each of the tools, or manual lifting and carrying in two-person teams, significantly reduced that risk.
- Carpenters expressed reservations about using any of the tools, believing that they would reduce productivity. They noted that these tools were for carrying but not installing drywall, so that they would be useful mainly for drywall stockers when forklift access to the worksite was impeded.
- These results provide evidence that two-person lifting and carrying techniques should be promoted on the work site. The two-person manual handling technique produced the best results with regard to acceptance by workers and for reducing low back stress.

For more information, contact:

Jennifer Hess: jhessdc@gmail.com

See abstract:

<http://bit.ly/1noMNf8>

©2014, CPWR – The Center for Construction Research and Training. CPWR, the research and training arm of the Building and Construction Trades Dept., AFL-CIO, is uniquely situated to serve construction workers, contractors, practitioners, and the scientific community. This card was made possible by a cooperative agreement with the National Institute for Occupational Safety and Health, NIOSH (OH009762). The contents are solely the responsibility of the authors and do not necessarily represent the official views of NIOSH.



THE CENTER FOR CONSTRUCTION
RESEARCH AND TRAINING

WWW.CPWR.COM