WorkSafeBC
WORKING TO MAKE A DIFFERENCE
worksafebc.com

CONSTRUCTIVE IDEAS
Innovative ideas to reduce soft tissue injuries in the construction industry

Support for overhead drilling

Problem

Drilling holes overhead for prolonged periods of time requires the arms and shoulders to exert a lot of effort, especially when working with a heavy tool and exerting force. This job presents a number of common risk factors for musculoskeletal injuries (MSIs):

- Awkward overhead posture
- Maintaining a stretched-out stationary posture
- Exerting a large amount of force

Process

While planning the renovation of a building in Massachusetts, safety professional Mike Joel identified a task that could place a large demand on the workers' shoulders and lead to overuse injuries. The troublesome task was to drill over 19,000 holes into a concrete ceiling, a task common to both new build and renovation projects. The problem of reducing the shoulder strain to the workers was presented during a project planning meeting. The general foreman, Jim Byrne, responded to the challenge and built a prototype by the end of the day. Jim's response to Mike's challenge was:

> *"I'd rather just do something easy than have some guy chasing us around for a week."*

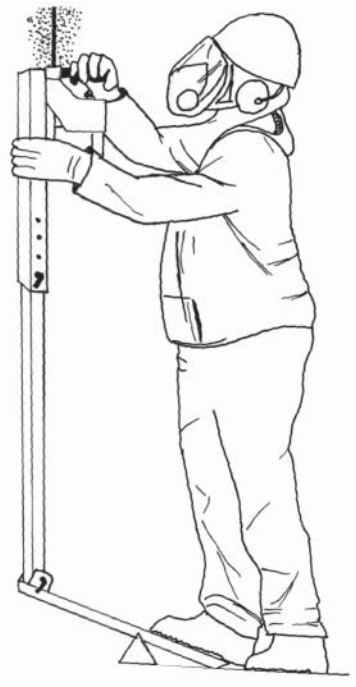
Solution

Supervisors often have to be creative and come up with solutions quickly; this situation was no exception. The solution was called the McGovern Lever and can be made with materials often found on the job site. In addition to access to a welder, the materials would cost no more than $50. When compared to the increase in productivity and reduction in wear and tear on workers, the cost is negligible. The lever is an adjustable see-saw that serves as a lift for a drill fastened to a post. Pressing down with your foot causes the see-saw to lift the post and thereby apply upward pressure for the drill. Once the drill is in place, the only required force is for guiding the drill. This solution eliminates the need for workers to hold their arms overhead and exert any upward force.

Benefits to industry:

- Increased productivity
- Reduced energy expenditure
- Reduced risk factors for MSIs
- Effective return to work (**RTW**) option

Rather than WorkSafeBC providing specific details regarding the construction of the McGovern Lever, contractors should use what they have available to create a lever that meets their individual needs.



The McGovern Lever is a University of Massachusetts Lowell Bright Idea, found at: http://www.uml.edu/Dept/WE/COHP/Documents/Bi8.pdf