



CIRSA LOSS ALERT

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Providing Risk Management Solutions

Frequent Injuries While Lifting Manhole Covers

A public works employee tore his rotator cuff while lifting a manhole cover. Total incurred costs were over \$130,000. From 2004 through 2008, members reported 41 claims due to lifting or moving manhole covers totaling close to one half million dollars.

Removing a manhole cover involves a great deal of force that can affect the shoulders, knees or back. Careful consideration should be given to not only the tools that are used to remove manhole covers, but also the body mechanics employed while using these tools. One can have the best tools for the job, but if proper body mechanics are not used, injuries can still occur.

Prevention Tips:

1. Use the proper tools for removing manhole covers. Typically this involves a pry bar and a manhole cover hook. Consider the use of a magnetic manhole puller. Instead of having to lift and pull the manhole cover off, one simply needs to place the magnet over the manhole cover and push down on the handles to remove the lid. This uses body mechanics that are much less stressful to the back and other body parts.
2. Do not jerk on the manhole cover to remove it. Use smooth, steady motions instead.
3. When removing the cover, keep your head up and avoid hunching your back. This will help maintain the proper curvature of the spine. Also, bend your knees and use your legs more than the back and arms for lifting.
4. Steel-toed shoes with slip-resistant treads should be worn.
5. Stretch before removing manhole covers. Include stretches for the back, shoulder, knees, hamstring, and other leg muscles.
6. Get help if you will be doing a lot of manhole cover removals. Considering rotating with other employees to perform some of the lifts.
7. CIRSA offers a new service for determining the best design of tools and the proper body mechanics for heavy tasks, such as lifting manhole covers. We have a force meter and software to calculate the joint forces on the body while pushing, pulling, lifting, or carrying items. If you are interested in this new service, contact John Colvin at CIRSA to arrange for an evaluation. A detailed explanation of this new service can be viewed in the August 26, 2009 Ergonomics Webinar in the "News and Events" section of our website, www.cirsa.org.