Watch Your Back - Prevent Back Injuries

Health Hazard Information Card HH-17

DID YOU KNOW?

 ✓ That back injuries account for over twenty percent of all lost-time injuries in the mining industry.
 ✓ That many of these injuries could have been avoided if:
   » workers were trained in and practiced a few basic and simple rules for back conservation,
   » lifting aids were provided, and/or
   » equipment and jobs were redesigned to eliminate or reduce the number of lifts required.

The back is a complex system consisting of five distinct spinal regions. The lumbar spine, which refers to the five vertebrae and six discs in the curved portion of the lower back, is the part most often injured. Lifting, bending, and twisting motions can cause severe injury and pain. Because the lumbar region is the area of the back at greatest risk during normal work, it should be the main focus of injury prevention through proper work practices and body conditioning.

LUMBAR CONSERVATION

Some ways to keep your back from being injured:

 ✓ Minimize the need to move materials manually.
 ✓ Eliminate unnecessary lifting; re-design and re-plan jobs.
 ✓ Use mechanical lifting aids, if available.

Stress in the lumbar region multiplies quickly as the center of gravity moves out from the spine. The squat-come-down-lift-with-the-legs maneuver does not come naturally to most people, and it is more tiring than the traditional bent-back lifting technique. Yet, it’s a maneuver well worth learning in order to prevent back injuries.

When lifting and carrying a load:

 ✓ Avoid lifting a load from below your knee level or from above your shoulder level.
 ✓ Avoid any lift where the load’s center of gravity is more than a few inches out from your midsection.
 ✓ Bend and straighten your legs while lifting or transferring loads.
 ✓ Turn your entire body with your feet.
 ✓ Do not twist your torso while you are lifting or carrying a load.
 ✓ Return your back to a vertical position.
 ✓ Carry the load close to your body.

Other ways to prevent back injuries during highly physical activities such as mucking or shoveling:

 ✓ Make certain that the material is loose.
 ✓ Use a long-handled shovel if space permits.
 ✓ Avoid overloading your shovel.
 ✓ Bend your knees and hips.
 ✓ Keep your back in reasonably straight alignment.

LUMBAR MAINTENANCE

Here are some good practices for maintaining your back, as well as the rest of your body, in peak condition:

 ✓ Exercise your back regularly; back conditioning starts with body conditioning. Consult your doctor before starting any exercise program.
 ✓ Stretch before exercising.
 ✓ Concentrate on exercises that strengthen each side equally; for example, low-impact aerobics, high-speed walking, rowing, and swimming.
 ✓ Avoid or reduce activities with many sudden changes of direction or unnatural twisting, such as tennis or golf.
 ✓ Use machines that allow you to simulate rowing, stair-climbing, or cross-country skiing.
 ✓ Strengthen your legs and allow them to do more of the heavy lifting.
 ✓ Eliminate or at least diminish your use of tobacco; smoking reduces the supply of oxygen and nutrients to the discs that cushion the vertebrae.

For additional information and assistance, contact:

» Your local MSHA office

» Metal/Nonmetal Mine Safety and Health
  Arlington, Virginia
  202-693-9630

» Coal Mine Safety and Health
  Arlington, Virginia
  202-693-9510

» Pittsburgh Safety and Health Technology Center
  Pittsburgh, Pennsylvania
  412-386-6901

U.S. Department of Labor
Mine Safety and Health Administration
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March 2009