

Back Injury Prevention Tips

In New York State, musculoskeletal disorders of the low back and upper body are a frequent and sometimes severe type of work-related injury. During 2010, there were 0.82 injuries for every 100 local government workers due to musculoskeletal disorders and the median days away from work was 14 days per injury¹. This is almost one 1 of every 100 workers suffering this type of injury in a single year.

Nationwide, this is an important health problem resulting in approximately one million people losing time from work each year. These disorders impose a substantial economic burden in compensation costs, lost wages and productivity. Conservative cost estimates vary, but a reasonable figure is about \$50 billion annually in work-related costs².

Back Injury Risk Factors

The risk factors associated with back injury can come from a combination of work-related activities, non-work activities and the physical and psychological characteristics of the individual². To reduce the work-related risks of back injury, consider the following factors when designing, planning and organizing work tasks:

- Limit the weight of the object to a maximum of 51 pounds³ (whenever possible)
- Reduce the reaching distance
- Keep the heaviest side of the load next to the body
- Adopt a stable position with feet apart and one leg slightly forward to maintain balance
- Provide a handle for a secure grip or hug the load as close to the body as possible, balance the weight being lifted on both arms
- Start the lift as close to waist height as possible
- End the lift as close to waist height as possible
- Maintain posture with slight bending of the back, hips and knees; lift the load as the legs begin to straighten⁴
- Reduce twisting the torso - if turning is required, move the feet as the object is carried
- Reduce the number of times a lift must be repeated

A visual way to remember some of these tips is to think of a baseball batter and keep the lift within the "strike zone" of the employee.

Other factors that may increase the potential for back injury are listed below⁵. Reducing these stressors may also reduce the risk of back injury:

- Whole body vibration
- Static postures
- Prolonged sitting
- Direct trauma to the back

Lifting and Back Injury Risk Reduction Tips

Employees and employers have an opportunity to reduce the risk of back injury before, during and at the end of a lifting task. Consider the following:

Before the lift

- Determine if the object can be lifted with a mechanical assist.
- Evaluate the weight and determine if assistance from a co-worker is needed.
- Move other items out of the way to get as close to the item as possible.
- Organize work areas so items are not stored on the floor.
- Organize storage areas so items are not stored above shoulder level.
- Clear pathways so adequate space is available to set the item down easily.
- Only carry one item at a time for better visibility.
- Store items in containers with good handles or find a spot to grasp the item securely.

Back Injury Prevention Tips

During the lift

- Secure a stance and put one foot beside the item if possible.
- Beginning the lift:
 - Keep the item close to the body.
 - Maintain balanced posture allowing for a slight bending of the back, hips and knees.
 - Lift the load as the legs begin to straighten.
- Move feet in the direction the item is being carried.

Setting the item down

- Keep the item close to the body as it is being placed.
- If lowering the item, position the feet with one foot beside where the item will be placed.
- If lifting the object above the waist:
 - Move body forward as the weight is lifted up and outward to reduce the reaching distance.
 - Use a ladder with hand rails.
 - Place the item on a level surface at waist level, bend down and pick up the item at chest level before hoisting it above the shoulders⁶.
- Move feet in the direction of where the object will be placed.

Understanding the primary work-related risk factors that increase the chance of a back injury is the first step in evaluating work tasks. Applying the lifting task risk reduction tips to the work task design may help reduce these stressors on the lower back. Educating employees in these back injury risk reduction principles will possibly help them to assess and alter their daily tasks to further reduce the potential for work-related back injuries.

For further information on back injury risk reduction for public entities please refer to Glatfelter Brokerage Services' other Risk Communiqués entitled:

- Back Injury Prevention and Patient Handling
- Back Injuries – Risk Factors and Controls
- Ergonomic Risk Reduction in Cleaning Tasks
- Ergonomic Risk Reduction Through Task Design

These can be found online at: GBSNewYork.com.

References

1. U.S. Department of Labor, Bureau of Labor Statistics, *New York State Occupational Injuries, Illnesses and Fatalities, Table 1, Incident Rates by Selected Natures with Musculoskeletal Disorders, local government, 2010*
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3. *National Institutes of Occupational Safety and Health: Revised NIOSH Lifting Equation, 1991*
4. *Health and Safety Executive, Getting to Grips with Manual Handling, ISBN 0 71762828 0, 2004*
5. *National Institute for Occupational Safety and Health, Applications Manual for the Revised NIOSH Lifting Equation*
6. *IMLRMA Today: Back Talk - Why Municipalities Should Implement Back Injury Prevention Programs, A. Masters, J. Closson*