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# **BACK TO THE FUTURE:**

## **STILL BATTLING THE #1 WORKPLACE INJURY**

{AN ERGODYNE WHITE PAPER}

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Ah the 80s. A remarkable time of bad hair and bushy brows; Star Wars and Airplane; Cabbage Patch Kids and Pac-Man; the War on Drugs and Nuclear Proliferation; Workers' Rights and Back Injury Awareness. Some of these have become fond and funny memories; some have resolved; others have gone on to become complete game-changers in the course of our history. Back injuries, however, remain the #1 worksite injury in the US – and likely the world.

## TALKING “BACK”

In 2009, there were almost 380,000 recordable sprain and strain injuries resulting from days away from work in the private industry alone [1]. Of that, backs were the most common body part injured, accounting for over 20% of total private industry lost time injuries [2]. Besides the pain for the worker, there is also pain for the employer, with the average total claim cost for a lower back injury reaching over \$39,000 [3]. We're no mathematicians, but that comes out to nearly \$3 billion a year paying for a problem. From where we stand, the numbers don't look good. So what is there to do? The good news is that there are steps employers and workers can take to reduce the risk of back injuries and other workplace sprains and strains.

Best practice is to employ the hierarchy of controls starting with elimination of the risk or substitution (using something else to accomplish the task therefore removing the risk). Does the heavy object really need to be lifted or moved? Can the same task be accomplished in a different manner? Can the task be accomplished with a machine or tool as a substitute? While many times the answer is “no” or doing so may be cost prohibitive or not practical, these questions are the first and best place to start.

If the risk cannot be eliminated or substituted, then employers should endeavor to put controls in place that help reduce the risk as much as possible. This can be as simple as rearranging a work station or process flow to reduce lifting, reaching, twisting, or bending – all common causes of injury. If the risk can be reduced by having two individuals perform a task instead of one, this may be an improved standard practice. Awkward reaches may even be reduced or eliminated by providing a ladder or step stool or simply getting physically closer to the task at hand. These are just three examples of controls that can be put in place to reduce the risk of a variety of sprain and strain injuries.

If all possible attempts to eliminate the task or movement have been considered and controls have been put in place to reduce remaining risks, but the injuries continue, the next step is to make sure that workers are aware of and trained on the remaining hazards. Employers should conduct a job assessment with workers to identify tasks and activities where the worker is vulnerable to a sprain or strain, urging caution when they are performing these tasks. Labeling heavy items “Heavy – Lift with Care” (or something similar) is a good reminder for workers to take proper precautions. Many injuries occur when a worker is caught off guard or simply unaware that the hazard existed – this is especially true of newer workers.

The last line of defense in the fight against sprains and strains is providing supplemental safety products. In the case of lifting, a back support may be worn as part of the overall process of proper lifting. Back supports have been used in the workplace for decades. Their use is well documented and numerous studies support back support use as part of a comprehensive approach to worker safety. Back supports serve three main purposes: 1) to provide lower back and abdominal support, 2) to promote proper posture, and 3) to serve as a reminder to the worker that they are about to lift. Back supports do not make workers stronger nor do they cure or eliminate an existing back injury.

## **WEAR IT RIGHT**

Wearing a back support wrong is like wearing an ill-fitting hard hat or having your safety glasses on top of your hat or head – pointless and ineffective. Back supports require training especially in the areas of fitting and proper use. The key things to remember when using a back support are:

- » Fit is critical. Once on, the back support should feel snug but not tight. To ensure a good fit, do the one finger test. Workers should be able to comfortably run a finger between the support and their trunk to ensure a good fit.
- » Placement of the top of side of the back support should fall approximately 2” below the navel. Lots of people make the mistake of placing the back support like a corset when it should in fact be placed on the lower back.
- » If the back support is equipped with suspenders, adjust them for a comfortable fit without tension.
- » If the back support has secondary elastic/tension bands, leave these loosely fastened at the side when not lifting. Prior to lifting, grasp the bands and stretch them forward as far as possible, securing in a snug position.

When the back support is on correctly, the worker will have additional support for lifting and is more likely to use proper posture. Not to mention – the proactive efforts taken are a mental indication to the body to prepare for the coming task.

## **PREPARING FOR THE LIFT**

When performing the action of lifting, there are important steps that workers can take to further reduce the risk of a back injury:

- » First, it is important to plan the lift and test the load. If the test feels as though the load may be too heavy, ask for help.
- » Then, get a firm footing by placing one foot slightly in front of the other, bend at the knees, and tighten the stomach muscles.
- » Next – and perhaps one of the most important techniques to remember – lift with the legs, not with the back.

- » Remember to always keep the load close to the body as extending the load puts undue stress on the back.
- » Keep the back upright, transport the load as needed, and complete the lifting process.

Lifting, reaching, bending, and twisting will always remain a part of many job activities but following these steps can reduce the risk of the most common injury in the workplace.

## **BACK TO THE FUTURE**

There is no magic formula to eliminating sprains and strains in the workplace. But – what we do know after 30 years in the ergonomics and workplace safety business is that the numbers don't lie and perhaps it's time to start talking "back" again. Where possible, eliminate the risk. Next, work to put controls in place to reduce the risk. Ensure workers are aware of the risks that remain. Finally, arm them with supplemental solutions to help reduce risk and train them on proper use. In the case of reducing back injuries, back supports can be a critical piece of the overall effort. It's time to start talking "back" – again.

## **WORKS CITED**

- [1] National Safety Council. (2012). Injury Facts®, 2012 Edition. Itasca, IL: Author.  
Library of Congress Catalog Card Number: 99-74142
- [2] National Safety Council. (2012). Injury Facts®, 2012 Edition. Itasca, IL: Author.  
Library of Congress Catalog Card Number: 99-74142
- [3] National Safety Council. (2012). Injury Facts®, 2012 Edition. Itasca, IL: Author.  
Library of Congress Catalog Card Number: 99-74142