



Southern California Trade Contractors Association

Safety Newsletter

4th Quarter, 2014

Back Injuries – U.S. #1 Safety Problem

Back injuries are a significant cost driver for school districts. They often result from overexertion, typically resulting from an injury sustained from lifting, pulling, pushing, and carrying an object—an injury classified as a sprain or strain,

Injuries come from grounds workers lifting and lowering mowing equipment off trucks, employees lifting special needs students who have fallen or lifting/lowering them to and from wheelchairs, nutrition services workers who retrieve food containers from bottom shelves multiple times a day, or custodians who are injured from emptying trash cans in the cafeteria. According to the Bureau of Labor Statistics, work related musculoskeletal disorders (WWSOs), including back injuries, account for more than one out of every three work-related injuries in the United States.

As back injuries continue to rise, efforts are made to train employees in proper lifting techniques to reduce the frequency and severity of these injuries, especially in maintenance and operations, custodial, grounds work, food services, child development centers and special education. Recommendations on safe lifting and are some practical ways to make all lifting activities safer have followed these concerns.

The National Institute for Occupational Safety and Health researched this topic and offered recommended weight limits and a calculator to estimate a “safe” lift. This information can be found at www.cdc.gov/niosh.

As a basic starting point, one person should be able to lift an object weighing up to 51 pounds:

- If the object is within 7 inches from the front of his or her body
- If the object is at waist height and directly in front of the person
- If there is no twisting involved
- If there is a handle on the object
- If the load inside doesn't shift once lifted

If any of the conditions listed above is not met, then the load would be considered “unsafe”, and modifications must be made to make it a “safe” lift.

In order to make it a safe lift:

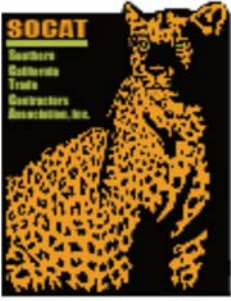
- The weight of the load must be decreased, or
- It needs to be a “two-person” lift, or
- Mechanical assistance must be used (dolly, cart, lift, etc.)

Reducing Lifting Exposures

Reducing exposures for any type of injury that a change be made to the job task or work environment to achieve a positive outcome. This might include different tools or equipment to make the job easier, alternating the work process or flow to allow more breaks (recovery), or training employees on better ways to lift. Cal/OSHA's regulation, 5110, details three control methods for reducing motion injuries.

Engineering controls: These would include physical changes or modifications to the workstations, tools, or equipment to make the job safer. Typically, engineering controls require an out-of-pocket budgetary commitment but have the highest rate of success for creating a safer work environment. Examples include:





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- Using truck ramps on ground crews' trucks that can be used to remove the mower and edger more safely than lifting them off the truck
- Purchasing smaller trash cans in cafeterias to create smaller loads
- Longer handles on equipment that would eliminate poor back postures while working, or raising the height of a work surface to reduce the amount of forward bending as employees work on materials

Administrative controls: Rather than purchase new products, tools, or equipment, administrative controls focus on reducing the exposure time with lifting hazards. Administrative controls might include a "work hardening" program for jobs that require intense lifting, job rotation to give the back a rest period, expanding the job duties of the worker to reduce repetitive lifting, etc. These types of controls do not have the success rate allowed through engineering controls but, instead, offer ways to prevent a fatigue-related injury or accident. For example:



- Offer a work hardening program for employees returning to work following an injury, or for all new hires, in order to condition them slowly into the job. Many custodians are injured during intense summer cleaning activities. A work hardening program may be a good administrative control to slowly condition their back muscles for the heavy-duty summer months of cleaning
- Another option would be to expand the job of warehouse workers to include some paperwork or housekeeping duties with less lifting to allow for a work-related recovery period from repetitive lifting
- Cross-training employees so workers can rotate between jobs requiring intense lifting activities with jobs that do not require this. Reorganizing the order in which tasks are performed also might prevent a fatigue-related injury or accidents

Training: When training is done well, in combination with engineering controls, it is a very effective way to reduce back injuries and create safer lifting environments. Training should focus on educating workers and managers about potential risks for back injuries due to unsafe lifting, their causes, and symptoms, as well as offering solid lifting techniques and proficiency stations.

One has to be cautious of behavior-based safety training programs that place responsibility for safe lifting entirely on the employee. Without engineering controls in place, many lifts are dangerous regardless of how well trained the employees are: lifting from floor level, lifting equipment over the sides of trucks, lifting students from wheelchairs alone, etc. When environments are not set up ergonomically and workloads are doubled, old habits quickly return and injuries occur

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