



ARCO SAFE TOOL BOX TALKS

Ergonomics – Back and Lifting Safety



Back disorders can develop gradually as a result of micro-trauma brought about by repetitive activity over time or can be the product of a single traumatic event. Because of the slow and progressive onset of this internal injury, the condition is often ignored until the symptoms become acute, often resulting in disabling injury. Acute back injuries can be the immediate result of improper lifting techniques and/or lifting loads that are too heavy for the back to support. While the acute injury may seem to be caused by a single well-defined incident, the real cause is often a combined interaction of the observed stressor coupled with years of weakening of the musculoskeletal support mechanism by repetitive micro-trauma. Injuries can arise in muscle, ligament, vertebrae, and discs, either singly or in combination.

- Lifting task is two-handed, smooth, in front of the body, hands are at the same height or level, moderate-width loads (i.e., they do not substantially exceed the body width of the lifter), and the load is evenly distributed between both hands.
- Manual handling activities other than lifting are minimal and do not require significant energy expenditure, especially when repetitive lifting tasks are performed (i.e., holding, pushing, pulling, carrying, walking or climbing).
- Temperatures (66-79°F) or humidity (35-50%) outside of the ranges may increase the risk of injury.
- One-handed lifts, lifting while seated or kneeling, lifting in a constrained or restricted work space, lifting unstable loads, wheelbarrows and shovels are not tasks designed to be covered by the lifting equation.
- The shoe sole to floor surface coupling should provide for firm footing.
- Lifting and lowering assumes the same level of risk for low back injuries.
- Using the Guidelines in situations that do not conform to these ideal assumptions will typically underestimate the hazard of the lifting task under investigation.