

ERGO Tip: How to Determine Safe Lifting

Over the last 50 years, one of the major efforts directed toward the prevention of occupational injury has been worker training in the form of stretching and safe lifting programs. The thought was that if workers could be instructed in a “safe” or “proper method” of work, injuries could be significantly reduced. With all the emphasis placed on stretching and safe lifting programs, we should have seen a reduction in back injuries. That, however, is not the case.

Ergonomics takes a different approach and concentrates on fitting the work to the working population. The premise of ergonomic principles is that proper body mechanics cannot make a task safe if it exceeds an employee’s physical capacity to perform the task. It also becomes clear that tasks that exceed a worker’s physical capacity should be altered to avoid the risk of injury. In other words, proper body mechanics and/or positioning cannot make an inherently unsafe task safe.

West Bend’s data shows that a large percentage of back injury claims involve some form of poor ergonomic mechanisms as the proposed root cause. The total financial impact for an organization from an employee injury can be quite large. But what does an employee injury really cost a company? A useful rule of thumb is applying the 80/20 rule. Around 20% of costs are insured costs, such as medical treatment and compensation payments, but the other 80% are uninsured costs. Uninsured costs include expenses like lost time, loss of production, overtime, and retraining costs.

Valid and reliable tools are available for employers to determine safe versus unsafe lifting. The NLE Calc mobile app produced by the CDC is widely used and based on the Revised NIOSH Lifting Equation. It’s a quick and easy way to calculate risk associated with manual lifting tasks at a workstation. The calculations supply two products: The recommended weight limit (RWL) is the weight of the load nearly all healthy workers (99% of male and 75% of female workers) can safely lift for the given set of lifting conditions. The lifting index (LI) is a score that provides relative risk of overexertion and back injuries for a particular manual lifting task. Analyzed jobs that return a LI less than 1.00 are safe; jobs that return an index greater than 1.00 are potentially hazardous.

The phone app can be downloaded for both Apple and Android mobile devices. It allows you to enter measurements related to a specific task. Data can be calculated for a single lifting task or a combination of tasks that apply to the worker’s job. The app will then provide information on the level of risk present and offer recommendations for improvement.

If you’re ready to make a change and improve ergonomics in the workplace and would like more help executing an ergonomic plan, please contact your West Bend loss control representative.

¹Waters, T. R., Putz-Anderson, V., & Garg, A. (1994). Applications manual for the revised NIOSH lifting equation. Cincinnati, OH: U.S. Dept. of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Division of Biomedical and Behavioral Science.