

# Ergonomics and back pain in the workplace



## Common back injuries at work

Back pain is one of the most common work-related injuries and is often caused by ordinary work activities such as sitting in an office chair or heavy lifting. Applying ergonomic principles - the study of the workplace as it relates to the worker - can help prevent work-related back pain and back injury and help maintain a healthy back.

The goal of an ergonomics program in industry is to adapt the workplace to a specific worker, dependent on the job description, required tasks and physical make up of the employee performing those tasks. Two types of situations typically cause people to begin having back pain or to sustain a back injury while on the job:

1. Non-accidental injury, where pain arises as a result of *normal* activities and requirements of the task. Poor body mechanics, prolonged activity, repetitive motions, and fatigue are major contributors to these injuries. This may occur from sitting in an office chair or standing for too long in one position.
2. Accidental injury results when an *unexpected* event triggers injury during the task. A load that slips or shifts as it is being lifted, and a slip and fall or hitting one's head on a cabinet door are typical examples. These accidents can jolt the neck, back and other joints with resulting muscle strain or tearing of soft tissue in the back.

## Back injury from physically demanding jobs

Occupations that are physically demanding and require repetitive lifting (such as in nursing or heavy industry) are at greatest risk for both non-accidental and accidental back injury. For example, many healthcare workers have back problems because patients are of different stature and weight with varying needs. Often, the patients need help changing position, rising from a chair and walking. Similarly, the physical effort needed on an accident or fire scene to release a trapped person or save a life is unpredictable. The same problems occur in the construction industry where consistencies of tasks are a challenge.

## Back injury from sitting in an office chair

People who sit most of the day, such as those who work at a computer while sitting in an office chair, are also at high risk for non-accidental back injury. Office ergonomics, or computer ergonomics, can help minimize the risk of repetitive injury, such as carpal tunnel syndrome, and the risks associated with prolonged sitting in office chairs, such as neck strain, lower back pain and leg pain.

This article will summarize the use of ergonomic concepts, mechanical devices and good body mechanics (biomechanics) that can contribute to reducing back injuries in the work environment for many jobs. Importantly, staying physically fit, strong and flexible improves the likelihood of avoiding back injuries in all types of work environments.

**If you are experiencing back pain contact a Hughston Spine Center physician at 1-866-HUGHSTON.**