

Materials Handling

Description

Occupational injuries resulting from material handling are among the most frequent and severe injuries causing lost time from work. The back is the most injured part of the body here at the University of Florida. Employees have been instructed and whole departments have been trained on how to prevent back injuries. The number has dropped some but the painful and costly injuries still occur. The following information is submitted to aid in injury prevention.

[su_spoiler style="fancy" icon="chevron" title=" Back Fact "] For many years experts have estimated that 8 out of 10 Americans will have a back injury sometimes during their life. Yet preventing back injuries can be as simple as learning proper lifting and material handling techniques, eliminating excess body weight, strengthening neglected back muscles, and adopting good posture habits. The personal pain, inconvenience and loss of social activity cannot be measured. But workers compensation insurance claims and individual out of pocket expense is estimated at 13 billion dollars a year nationally. Reduced production, increased turnover, medical bills and pain means bad backs are bad business for the university.

[/su_spoiler] [su_spoiler style="fancy" icon="chevron" title=" Anatomy of the Back "] Supporting the back is the spinal column, made up of 24 vertebrae stacked one upon another. Separating the vertebrae are soft discs made of cartilage, which act as shock absorbers and allow the vertebrae to move. Most people don't realize that it's the abdominal muscles along with the muscles and ligaments along the spinal column that give the back its support. A healthy back is properly aligned with three natural curves called the cervical, thoracic and lumbar curves.

Because we stand upright, most of our body weight falls squarely on the vertebrae (L1 through L5) of the lower back, or the lumbar region, making it prone to injury. Abdominal and back muscles weakened from underuse or poor posture can rob the spinal column of the support it needs. A sudden twist or a careless lift can cause injury to the lower back. The best way to ensure a healthy back is to keep all your body's muscles strong, watch your posture and learn proper lifting and material handling techniques.

[/su_spoiler] [su_spoiler style="fancy" icon="chevron" title=" Prevention "] Back safety is a shared responsibility. The University is committed to reducing back injuries at work by teaching proper lifting and material handling techniques. Most back injuries result from improper lifting. According to the principles of biomechanics, the worst lifting situation occurs when the body is extended over the load. The lower back becomes a fulcrum, supporting the weight of the body plus the load. Twisting in this position can cause injury. Keep your back upright to shift weight onto the more powerful leg muscles and reduce the lever effect. Maintain the three natural curves of the back in their normal position.

Prior to lifting an object, first lift the load mentally. Plan every step before you do it physically. Size up the load; how much does it weigh? Give it the heft test to see if you can lift it. If the load is too heavy or bulky to lift alone, get help. Check the route of travel and look for obstacles and surface conditions, which may be unsafe. Arrange for mechanical devices like a pushcart, handtruck or other appropriate means to help with transporting the load. Remember to use proper lifting techniques when loading

mechanical devices. Whenever possible, push rather than pull.

There are six steps to safe lifting which will eliminate most back injuries:

- Get a firm footing. Keep your feet apart (shoulder width) for a stable base. Point toes out.
- Bend your knees. Don't bend at the waist. Keep the principles of leverage in mind. Don't do more work than you have to. Maintain your three natural back curves.
- Tighten your stomach muscles. Abdominal muscles support your spine when you lift, offsetting the force of the load. Train muscle groups to work together.
- Lift with your legs. Let your powerful leg muscles do the work of lifting, not your weaker back muscles. Maintain your three natural curves.
- Keep the load close. Don't hold the load away from your body. The closer it is to your spine, the less force it exerts on your back.
- Keep your back upright. Whether you are lifting or putting down the load, don't add the weight of your body to the load. Avoid twisting; it can cause injury.

Other conditions to consider are:

- Store items within easy reach, rather than high or low.
- Break up loads.
- Make shelves less deep.
- Arrange the space so workers do not have to lift and twist. Twisting while under a load increases the potential for injury four fold.
- Provide stools or footrests for stationary standing jobs or rotate task so that periods of standing alternate with movement or sitting.

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