Back Safety Safety Talk



WHAT'S AT STAKE?

Back injuries can be extremely painful and debilitating. According to the US Bureau of Labor Statistics, back injuries account for nearly 20 percent of all injuries and illnesses in the workplace. In fact, only the common cold accounts for more lost work days.

Although there is not a specific regulation for training employees on back safety, the General Duty Clause does require employers to provide employees with a workplace that is "free of recognized hazards," and given the prevalence of back injuries in the workplace – it's hard to not see it as a "recognized hazard."

In fact, a back-safety program is key to dramatically reducing debilitating back injuries on the job.

Disabling back injuries are costly and all too prevalent. That's why your company needs more than a quick fix approach to battling back pain.

WHAT'S THE DANGER?

The vast majority of low back pain is mechanical in nature. In many cases, low back pain is associated with spondylosis, a term that refers to the general degeneration of the spine associated with normal wear and tear that occurs in the joints, discs, and bones of the spine as people get older. Some examples of mechanical causes of low back pain include:

- **Sprains and strains** account for most acute back pain. Sprains are caused by overstretching or tearing ligaments, and strains are tears in tendon or muscle. Both can occur from twisting or lifting something improperly, lifting something too heavy, or overstretching. Such movements may also trigger spasms in back muscles, which can also be painful.
- **Intervertebral disc degeneration** is one of the most common mechanical causes of low back pain, and it occurs when the usually rubbery discs lose integrity as a normal process of aging. In a healthy back, intervertebral discs provide height and allow bending, flexion, and torsion of the lower back. As the discs deteriorate, they lose their cushioning ability.
- **Herniated or ruptured discs** can occur when the intervertebral discs become

compressed and bulge outward (herniation) or rupture, causing low back pain.

- **Radiculopathy** is a condition caused by compression, inflammation and/or injury to a spinal nerve root. Pressure on the nerve root results in pain, numbness, or a tingling sensation that travels or radiates to other areas of the body that are served by that nerve. Radiculopathy may occur when spinal stenosis or a herniated or ruptured disc compresses the nerve root.
- **Sciatica** is a form of radiculopathy caused by compression of the sciatic nerve, the large nerve that travels through the buttocks and extends down the back of the leg. This compression causes shock-like or burning low back pain combined with pain through the buttocks and down one leg, occasionally reaching the foot. In the most extreme cases, when the nerve is pinched between the disc and the adjacent bone, the symptoms may involve not only pain, but numbness and muscle weakness in the leg because of interrupted nerve signaling. The condition may also be caused by a tumor or cyst that presses on the sciatic nerve or its roots.
- **Spondylolisthesis** is a condition in which a vertebra of the lower spine slips out of place, pinching the nerves exiting the spinal column.
- **A traumatic injury,** such as from playing sports, car accidents, or a fall can injure tendons, ligaments or muscle resulting in low back pain. Traumatic injury may also cause the spine to become overly compressed, which in turn can cause an intervertebral disc to rupture or herniate, exerting pressure on any of the nerves rooted to the spinal cord. When spinal nerves become compressed and irritated, back pain and sciatica may result.
- **Spinal stenosis** is a narrowing of the spinal column that puts pressure on the spinal cord and nerves that can cause pain or numbness with walking and over time leads to leg weakness and sensory loss.
- **Skeletal irregularities** include scoliosis, a curvature of the spine that does not usually cause pain until middle age; lordosis, an abnormally accentuated arch in the lower back; and other congenital anomalies of the spine.

Low back pain is rarely related to serious underlying conditions, but when these conditions do occur, they require immediate medical attention. Serious underlying conditions include:

- **Infections** are not a common cause of back pain. However, infections can cause pain when they involve the vertebrae, a condition called osteomyelitis; the intervertebral discs, called discitis; or the sacroiliac joints connecting the lower spine to the pelvis, called sacroiliiitis.
- **Tumors** are a relatively rare cause of back pain. Occasionally, tumors begin in the back, but more often they appear in the back as a result of cancer that has spread from elsewhere in the body.
- **Cauda equina syndrome** is a serious but rare complication of a ruptured disc. It occurs when disc material is pushed into the spinal canal and compresses the bundle of lumbar and sacral nerve roots, causing loss of bladder and bowel control. Permanent neurological damage may result if this syndrome is left untreated.
- **Abdominal aortic aneurysms** occur when the large blood vessel that supplies blood to the abdomen, pelvis, and legs becomes abnormally enlarged. Back pain can be a sign that the aneurysm is becoming larger and that the risk of rupture should be assessed.
- **Kidney stones** can cause sharp pain in the lower back, usually on one side.

Other underlying conditions that predispose people to low back pain include:

- **Inflammatory diseases of the joints** such as arthritis, including osteoarthritis and rheumatoid arthritis as well as spondylitis, an inflammation of the vertebrae, can also cause low back pain. Spondylitis is also called spondylarthritis or spondyloarthropathy.
- **Osteoporosis** is a metabolic bone disease marked by a progressive decrease in bone density and strength, which can lead to painful fractures of the vertebrae.
- **Endometriosis** is the buildup of uterine tissue in places outside the uterus.
- **Fibromyalgia,** a chronic pain syndrome involving widespread muscle pain and fatigue.

HOW TO PROTECT YOURSELF

Recurring back pain resulting from improper body mechanics is often preventable by avoiding movements that jolt or strain the back, maintaining correct posture, and lifting objects properly. Many work-related injuries are caused or aggravated by stressors such as heavy lifting, contact stress (repeated or constant contact between soft body tissue and a hard or sharp object), vibration, repetitive motion, and awkward posture. Using ergonomically designed furniture and equipment to protect the body from injury at home and in the workplace may reduce the risk of back injury.

The use of lumbar supports in the form of wide elastic bands that can be tightened to provide support to the lower back and abdominal muscles to prevent low back pain remains controversial. Such supports are widely used despite a lack of evidence showing that they actually prevent pain. Multiple studies have determined that the use of lumbar supports provides no benefit in terms of the prevention and treatment of back pain. Although there have been anecdotal case reports of injury reduction among workers using lumbar support belts, many companies that have back belt programs also have training and ergonomic awareness programs. The reported injury reduction may be related to a combination of these or other factors. Furthermore, some caution is advised given that wearing supportive belts may actually lead to or aggravate back pain by causing back muscles to weaken from lack of use.

Following any period of prolonged inactivity, a regimen of low-impact exercises is advised. Speed walking, swimming, or stationary bike riding 30 minutes daily can increase muscle strength and flexibility. Yoga also can help stretch and strengthen muscles and improve posture. Consult a physician for a list of low-impact, age-appropriate exercises that are specifically targeted to strengthening lower back and abdominal muscles.

- Always stretch before exercise or other strenuous physical activity.
- Don’t slouch when standing or sitting. The lower back can support a person’s weight most easily when the curvature is reduced. When standing, keep your weight balanced on your feet.
- At home or work, make sure work surfaces are at a comfortable height.
- Sit in a chair with good lumbar support and proper position and height for the task. Keep shoulders back. Switch sitting positions often and periodically walk around the office or gently stretch muscles to relieve tension. A pillow or rolled-up towel placed behind the small of the back

can provide some lumbar support. During prolonged periods of sitting, elevate feet on a low stool or a stack of books.
- Wear comfortable, low-heeled shoes.
- Sleeping on one’s side with the knees drawn up in a fetal position can help open up the joints in the spine and relieve pressure by reducing the curvature of the spine. Always sleep on a firm surface.
- Don’t try to lift objects that are too heavy. Lift from the knees, pull the stomach muscles in, and keep the head down and in line with a straight back. When lifting, keep objects close to the body. Do not twist when lifting.
- Maintain proper nutrition and diet to reduce and prevent excessive weight gain, especially weight around the waistline that taxes lower back muscles. A diet with sufficient daily intake of calcium, phosphorus, and vitamin D helps to promote new bone growth.
- Quit smoking. Smoking reduces blood flow to the lower spine, which can contribute to spinal disc degeneration. Smoking also increases the risk of osteoporosis and impedes healing. Coughing due to heavy smoking also may cause back pain.

FINAL WORD

Back injuries and repetitive strain, injuries, are problems in the workplace. Good planning and safe work practices can help prevent these injuries.