

Simple procedures at work may help prevent back pain

Dr. Rebecca Clearman

Back pain is the second-leading cause of missed work. Severe back pain will continue to plague workers, even with the implementation of new Occupational Safety and Health Administration Ergonomic Standards, which are expected to eliminate musculoskeletal injury in nearly 500,000 employees per year.

The term "back" refers to the spinal column, consisting of the vertebrae that extend from the head to the sacroiliac joint at the base. The weight of the upper body goes through the sacroiliac joint, and dysfunction causes crippling back pain below the waist.

OFF TRACK

The sacroiliac joint has complex biomechanics, moving like a drawer that slides a tiny amount in and out in the pelvis. Dysfunction occurs when the sacral "drawer" gets off track and gets stuck and the small sacral glide is lost.

Sometimes there is a sudden onset, described as a "catch" or "being stabbed with an ice pick" in the back, accompanied by incapacitating pain and weakness. For office workers, activities that bring on sacroiliac joint (SI) pain often involve a twisting component such as opening a drawer from a desk chair or reaching into a vehicle for a briefcase. Pain can also occur with uneven loads, such as lifting and carrying more weight on one side of the body such as with a bag filled with a laptop computer, personal digital assistant and files.

DIAGNOSIS

A proper diagnosis that distinguishes between SI dysfunction and other spinal disorders is critical for successful pain relief. Surgery will not help SI dysfunction, nor will hot packs, ultrasound or massage.

SI dysfunction can mimic other disorders such as a ruptured disc pressing on a spinal nerve. Patients often have pain radiating into the buttocks, down the back of the leg and occasionally around the front and into the groin and pubic bone.

These areas can have all the symptoms of a pinched nerve with tingling, burning, cramping, pain, altered reflexes and weakness. Those experiencing SI dysfunction may have difficulty standing on one of their legs and be unable to stand straight. Neck problems and headaches often accompany SI dysfunction.

X-rays, CT scans, MRI and other tests will not show a problem with SI function. Often studies are read as showing "degenerative disk disease," a poorly named condition that is part of the normal aging process, much like baby boomers' hair turning gray.

Diagnosis depends on a thoughtful evaluation of spinal mechanics -- the person experiencing problems must move while the physician palpates spinal motion. Fortunately for the physician with good manual skills, the sacroiliac joint itself will be painful to palpation, making diagnosis less difficult.

PREVENTION

Injury can be avoided by considering the keys to spinal and SI health:

- **Variety.** Staying at a desk or in a vehicle an entire shift is stressful to the spine no matter how comfortable the seating. Whenever possible, a person should vary positions during the day with walking, sitting, standing and bending. Those who must sit all day should take micro-breaks -- stand up and stretch for 15 seconds every 10 to 15 minutes.
- **Symmetry.** Avoid habitually "loading" one leg or one side of the body more than the other. Sit or stand with weight evenly distributed on the pelvis or feet. Upper body loads should be distributed symmetrically.
- **Unloading.** Minimize the loads through the SI joint during recovery by limiting lifting, bending, pushing or pulling. When the worker who has experienced SI dysfunction is able to resume regular duty, a careful ergonomic evaluation is needed to ensure that all loading is symmetric across the SI joint.
- **Workstation.** All seating should allow workers to comfortably rest their heels on the floor, with plenty of room for knees and thighs to move. Carts and hand trucks with brakes and correct tires (hard versus pneumatic) should be used when needed. Balance doors for easy opening. Store items that are used frequently at waist height.

Both employers and also employees will find the new OSHA standards and recommendations for action (<http://www.osha.gov>) helpful in making workstations more ergonomic for SI problems.

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