

## Avoiding Back Pain

Chances are if you have been around the fire department more than a minute you know of someone who was off work due to a lower back, knee, ankle, or shoulder injury. Even with an increased awareness of fitness, health and measures designed to make the job safer. About 65,000 injuries occur every year to firefighters during job related activities. 57% of on the job injuries are classified as a sprain, strain or muscular pain. You can have a healthy and productive career free from injuries with a little luck and some attention to preventing these common joint and muscle injuries before they happen.

## Back Injuries

Lower back injuries are responsible for about half of all line- of- duty injury retirements so preventing these injuries paramount to a long and happy career. With aging, muscle tightness often causes lower back injuries and less than ideal core strength.

## The Lower Back (Lumbar) Anatomy

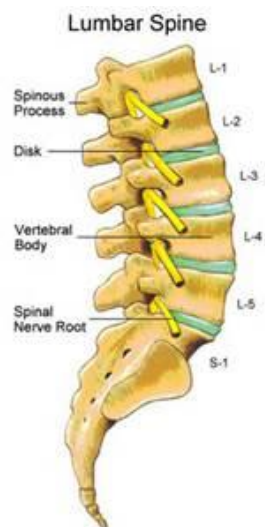


Photo from propainphysicians.com

The lower back is composed of nerves protected by 5 small bones, stacked with shock absorbing discs in-between, and cartilage protecting where the bones touch. Supporting this column of bones and disks is a network of muscles and ligaments often called your core.



Photo from extremeballsports.com

## Six Common Diagnoses of Lower Back Pain

### 1. Sprains and strains

Sprains are injuries caused by overworked muscles and typically pain is felt during or immediately following an activity, pain is made worse by flexing the back or standing. Resting relieves this pain.

Strains are injuries to the ligaments of the lower back and are typically caused because a ligament has become stiff and or weak due to poor conditioning or over use. A sudden forceful movement typically causes strains.



Photo from azchiropractor.com

### 2. Degenerative Disc Disease / Herniated Disk



Photo from spinaluniverse.com

With age the inside of the shock absorbing disc between your back bones become harden and loose their jelly like texture, with this hardening the disk weakens and can began to be flatten known as a “bulging disc” when these bulging discs press out and compress nerves they become painful and are called herniated or slipped discs.

### 3. Osteoarthritis

Osteoarthritis is a deterioration of the cartilage to the point where the bones of the back touch. This deterioration occurs with age and is most common in individuals 60 years old and older. Osteoarthritis related back pain can be felt in the form of back stiffness, pain leg, nerve or leg pains.



Photo from imarcade.com

### 4. Osteoporosis

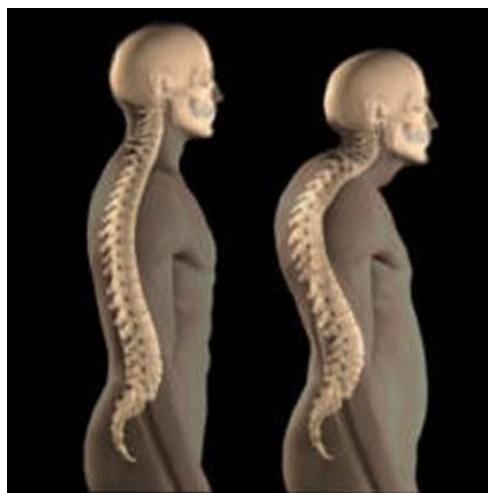


Photo from iposture.com

Osteoporosis is another type of arthritis most typically found in women over the age of 50 years old. Thinning of the bones in the back causes this type of back pain. Those with a known risk for this disease should focus early on weight bearing exercises that help to increase bone density.

## 5. Spinal Stenosis

Spinal stenosis is seen most often in middle aged adults and is caused by soft or boney tissue that presses on the spinal cord or spinal nerves. Spinal stenosis can cause leg pain, numbness or weakness.

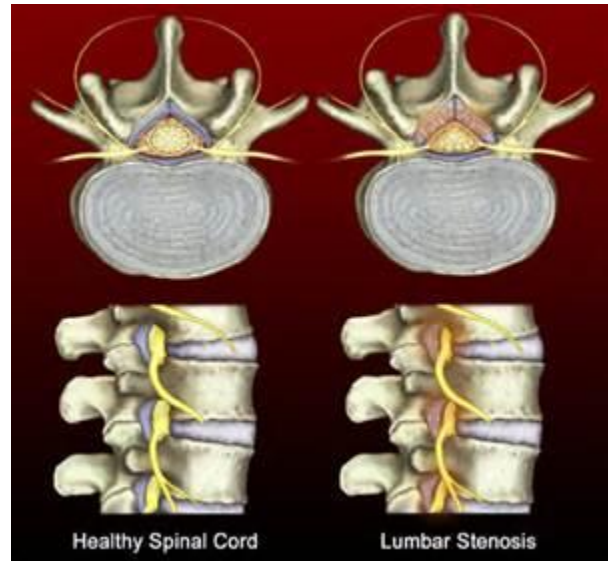


Photo from orthospinenews.com

## 6. Sciatica



Photo from rayaclinic.com

Sciatica is specifically pain caused by compression or inflammation of the sciatic nerve, which is felt in the form of pain in the buttock or leg.

## 4 Keys to Prevent Back Pains:

Proactively maintaining a healthy back is the key to preventing back pains.

Exercise should be focused on movements that do not cause pain but improve strength, mobility, and maintaining a healthy weight.

Activities of daily living such as sitting, standing, lifting and sleeping should also be done with you back in mind.

1. Sit – Choose seats with good lower back support, set setting the chair height so your feet are flat on the floor with your hips higher than your knees.

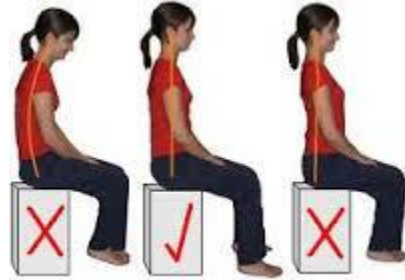


Photo from chicatanyage.com

2. Stand- Stand with your pelvis neutral this can be done by placing one foot on a low stool and alternating which foot is resting.

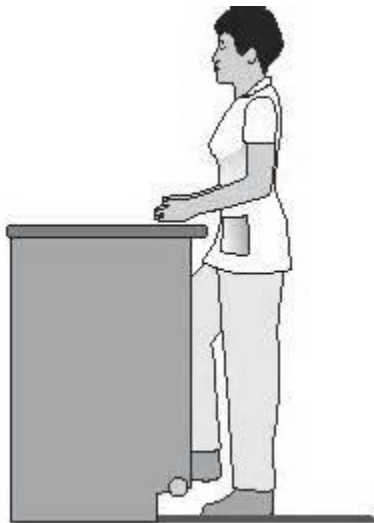


Photo from osha.gov

3. Sleep – Choose a firm mattress and a pillow that allows your neck to be inline with your spine.

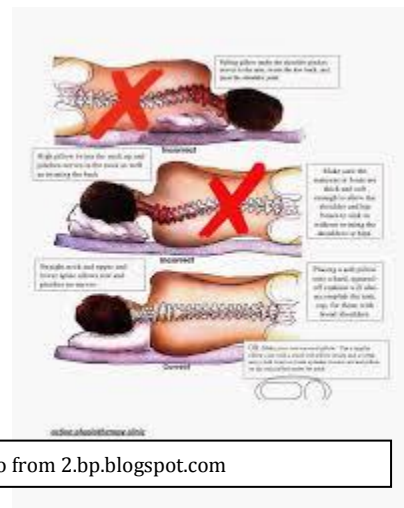


Photo from 2.bp.blogspot.com

4. Lift- Lift methodically allowing you legs to lift and move straight up and down by flexing your knees and your hip. Avoid allowing your back to curve or lifting and twisting simultaneously. It is ideal to use lifting movements like a squat or deadlift during workouts to allow for regular practice of proper lifting techniques.

[Lifting Ambulance Cot Video](#)

[Lowering Ambulance Cot Video](#)

[Loading Ambulance Cot Video](#)

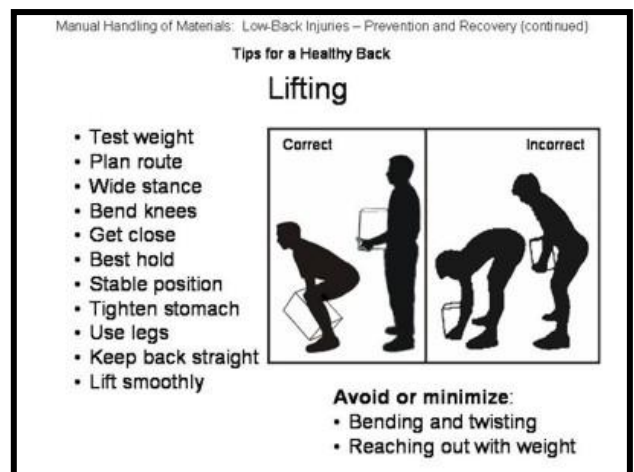


Photo from msh.gov