

LOSS CONTROL

Information Bulletin

Strains & Sprains

The Bureau of Labor Statistics (BLS) reported 493,170 cases of sprains and strains in the United States in 2009. This represented 40% of the 1,238,940 cases of nonfatal occupational injuries to workers in the public and private sectors. These nonfatal injuries require days away from the job in order that the worker can recuperate.

What is a **strain**? An injury to a muscle or tendon is pulled, twisted, or stretched to far. Tendons attach from bone to muscle. The strains often occur from over use, prolonged use, and repetitive movement of muscles or tendons as well as from direct blows to the body. A strain can be as simple as over stretching of a muscle or a complete tear. The most common strains are in the back and hamstrings.

What is a **sprain**? A sprain is an injury to a ligament or ligaments caused by excessive stretching, abnormal twisting, bending, or tearing. Ligaments attach from bone to bone and are responsible for holding your skeleton together in proper alignment. A sprain is caused by direct or indirect trauma (such as a fall) that knocks a joint out of position and over stretches or ruptures ligaments. Sprains are most common in knees, ankles, & wrists.

The 2009 BLS report cited back strains & sprains in 37% of the cases, knee injuries represented 13%, the shoulders 12%, the ankles about 9%, and the remaining 27% were to other body parts.

The most common types of events that resulted in strains and sprains were over exertion which accounted for 42% of the cases, bending, twisting, reaching and slipping was responsible for 22%, falling occurred in 11% of the cases, 7% was contact with objects or equipment and balance was from various other types of events.

The BLS reports that back injuries are the number one workplace safety problem. One out of every five work place illnesses and injuries involve the back. Their survey revealed that 80% of the back injuries occurred to the lower back and that three out of four back injuries occurred while workers were lifting an object.

The chart below describes the occupations that were most at risk for developing strains and sprains.

Occupation	Cases workers missed work days	Incidence rate per 10,000	Leading type of event (per cent of total)
Laborers, freight, stock and material handlers	64,190 cases	406.7 cases	Contact with objects 32% Over exertion 32%
Nursing aids, orderlies and attendants	50,620 cases	455.6 cases	Over exertion 48% Falls from same level 17%
Janitors and cleaners	48,180 cases	316.2 cases	Over exertion 29%

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			Equipment contact 21%
Heavy duty tractor trailer drivers	47,790 cases	327.6 cases	Over exertion 32%
Police & Sheriff's patrol officers	35,590 cases	603.2 cases	Equipment contact 20%
Light truck & delivery drivers	32,210 cases	410.1 cases	Assaults 23%
Construction laborers	26,690 cases	382.1 cases	Vehicle accidents 18%
			Over exertion 28%
			Equipment contact 16%
			Equipment contact 43%
			Over exertion 17%

What can be done to prevent **strains** and **sprains**? Each business should develop a proactive approach to addressing strains and sprains since they are common, costly, and preventable. The steps described below can provide a business with some common sense guidelines.

- (a) business should identify in writing the jobs that are high risk
- (b) business should conduct a job safety analysis(JSA) on high risk jobs
 - (1) record the steps needed to perform the job safely
 - (2) record the hazards and risks associated with the job
 - (3) record procedures that will reduce and/or eliminate the risks
 - (4) document training of workers in safe job execution & preventive measures
- (c) use experienced workers to develop JSA's and to train the other workers
- (d) all jobs with high risks should be regularly reviewed with the appropriate employees
- (e) perform all jobs in a slow and deliberate manner
- (f) remove as many hazards and obstacles as possible before starting the job
- (g) test employees on their ability to perform jobs safely according to JSA's
- (h) utilize mechanical equipment to perform tasks when possible & feasible
- (i) before performing any strenuous work, do warm up exercises to stretch muscles
- (j) maintain good muscle strength and flexibility through regular exercise & proper diet

SAFETY IS NO ACCIDENT

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