



## SPRAINS AND STRAINS PREVENTION TOOLBOX SAFETY TALK

Sprains and strains account for about a third of injuries in construction. A **sprain** is an injury to a ligament, the tough, fibrous tissue that connects bones to other bones. Sprain injuries involve a stretching or a tearing of this tissue. Ankle, knee and wrist injuries account for the majority of sprains. A **strain** is an injury to either a muscle or a tendon, the tissue that connects muscles to bones. Back injuries are the most prevalent in regard to strains. Depending on the severity of the injury, a strain may be a simple overstretch of the muscle or tendon, or it can result in a partial or complete tear.

These soft tissue injuries occur frequently, and are painful, disabling and often accompanied by lengthy recovery periods. Maintaining good physical fitness is essential in avoiding sprains and strains.

To minimize the chances of **sprains**, observe the following practices:

1. Practice safety measures to help prevent falls. For example, practice safe housekeeping by keeping work areas clear of clutter.
2. Avoid strenuous activity on the job when tired or in pain.
3. Use extra caution when working on slippery surfaces such as ice or wet floors.
4. Always wear appropriate and proper fitting footwear for your job.
5. Use extra caution when walking across uneven surfaces. These are areas where you could easily turn or twist an ankle or knee.
6. When stepping off ladders, always look where you are placing your feet, before you put your full weight on them.

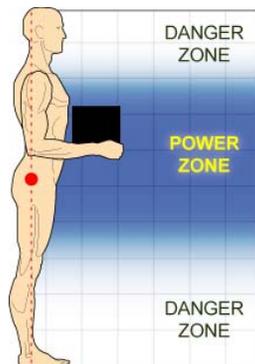
To minimize the possibility of incurring **strains**, observe the following practices:

1. Be certain that you understand your employer's Material Handling Safety program.
2. Whenever possible, arrange your work areas to minimize the amount of heavy lifting required.
3. Before any heavy lifting activity, always warm up, using moderate stretching exercises. Do not stretch aggressively as you may over-stretch and injure yourself.

4. Always plan the lift. Consider the weight of the object; how far you must carry it and your route of travel. When you approach an object on the floor, try to get an idea of how heavy it may be by moving it with your foot or cautiously lifting it off the ground. If the object is too heavy, seek additional help or use a mechanical lifting device such as a forklift, hand truck or winch.



5. Lift objects in the “power zone”. This is the area between mid-thigh and mid-chest height. Avoid lifting objects outside this zone. Use your best judgment when lifting heavy objects. Do not attempt to lift an object that exceeds your strength, and use extreme caution when lifting objects exceeding 50 lbs.



6. Always carry objects close to your body.
7. Always lift slowly and smoothly.
8. Avoid twisting. Always turn the whole body as one unit when changing direction while carrying a heavy object.
9. Move heavy objects by pushing or pulling, whenever possible. Pushing is always preferable.
10. Always stand close to the object that you are lifting and be certain that fingers and toes are clear when setting it down.
11. Always lift with you legs and not your back.

Follow these helpful rules and you will greatly reduce the chance that you will experience a painful sprain or strain.

*What this talk covers:*  
Key rules for the prevention of sprains and strains on the job.

*Discussion notes:*  
Whenever possible, use examples of real-life situations that resulted in sprains or strains

**Review Questions: True/False**

1. It is always better to lift and carry an object, even when it is possible to push or pull it.  
**FALSE:** Whenever possible, it is better to push or pull an object.
2. Good physical conditioning is not important to preventing sprains and strains.  
**FALSE:** Good physical conditioning is essential to strengthen muscles and reducing weight which makes you less vulnerable to sprains and strains.
3. For objects exceeding 50 lbs., lift using the buddy system or use a mechanical lifting device.  
**TRUE**

Talk given by: \_\_\_\_\_

Date: \_\_\_\_\_

Company: \_\_\_\_\_

| Printed Name | Signature |
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**References:**

- North Carolina Department of Labor – Sprains and Strains Fact Sheet (2009): [http://www.nclabor.com/osha/etta/A\\_to\\_Z\\_Topics/Sprains.pdf](http://www.nclabor.com/osha/etta/A_to_Z_Topics/Sprains.pdf)
- National Institute for Occupational Safety and Health, Simple Solutions: Ergonomics for Construction Workers (2007): <http://www.cdc.gov/niosh/docs/2007-122/>

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