



Building Your Quality of Life



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Participant's guide

Soft tissue injury prevention program



Soft tissue injury prevention program

Soft tissue injuries are more commonly known as sprains and strains. Everyone probably has had a soft tissue injury sometime in their life. These injuries can happen at home, work or play. Most result in minor pain and quickly heal. However, some soft tissue injuries can be more severe and negatively affect your lifestyle.

The techniques you learn today will help you prevent these injuries. Learning to plan ahead, to stretch, to know when to push and when to pull, and how to best position your body to maximize your strength are all important in preventing these injuries. Once you are familiar with the techniques, we encourage you to set an example for others.



Soft tissue injuries happen everyday at home, on the job or by a single accident, such as a fall, jerk or blow to the body. They may also be caused by doing the same motions over and over for an extended period of time, sometimes months or even years. While potentially devastating, many soft tissue injuries can be prevented. We're going to focus on why they occur and how they can temporarily or permanently affect your ability to work and enjoy leisure time.

Soft tissue injuries affect the musculoskeletal structure: the joint tissues, ligaments, tendons and muscles. These moving parts of our body work together, much like parts of a crane work together to pick up a heavy load. The musculoskeletal structure is a remarkable mechanism. It allows us to sit, stand, walk, run, jump, work and play.

- When working properly, the musculoskeletal system functions like a well-oiled machine.
- Like other machinery, the human body sometimes breaks down, especially when we ask it to perform tasks that exceed its limit. One common result: soft tissue injuries.

Many activities – even normal activities – can lead to soft tissue injuries. They can be acute, happening suddenly, or they can be chronic, affecting you for a long period of time.

- Types of soft tissue injuries include but aren't limited to sore muscles, strains, sprains, bruises, inflammation, pinched nerves, and numbness and tingling.
- Soft tissue injuries among construction workers most commonly affect the neck, back, arms and shoulders, hands, fingers, wrists, legs and knees.

Awkward postures

- An awkward posture is one in which any part of the body is under strain due to its unnatural or extreme position.
- When working in awkward postures, the stress on your joints, muscles, tendons, nerves and blood vessels is increased.
- The amount of muscle effort is also increased and so is your risk of fatigue and injury.

Extreme force

- Force is the amount of effort it takes to perform an activity or work task, such as pushing, pulling or gripping a tool.
- Keeping your body in one position for a period of time also requires muscle effort.
- The more force you have to exert, the greater the stress on your body.

Mechanical stress

- Mechanical stress is caused by the human body coming into contact with hard objects or surfaces.
- External mechanical stress can contribute to internal strain, pressures or restrictions.
- Prolonged exposure to external stress can have permanent or chronic consequences.

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Prolonged vibration

- Muscles have to work harder when gripping tools that vibrate.
- The body absorbs energy from vibrations.
- Vibration can result in fatigue and, in some cases, soft tissue damage.

Extreme temperatures

- When you're working in cold temperatures, muscles may tense, making strains more likely.
- Heavy work in hot environments increases your body temperature and puts you at risk of fatigue, cramps, exhaustion or even stroke.

Repetitive motion

- Repetitive motion is defined as performing the same activity over and over for a long period of time, either at home or at work, during sports, and/or with hobbies.
- It puts stress on muscles, tendons and joints.
- If the body doesn't have time to rest, recuperate and repair itself from the activity, the result may be a soft tissue injury.

Lifestyle choices

- Poor physical conditioning, lack of exercise and excess body weight can contribute to soft tissue injuries.
- Smoking can contribute by displacing the oxygen molecules with other chemicals inhaled by smoking, thus increasing fatigue and reducing the ability to recover.
- Alcohol, stress and age can affect on-the-job performance.

Solutions and prevention of soft tissue injuries

Manual material handling/concrete

- Pre-plan
- Check route
- Communicate
- Work area set-up

Work practices

- Wear personal protective equipment
 - Gloves
 - Padding
- Use proper body mechanics/lifting techniques
- Teamwork
- Avoid jumping
- Use appropriate tools for task
- Keep material in "lifting zone"
- Stretch before and after work
- Pre-task planning

Equipment operation

- Take breaks to stretch muscles that have become tense from continuous sitting and/or exposure to vibration.
- Consider anti-vibration gloves.
- Consider a seat pad to help absorb the constant vibration from certain types of equipment.
- When descending from equipment, step down carefully. Don't jump.

Tool safety

- A hammer may have a long handle, but using it may force you to stretch in such a way that arms, shoulders and neck can be injured.
- Proper positioning and proper tool use are the keys to safety.

Total wellness

- The best way to help achieve physical well-being is through a “wellness program” plan.
- Total wellness includes physical conditioning, weight management, healthy eating habits and avoiding tobacco products.

Stretching

- Start each work activity with stretching.
- Warming up your muscles before strenuous physical activity will help prevent injury.
- Construction workers are no different than world-class athletes; they need to engage in pre- and post-work stretching to lengthen tired or tense muscles.

Exercise

- Consult with your doctor before starting any exercise program.
- Exercise helps to strengthen muscles and allows them to work harder, longer.
- Regular exercise also improves your longterm flexibility, which increases your daily performance and reduces the chances of injury.

Avoid tobacco products

- If you quit smoking, you will feel better and your physical performance on and off the job will improve.

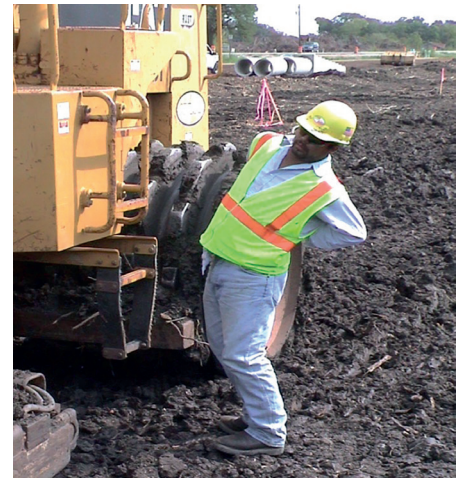
Healthy weight

- Extra weight causes greater strain on the musculoskeletal system.
- One of the best ways to lose weight is to develop an exercise routine.
- Regular exercise can help you shed pounds which reduces stress to your back and also increases your overall fitness.

Conclusion

The risk factors and control measures discussed in this guide do not include all the ways to help prevent soft tissue injuries. However, now that you know the basic techniques, you can identify and minimize hazards.

If you implement what you have learned, you're well on your way to avoiding soft tissue injuries.



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While certain practices appear to be desirable, none can guarantee that soft tissue injuries will not occur. This program does not create any obligations, or establish any specific standards or guidelines, for managing the risk of such injuries. It is not an exhaustive or complete treatment of its subject matter.

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