

Sprain/Strains

Sprains vs. Strains

Sprains and strains are among the most common of athletic injuries. Sprains occur to ligaments and strains occur to muscles and tendons. For example, you can sprain your ankle, but you strain your hamstring. Muscle, tendons, and ligaments are designed to withstand a tremendous amount of force, but they have a maximum tensile strength where the force placed on them exceeds what they are able to tolerate. This is when a strain or sprain can occur.

Classification

There are three different grades assigned to strains and sprains.

- *Grade 1*- This grade of a sprain/strain occurs when the stress placed on the muscle, tendon, or ligament exceeds its maximum tensile strength, but does not cause major damage. These injuries, while painful, do not alter the length of the muscle, tendon, or ligament and will usually heal with minimal complications. There is often swelling around the injury site and it may be painful to use the affected body part.
- *Grade 2*- This grade of a strain/sprain occurs when the stress placed on the muscle, tendon, or ligament exceeds its maximum tensile strength and causes major damage. The muscle, tendon, or ligament will sustain tearing inside it and will alter the length of the muscle, tendon, or ligament. The tearing within the tissue will cause laxity in a joint with a sprain and severe weakness in a muscle with a strain. These injuries are very painful and are often associated with significant swelling and discoloration of the affected site. The discoloration, or bruising, is due to blood vessels within the damaged structure that are damaged and bleed internally.
- *Grade 3*- This grade of a strain/sprain is the most severe. In this case the stress placed on the muscle, tendon, or ligament is sufficient to completely tear it. In a sprain, the torn ligament may make the joint feel wobbly or loose. In a strain, there may be a visible deformity from the muscle or tendon that has torn and balled up underneath the skin.

Caring for a Sprain/Strain

In order to properly care for a sprain or strain it is important to classify the injury. This will directly affect the care for the injury. The athletic trainer or team physician should

perform the evaluation and classification of the injury. In all cases, the self-care is the same and is easily remembered by using RICE.

- *Rest*- Avoid using the injured body part until evaluated by an athletic trainer or team physician.
- *Ice*- Apply ice to the injured body part. You should ice for at least 10 minutes, but no longer than 20 minutes. Never apply heat to a new injury for the first 2-4 days. This will increase the swelling and prolong the recovery time.
- *Compression*- When able to be applied to the body part, a compression wrap, such as an ACE bandage, should be applied to the body part. Do not wear a compression wrap while you sleep. Your blood pressure drops when you are asleep and the compression wrap can hinder your circulation.
- *Elevation*- Keep the injured body part higher than your heart. This will aid in keeping the swelling down.

Always tell your athletic trainer about a possible strain/sprain as soon as possible. Early care aids in early recovery.