

The Sprains And Strains Of Sporting Injuries

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The fall sports season is quickly approaching. What's that mean? Football Friday nights. Soccer moms shuttling kids to practices. Whistles blowing. Kids running drills. Coaches congratulating players on a job well done. And unfortunately, injuries.

Sprains and strains are some of the most common types of injuries in any sport. They involve the stretching or tearing of tissue. Sprains occur to ligaments, while strains involve muscles or tendons.

HOW ARE SPRAINS & STRAINS CLASSIFIED?

Sprains and strains are placed into three categories according to severity. They are classified as follows:

- ❖ **First Degree (Mild)** – tissue is only stretched
 - ◆ Slight swelling (hardly noticeable)
 - ◆ Mild loss of range of motion (ability to move in various directions) and strength (0 – 25%)
 - ◆ No decrease in stability
- ❖ **Second Degree (Moderate)** – involves stretching and some tearing of tissue
 - ◆ Moderate swelling (may look “baseball” size)
 - ◆ Usually includes some bruising
 - ◆ Moderate loss of range of motion and strength (25 – 75%)
 - ◆ Some decrease in stability
- ❖ **Third Degree (Severe)** – complete tearing of tissue
 - ◆ Significant swelling and bruising
 - ◆ Near complete loss of range of motion and strength (75 – 100%)
 - ◆ Marked decrease in stability

Range of motion and strength percentages are determined by comparing the injured body part to the uninjured side. **Severity of injury is best determined by a physician or licensed athletic trainer.** Immediate first aid for all sprains and strains is **Rest, Ice, Compression, and Elevation** (described in detail in the May 2002 SportsPage article “The

Numbers Are Impressive”). After initial first aid is administered, prompt referral to an appropriate medical professional should be sought to ensure proper injury treatment.

“IT’S JUST A SPRAIN...WHAT’S THE BIG DEAL?”

Sprains and strains can be a big deal. Athletes who are still growing often encounter other types of injuries. The most common is a fracture – specifically a Salter-Harris or growth plate fracture.

“Growth plates are located near the ends of long, growing bones in children and gradually close as a child reaches skeletal maturity,” explains John Kean, M.D., Chief of Orthopedics at Children’s Hospital. “The growth plate in growing children is weaker than the nearby ligaments and tendons. Therefore, the growth plate will become injured under lower forces than those that would injure a tendon or ligament.”

Young athletes with Salter-Harris fractures will be very tender, typically over the growth plate. They may have bruising, are often reluctant to bear weight and, if initially missed, will not respond to rehabilitation as expected. A x-ray is the best way to confirm this diagnosis. Even if the initial x-rays are negative, repeat studies will sometimes reveal the fracture.

There are complications of growth plate injuries that go undiagnosed, untreated, or treated incorrectly. This confirms the importance of seeking the advice of a qualified medical professional with experience in dealing with these injuries even when it looks like it is “just a sprain.”

WHEN SHOULD YOU BE CONCERNED ABOUT AN INJURY

Initially, the inability to bear weight (about 4 steps) after the injury or tenderness over any bone should prompt an evaluation that includes x-rays.

“Within a few days, any continued significant pain, continued reluctance to bear weight, significant swelling and/or bruising may warrant re-evaluation and possibly an x-ray. Any other unusual symptoms such as numbness, loss of pulses near the injured area, discoloration, out of proportion pain, or rashes would indicate the need for further evaluation,” states Dr. Kean.

As this fall approaches, enjoy the whistles blowing and the drills being run. If your child is unfortunate enough to sustain an injury, remember that quick and proper treatment is the key to limiting the time on the sideline.

Consult your primary care physician for more serious injuries that do not respond to basic first aid. As an added resource, the staff at Nationwide Children's Sports Medicine is available to diagnose and treat sports-related injuries for youth or adolescent athletes. To make an appointment, call 614-355-6000.