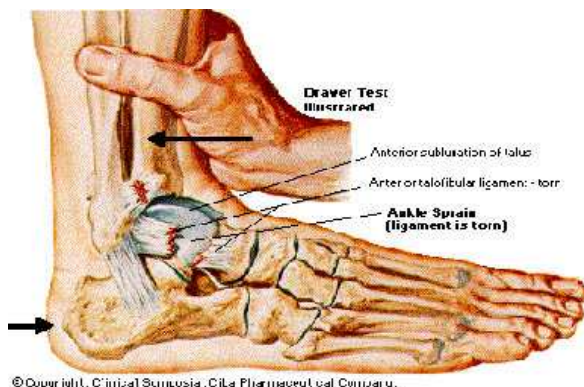


Sports Injury Treatment

Participating in a variety of sports is fun and healthy for children and adults. However, it's critical that before you participate in any sport, you are aware of the precautions you can take to prevent injuries. Warming up, strengthening your muscles and cooling down after any type of exercise are excellent ways to help prevent sports injuries.

Unfortunately, even when taking these and other precautions, injuries still occur. More than 10 million sports injuries are treated each year in the United States. Here is a list of some of the more common sports injuries with their causes, symptoms, and treatments.

Sprains and Strains



Sprains and strains are arguably the most common injuries caused by participating in sports. A sprain is a stretch or tear of a ligament, which is the connective tissue that joins bones together in your body. A strain is a stretch or tear of a muscle or tendon. Tendons connect your muscles to your bones.

Causes:

Sprains and strains are caused by a fall or twist of the body. Any area of the body is susceptible to this type of injury, but depending on the particular sport, some areas are more at risk than others. For example, gymnasts and tennis players are more likely to suffer hand and elbow sprains and strains while basketball and soccer players are at greater risk for those of the leg and ankle. Ankle sprains are the most common and are generally caused by running on an uneven surface or landing off-balance after jumping.

Symptoms:

Sprains and strains may be evidenced by pain, bruising, inflammation or swelling of the affected area.

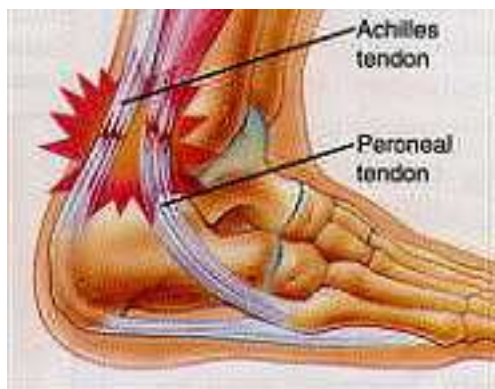
Treatment:

The first step in treating a sprain or strain is with R.I.C.E (Rest, Ice, Compression, Elevation). Recovery time depends on your age, general health, and the severity of the sprain or strain. A more severe sprain or strain may require physical therapy or surgery. Consult a medical professional for proper diagnosis and treatment.

Bursitis and Tendonitis

Bursitis is an inflammation of a bursa sac. Bursa sacs are located between bone and skin. They allow the skin to slide over bony prominences in the body, such as the knee, shoulder, and elbow. When a bursa sac becomes irritated and inflamed, it causes pain and discomfort in the nearby joints.

Tendonitis is an inflammation or irritation of a tendon.



Causes:

Bursitis and tendonitis can be caused by any activity that places extreme, prolonged, or repetitive stress on a bursa sac or tendon. Any bursa sac or tendon can become inflamed, but those found around the joints (shoulder, hip, knee, wrist, elbow, etc.) are the most commonly affected.

Symptoms:

Pain, discomfort, tenderness and possible swelling in the affected area.

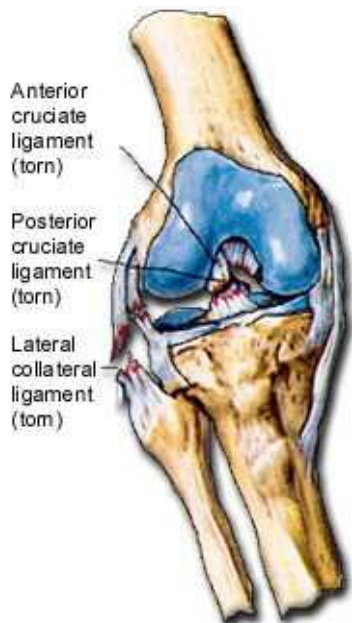
Treatment:

R.I.C.E (Rest, Ice, Compression, Elevation) and anti-inflammatory medications are the first steps to decrease the inflammation and swelling.

Gently stretch and massage the affected area. Consult a professional to learn the appropriate techniques.

Keep pressure off of the affected area.

If pain persists, consult a physician. In extreme cases of bursitis, a needle can be injected into the bursa sac by a doctor to remove the excess fluid and relieve the pain.



ACL Injury

The ACL (Anterior Cruciate Ligament) is one of the four major ligaments critical to the stability of the knee joint. Its primary purpose is to restrain forward motion of the shinbone. An ACL injury occurs when this ligament is torn.

Causes:

ACL tears are commonly caused by sports that require frequent pivots and stops and starts, such as football, basketball, skiing, and soccer. Patients with ACL tears generally complain of a sudden and quick injury with the knee "giving-out" or "buckling".

Symptoms:

Pain, swelling, or a "popping" sound heard around the knee, and instability of the knee joint.

Treatment:

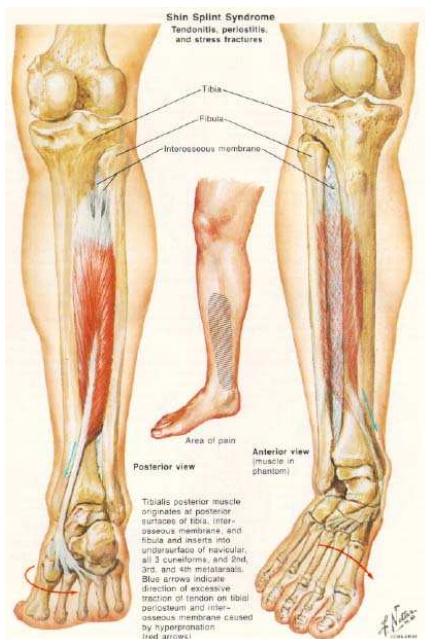
Ice the knee to decrease inflammation and pain. Ice should be applied for at least 20 minutes, 2-3 times daily.

Rest until the swelling disappears.

Begin physical therapy to regain as much of the normal range of motion as possible.

Surgery is often required to repair the damage.

Shin Splints



The periosteum is a membrane that surrounds bone. Shin Splints are an inflammation of the periosteum encasing the shinbone and are the result of strenuous athletic activity.

Causes:

People who play sports that require a lot of running, repeated impact on hard surfaces, and lots of starts and stops are more prone to develop this condition. Common causes are training too rigorously, "overuse" of the lower leg muscles, and shoes without sufficient cushioning and inadequate rest time during training.

Symptoms:

Pain, discomfort, inflammation, and swelling of the shin. Pain is usually noticed at the very beginning of the exercise and afterwards while at rest.

Treatment:

Rest. Avoid "overusing" leg muscles that are in pain.

Ice the shin to decrease inflammation and pain. Ice should be applied for at least 20 minutes, 2-3 times daily.

Gently stretch and massage the affected area. Consult a professional to learn the appropriate techniques.

If pain persists, consult a physician.

Tennis Elbow



Tennis Elbow (also called *lateral epicondylitis*) is an inflammation of the tendons attached to the elbow.

Causes:

The most common cause of tennis elbow is "overuse" of arm and forearm muscles. People who play sports that require them to frequently use their forearm, such as tennis and golf, are more prone to develop this condition.

Symptoms:

Pain and discomfort around the bony prominence of the elbow, possibly travelling to the forearm and hand. Pain usually occurs when moving the arm or grasping or squeezing something. However, pain may persist even while at rest.

Treatment:

Avoid doing any activity that causes pain and discomfort. Modify movements to avoid discomfort. Wearing an elbow splint may help to reduce pain and allow the muscles and tendons to rest and heal.

Ice the elbow to decrease inflammation and pain. Ice should be applied for at least 20 minutes, 2-3 times daily. Anti-inflammatory medications can also be taken to decrease inflammation and pain.

Gently stretch and strengthen the muscles and tendons around the elbow, forearm, and wrist.

If pain persists for 6-12 months, surgery may be required.

Sports Injury Prevention

Participating in regular physical activities such as sports is a key component of a healthy lifestyle. Current research indicates that exercise and involvement in sports can help you lose weight, stay healthy and even improve your mental state. However, participation in any sport or physical activity also carries the potential for injury in children and adults.

Before you or your children participate in any exercise or sport, make sure you take the necessary precautions to prevent injuries. Here are some easy steps you can take to prevent the most common injuries.

Warming-Up

It is important that you do some type of aerobic exercise prior to participating in your sport of choice. A proper warm-up will increase the flow of blood and oxygen to your muscles, which heats the muscle tissue. Warm muscles are less prone to become strained and irritated.

Tips for Warming Up

- *Start slowly* - Begin at a slow pace and ease into your warm-up routine. Walking slowly and

moving your arms a little is a great way to start your warm-up. If you're more advanced, take a brisk walk before running, do some jumping jacks before playing tennis, etc.

- *Allow enough time* - Spend approximately five to fifteen minutes warming up your body and muscles. Do anything that feels right for your body, as long as it increases your heart rate and blood flow.
- *Follow with stretching* - After you have increased the blood flow to your muscles make sure you adequately stretch them by following the next set of tips.

Stretching

Once you've completed your warm-up, it's critical that you stretch all of the muscles that you will be using. Stretching actually lengthens your muscles, making them less prone to injury.

Tips for Stretching

- *Avoid pain* - Never hold a painful stretch. Stretch a particular muscle just to the point below where you feel pain. If you do feel pain, back off a little and hold the stretch at that point. It should feel slightly uncomfortable, but not painful. Ease into your stretches slowly and gently before holding.
- *Hold your stretch* - Hold your stretches for approximately 30 seconds to one minute. It takes time to lengthen muscle tissue safely.
- *Stretch appropriate muscles* - It's a good idea to stretch as many muscles as possible. However, make sure you focus on the muscles and range of motion that you will be using during your sport activity. For example, if you will be playing soccer, focus on your leg muscles.
- *Never bounce* - Bouncing during a stretch can injure your muscles. Simply hold the stretch in one place for at least 30 seconds.

Cooling Down

After you have participated in your sport, you should stretch the muscles that you just worked. Muscles have a tendency to tighten during aerobic exercise, so stretching after you have exercised will leave your muscles more flexible and limber and less prone to injury.

Don't Overdo It

While sports and exercise can be both fun and healthy, don't overdo it. Listen to your body. When you feel pain, stop. When you're gasping for breath, stop. If you want to increase the amount of time you spend exercising or participating in a sport, increase the time gradually by approximately 10 percent per week.

Play It Safe



Being safe and understanding the rules of the sport are particularly important for children and adolescents. Make sure you and your children follow these guidelines to prevent any minor or serious sports injuries.

Wear Protective Equipment - This will vary depending on your sport of choice. If you're playing soccer, wear shin guards, if you're playing football, wear a helmet, etc.

- *Understand the Equipment* - If your sport requires using different items, make sure you know how they function. For example, when skiing, know what size skis you should use and how to adjust the settings.
- *Select the Proper Shoes* - Wear appropriate shoes for your sport or activity and replace them when they're worn or damaged.
- *Take Lessons* - If you don't completely understand your sport, take lessons or ask an expert for advice. Using proper form can help to prevent many "overuse" sports injuries.

Strengthen Your Muscles

Strengthening your muscles will increase your muscle strength and mass and help to protect your joints, tendons and ligaments when you participate in many of the aerobic sports activities. Sit-ups, leg lifts, and push-ups are a great way to start strengthening your muscles. Start slowly and gradually and consult a professional to know what level of strength training is appropriate for your body.