

# Don't Lose to the Top Seeds of Tennis Injuries

**M**any people presume that tennis elbow is the number one tennis injury, and to those who haven't played regularly over the winter and who start with too much of a bang, it is a main contender. However, for regular tennis players (and many other people who lead active lives) the top seed in the injury rankings is the ankle sprain, so we're going to start with some advice on the immediate treatment of an ankle sprain before moving onto some helpful hints for both treating as well as preventing tennis elbow injury.

**NO. 1 SEED THE ANKLE SPRAIN**  
The sudden sideways movements, quick lunges and changes in direction can cause the ankle to twist, particularly if the surface is slippery or the player is fatigued. A sprain is defined as a tearing or partial tearing of the ligaments that connect bone to bone and help stabilise the joint.

On the inside of the ankle (medial side), the joint is stabilised by a thick, strong fibrous ligament called the deltoid ligament. Sprains to this ligament are very uncommon. However, on the outside of the ankle (lateral side), the joint is stabilised by three smaller ligaments. Sprains to any of these ligaments (inversion sprains, foot twisting inwards) account for more than 80% of all ankle sprains.

## Proven risk factors:

- Previous or existing ankle injury especially if poorly rehabilitated
- Lack of strength and stability related to the ankle
- Lack of, or extreme flexibility in the ankle (laxity or unstable ankle joint)
- Poor balance
- Sudden change in direction
- Increasing age of player.

## Other risk factors:

- Poor condition of playing surface

The sun is shining, the strawberries are ripening and the tennis season is upon us! The tournaments held at the Queen's Club and The All England Club in London are just around the corner, inspiring many of you to get back out on court (if you're not already).

- Inappropriate, inadequate, or no warm-up
- Wearing inappropriate footwear
- Lack of external ankle support (taping or bracing) for previously injured ankles.

## Signs and Symptoms

A twisted ankle causes damage to ligaments and other soft tissues around the ankle. The damage causes bleeding within the tissues, which produces a swollen ankle that can be extremely painful. Swelling and bruising can move into the foot and toes, and even upwards above the ankle. Sprains are graded on a scale of 1 to 3 (mild, moderate, and severe), depending on the degree of tearing to the ligaments.

## Treatment

Immediately after a sprain you should apply the PRICE protocol for 48-72 hours. The aim is to reduce the bleeding and damage within the joint. Get help from a physical

therapist regarding this protocol, but essentially it stands for Protection, Rest, Ice, Compression, Elevation.

Most ankle sprains heal within 2 to 6 weeks; however severe sprains may take as long as 12 weeks. After the first 72 hours, physical therapy treatment may start with gentle mobilising of the joint to prevent stiffness developing, and gentle hands-on treatment to promote healing and reduce pain. Ultrasound and taping may be used to reduce swelling.

As soon as pain allows rehabilitation should start with a physical therapist. It is proven that good rehabilitation significantly improves the level of ankle function and minimizes the chances of the injury recurring. These treatments may include flexibility,



balance, stretching, strengthening and sport-specific exercises.

## Prevention

A physical therapist can help you with many of these things listed below which can reduce the chance of you having an ankle injury this season!

- General physical fitness, jogging or cycling. Injuries often happen when you are getting tired
- Gradually increasing the intensity and duration of training
- Undertaking flexibility, balance, stretching and strengthening exercises in weekly training programmes
- Including agility work in training programs so the ankle joint becomes accustomed to changes in direction
- Adequate recovery time between workouts or training sessions
- Warming up
- Wearing ankle taping or bracing especially for previously injured ankles
- Checking the training and playing area to ensure an even surface and no loose balls to trip over
- Wear firm, stable, well-fitting tennis shoes and pay attention to how the shoelaces should be tied. An ideal tennis shoe should have good shock absorption, sideways stability, grip and optimal comfort.

## NO. 2 SEED TENNIS ELBOW

Overuse injuries most often affect the upper limb (elbow, shoulder and wrist) and are due to the high-velocity and repetitive arm movements required in tennis. The good news is that these injuries can often be prevented with some changes to technique, equipment and sometimes training routines.

Tennis elbow, also known as lateral epicondylitis, occurs in about 40% of all tennis players, generally more commonly in players aged between 35 and 50. Acute tennis elbow is an injury to the muscles and tendon that extend (straighten) the wrist and fingers. The site of the pain is typically the lateral epicondyle, a bony bump on the outside of the elbow where these muscles

attach via the extensor tendon.

## Symptoms

The tennis elbow sufferer will experience pain when performing gripping tasks or resisted wrist/finger extension. Pain can also be present when the muscles are stretched. There will be tenderness directly over the bony condyle and tender points (trigger points) in the muscles. Some people may also suffer from neck stiffness and tenderness, and signs of nerve irritation. Most elbow movements are pain-free despite the surrounding area being painful.

## Causes

Acute tennis elbow is caused by damaged muscle tissue at the point it anchors to the arm at the elbow, also known as the 'extensor tendon'. It occurs when more force is applied to that area than the normal healthy tissue can handle.

For example:

- Unaccustomed hand use such as starting the tennis season too quickly (ie. playing too often for too long when re-starting the season)
- Excessive gripping or wringing activities, or possibly using a new racket or different grip size
- Poor forearm muscle strength or tight muscles
- Poor technique (such as a biomechanically inefficient tennis shot).

Chronic (or longer term) tennis elbow is associated with degenerative changes in the extensor tendon. Although a sudden acute flare of tennis elbow may have some inflammatory response and swelling, chronic tennis elbow is now known not to be due to inflammation. Chronic tennis elbow is associated with changes in the nerves and blood supply to the tendon, as well as changes in the actual tendon structure resulting in break down of the tendon tissue.

Tennis elbow should be diagnosed by a physical therapist or doctor. A history is taken and clinical tests performed. Referred pain from the neck and reduced nerve mobility

can mimic tennis elbow. The physical therapist should check your neck and clear it from any involvement in your elbow pain. An ultrasound scan or MRI are the best tests to identify tendon damage although are usually unnecessary.

## Treatment

Untreated tennis elbow can last anywhere from 6 months to 2 years. Physical therapy can however be very effective in both short and long term. Massage therapy will relieve pain and help lengthen and stretch tight muscles and structures. Manual therapy can mobilise joints in the elbow and around the neck to ensure normal function. Exercise therapy can be prescribed to strengthen and balance the muscles of the forearm; and stretches given to lengthen muscles and relieve pressure on nerves. Taping and braces are beneficial in reducing pain in the elbow and supporting the muscles when you return to sport. Ice and ultrasound therapy may be used to reduce inflammation. Dry needling can also be effective for pain relief, releasing trigger points in the muscle and promoting tissue healing.

Tennis elbow unfortunately has a knack of recurring. It's important to try and identify what caused the injury and address these issues, a physical therapist may also be able to help with this.

A quick note on grip size: Make sure your racket has the correct grip size and string tension to reduce stress on your elbow and shoulder. You should also pay attention to the size and weight of your racket based on your needs and ability. A professional can help you to choose the right racket. If the grip is too small you tend to squeeze the handle excessively to prevent it slipping or moving in your hand and this can overstress the muscles of the forearm and lead to tennis elbow. Check out this link for some guidance on grip size <http://spjx.nl/2qvQ9F9>

Talk tennis with your local physical therapist so you can play this season in Grand Slam form without any early retirements.

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