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## Tennis Shoulder

Do you have pain or have you had an injury to the shoulder? If you do its not surprising when you consider the overhead motion involved when playing tennis. Shoulder injuries are common in tennis players because of repetitive nature of the forces placed upon the shoulder joint when we serve, and play shots such as an overhead smash, high forehand and backhand volley. Even if you have been lucky enough to avoid shoulder problems to date, there's no time like the present to start some preventative shoulder conditioning. This will not only help prevent injury from an overuse problem but it may enhance performance and help to avoid fatigue.



The rotator cuff is a group of 4 muscles whose role is to stabilize the shoulder joint. Injuries to the rotator cuff tendons, which attach the muscles to the bones, are typically caused by eccentric overload. Eccentric overload occurs with the high-intensity decelerative muscle contractions which happen during the follow through phase of the serve. The overload to the rotator cuff muscles can lead to irritation and inflammation of the tendons. Fatigue, weakness, past injury, degeneration and imbalances in your strength and flexibility will increase your risk of injuring the rotator cuff tendons. The pain and inflammation of the rotator cuff tendons will next alter the biomechanics of the shoulder. This may lead to what is commonly called impingement of the rotator cuff and eventually a tear of this muscle group.

Stretching and strengthening of the *asymptomatic* shoulders may prevent shoulder injuries. Please note – this program is designed for the healthy shoulder – should you have a history of pain or injury, or these exercises cause you moderate discomfort, discontinue and consult a physician or physical therapist.

### Stretching

Maintenance of good shoulder flexibility in order to allow for full range of motion, decreases the chance of injury and improves stroke potential. The stretching program recommended for the tennis player focuses on stretching motions of the shoulder which typically become tight in the tennis player. Perform stretches 3 times each on each side, holding for 45 seconds, once a day. In addition, do these stretches before and after you play tennis.

### 1. Cross Arm Stretch

Lift arm out in front of you to shoulder height with elbow bent at 90 degrees. Using your other arm, pull the elbow across your body. The stretch should be felt in the back of the shoulder.



### 2. Hand behind back Stretch

Place your hand behind your back with your palm facing outwards. Grasp a tennis racquet as shown and gently pull your arm up you back as shown.



### 3. Inferior Capsule Stretch

Lift your arm overhead with your elbow pointing to the ceiling. Holding a tennis racquet, gently pull your arm towards the ground.



## Strengthening

The rotator cuff muscles help to stabilize the shoulder joint. An injury to this muscle groups will lead to instability and a variety of other shoulder problems. A strengthening program will prevent such injuries as well as improve power and endurance during the game. The following exercises will help to prevent injury to the shoulder when the shoulder is in an unstable position such as a serve, volley or overhead smash.

The exercises should be done 3-4 times a week in 3 sets of 10 repetitions. Attach a resistive band (available at Physical Therapy clinics or sports store) to something at about shoulder height. Begin with a yellow band, then advance to red, then green if able.

### 1. Shoulder internal rotation

Face away from the attachment of the band and position your shoulder out to the side as shown, with your elbow bent to 90 degrees. Pull band forwards towards the floor and slowly return to starting position.



### 2. Shoulder External Rotation

Facing the attachment of the resistive band, position your shoulder out to the side as shown with your elbow bent to 90 degrees. Pull band backwards and slowly return to starting position



There are many other exercises that can be added to maximize strength and flexibility. Please consult a physical therapist or an athletic trainer for further information.

## **Prevention tips**

Finally, as the warmer weather approaches many people are returning to or increasing the amount of tennis they play. Remember these tips to help avoid injury:

- Participate in a conditioning program to ensure you have the appropriate muscle strength, endurance and flexibility.
- At the beginning of a season do not over train or over play as you will be putting excessive stress on soft tissues not conditioned for the new level of activity
- Be sure to have the correct equipment – have a professional assist you when you chose which racquet to purchase
- Be sure you are using the optimal techniques – its worth having a lesson from a tennis professional!
- If you have had a past injury, be sure it is fully rehabilitated and healed before resuming tennis.
- Nourish your muscles by eating a well-balanced diet
- Warm up before any sports activity
- If you are injured, seek the assistance of a qualified health care provider



The information provided here is from Performance Physical Therapy. It is not intended to replace any information/treatment provided to you by your health care provider. Please feel free to check with your Physical Therapist if you have any questions about the information provided on this page.

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