

# Eccentric Strength Training

## *The Right Way to Rebuild Your Tendons*



# Centre for Chiropractic & Sports Rehabilitation

An integrative, biomechanical approach to the everyday sports and spinal injuries.

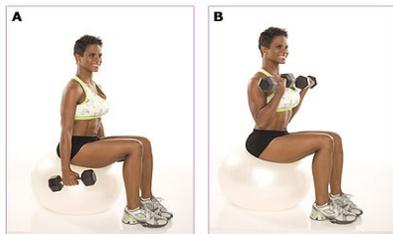


Figure 1: The Bicep Curl

Strengthening your tendons is an incredibly important part of your treatment at CCSR. Once you and your doctor have cleared your problem area(s) of damaged tissue, lengthening and strengthening the affected tendons will ensure continued strength and overall health. This sort of strengthening will teach your body to operate efficiently and effectively, can rebuild muscle mass and strengthen muscle, and is particularly effective in repairing tendinoses (tendons with long-term damage) all over the body. And, eccentric training is low impact and easy to do!

### What is Eccentric Training?

Eccentric training is simple: it's the lowering or lengthening phase of any exercise. Let's use the bicep curl in Figure 1 as an example: gripping a dumbbell, the patient raises her hand to her shoulder. When she does so, the bicep contracts, creating a group of shortened muscles and tendons (B). This is called *concentric* strengthening. When the patient slowly lowers her arm back to her side, the bicep and surrounding tendons lengthen (A). This is *eccentric* strengthening: lengthening the tendon while it is under a load. Eccentric strengthening can be performed with any tendon or muscle in the body.

### How do I do it?

Clinical studies have proven that a dedicated regime of eccentric strengthening is an effective way to heal painful, damaged tendons. In fact, after friction massage and active release techniques (your practitioner's preferred treatment methods), this is the *most* effective way!

To improve or heal a tendinosis in your shoulders you must perform three exercises with the theraband: a 45-degree shoulder abduction (Figure 2), an internal shoulder rotation (Figure 3), and an external shoulder rotation (Figure 4).

Begin the shoulder abduction (Figure 2) by standing with your feet shoulder width apart, standing squarely on a theraband. Stand with your arms at your sides, gripping the end of the theraband in your right hand. Your palms should be facing backwards, with your right thumb at your side. Keeping your arm straight, bring your right hand out to 45 degrees, and slowly lower it back to your side. Do this 12 times with your right hand, then 12 times with your left hand. Repeat this set three times in total.

To complete both shoulder rotation exercises, you'll need to tie the theraband to a chair or doorhandle. Make sure that the theraband is secure at elbow height. Stand next to the theraband with the arm closest to the band hinged at the elbow. Grasp the theraband in that hand, and slowly rotate your shoulder so that your hand moves in an arc toward your body. Then, bring your arm back to the starting position. This entire movement is done by rotating the shoulder, *not* by moving the wrist (Figure 3)! Complete this exercise 12 times, then turn 180 degrees and complete the opposite movement: this is the external shoulder rotation (Figure 4). With your right arm hinged across your body, grasp the theraband and slowly rotate your shoulder outwards: your hand will make an arc outside the body. Rotate back to your starting position, and complete 12 times. Do the same exercises with your opposite hand, and complete the circuit three times in total.

**Remember: eccentric training will only result in permanent results when you follow a dedicated regime. Perform each movement every day for three sets of 10-12 repetitions. Continue for twelve weeks.**

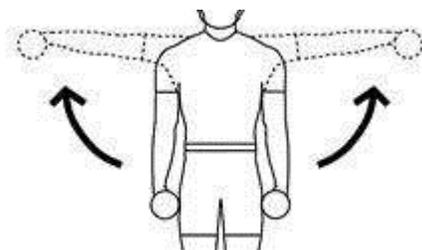


Figure 2: Shoulder Abduction

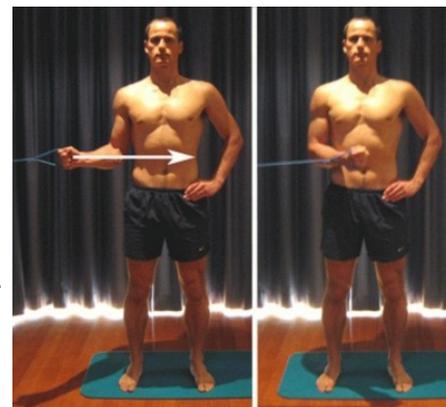


Figure 3: Internal Shoulder Rotation

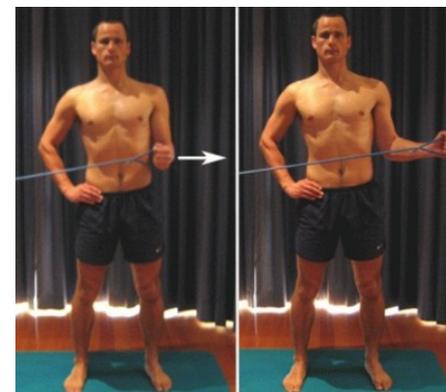


Figure 4: External Shoulder Rotation