

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.

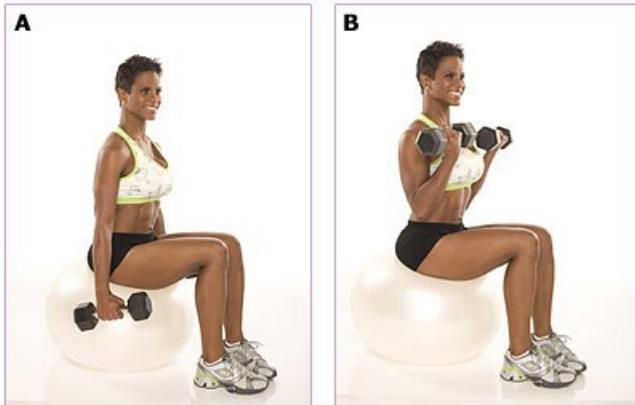


Figure 1: The Bicep Curl

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 (Dr. LaBelle's preferred treatment methods), this is the *most* effective way!

To improve or heal tendinosis in your knee, perform drop squats against a wall, with a swiss ball resting between your lower back and the wall.

The movement for drop squats is simple (Figure 2). Start standing straight up and down, with your feet shoulder width apart. Your arms should be straight out in front of you, and there should be a swiss ball between your lower back and the wall. Bending at the knees, lower your body as if you are about to sit down in a chair. Hold this position, then slowly raise yourself back up to standing. Repeat 12 times, then take a two-minute break. Repeat this set three times overall.



Figure 2: Drop Squats