



Tennis Elbow Rehabilitation Program

Purpose:

An effective program for using Powerball® in the direct treatment of Lateral Epicondylitis “Tennis Elbow”.

This is a painful condition typically aggravated by tension in the wrist and finger extensor muscles located in the forearm [posterior]. These muscles can shorten in length due to a variety of factors such as age; poor work posture; repetitive strain; general over-use or a reduction in blood flow from injury and will usually result in pain, general discomfort and inflammation in the tendon which connects them to the elbow joint [figure 1].



figure 1 - Origination point of the forearm [extensor] tendon responsible for Tennis elbow pain and discomfort

Following this short program with your Powerball®, just 2-3 times per week, will greatly assist in reversing these conditions by stimulating [significant] blood flow into the arm, stretching out and lengthening the forearm extensor muscle and taking pressure off the connecting tendon - all of which helps reduce inflammation in the tendon itself and increase overall range of movement at the elbow joint – **relief will be immediate.**

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Note: please remember that, should you experience any discomfort while exercising with Powerball® or while following this rehabilitation program, you should speak to your physiotherapist or other qualified healthcare practitioner to get the best advice and support before proceeding.

Let's Begin

Step 1 To begin:

Grip Powerball® firmly between thumb and four digits, making sure Powerball® is seated securely in the palm of the hand [see figure 2]. Start your Powerball® in the usual manner and accelerate up to a comfortable spin speed - if you don't know how, check out the '**Getting Started**' page on our site at Powerballs.com for videos and instructions.

It is very important that you spin only with your wrist and not the arm - rotating clockwise or anticlockwise as preferred.



figure 2 - Power grip

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Spin speed is determined by your personal strength and fitness level as well as the severity of your condition. The purpose here is not to strengthen, but to loosen out and warm up the muscle tissue by bringing about increased blood flow in the limb. Therefore, rhythmic, slower spins of 2-3 minutes in duration (or longer if you prefer) are preferable to short, faster spinning for this specific program.

Faster spinning produces more resistance from Powerball® and requires the wrist flexor and extensor muscles to work harder to maintain a firm grip – this is useful for the purposes of strengthening healthy muscle tissue but not beneficial in this instance where there is likely to be an accumulation of scar tissue and inflammation; excess resistance is therefore to be avoided during this rehabilitation phase, thus slower spinning is preferable.

Note: It is recommended that you wear a light, skin tight garment to help reduce possible friction on the skin during the following steps.

Step 2 Pre-massage warm up process:

Once the entire forearm has been sufficiently warmed up in this way, stop the spinning rotor and place Powerball® into your *opposite hand*, gripping it firmly.

Using ONLY the FLAT base of your Powerball®, begin to slide it up and down the forearm (as illustrated in figure 3) using firm, fluid strokes from wrist to elbow, applying gentle downward pressure of the smooth plastic shell surface into the muscle.

You may do this as quickly or slowly as you prefer; your objective here is to warm up and loosen out a tight extensor muscle and therefore the speed/pressure of the strokes used will always depend on the severity of your own particular RSI condition and tolerance levels.

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figure 3 - Powerball® presented flat to the arm

Continue this action for at least 2-3 minutes until the tissue has been fully loosened out and sensitivity now fades in the muscle.

Step 3 Deep tissue massage process:

Deep tissue / self massage from wrist to elbow helps reduce extensor muscle tension by breaking down adhesions and surface knots in the actual muscle fiber. Blood flow will have been significantly enhanced during the pre-massage process above and you should now find that the muscle is in a far more pliable, relaxed state and is exerting considerably less pressure on the connecting tendon at the elbow.

Now take Powerball® and elevate it to **45 degrees** so that the curved edge of the shell is the only part in contact with the forearm (figure 4).

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figure 4 - Note the increased angle of Powerball® – just the curved edge should be touching the skin

Beginning at the wrist, slowly move Powerball® up along the forearm toward the elbow, pressing down firmly into the belly of the muscle as you go; imagine that you're trying to lengthen the actual muscle, pressing deeper into the tissue with each stroke.

NOTE: Take care AT ALL TIMES to avoid working directly over the tendon itself or any point in the muscle that may already be inflamed; any such area will be far more sensitive to pressure than surrounding muscle tissue. If actual discomfort is experienced however, simply reduce downward pressure significantly or stop the treatment entirely and allow the area to recover before continuing.

As you proceed, you'll also likely encounter areas in the muscle that may require more localised pressure; these are trigger points (contraction knots in the muscle fibers) and breaking these down by applying firmer pressure with Powerball's shell can bring particular relief to your condition.

In many cases, the highest relief will be felt by applying suitable pressure to the muscle at a point immediately below where it attaches to the tendon (figure 5).

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figure 5 - The 'sweet spot' where tendon converts into muscle

Continue the massage treatment for 3-5 minutes, stretching the arm out periodically in between – if you're applying sufficient pressure in each stroke, you'll notice an immediate increase in pain-free range of motion at the elbow joint as tension and pressure in both the muscle and tendon diminish.

Step 4 Stretch it out:

It is recommended that you finish each treatment with a light 30-60 second stretching of the wrist area as illustrated in figure 5; this will help to further lengthen out the muscle, taking even more pressure off the tendon where it attaches at the elbow.

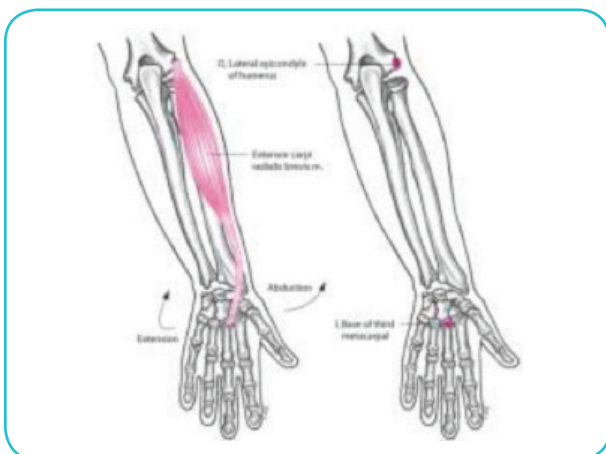
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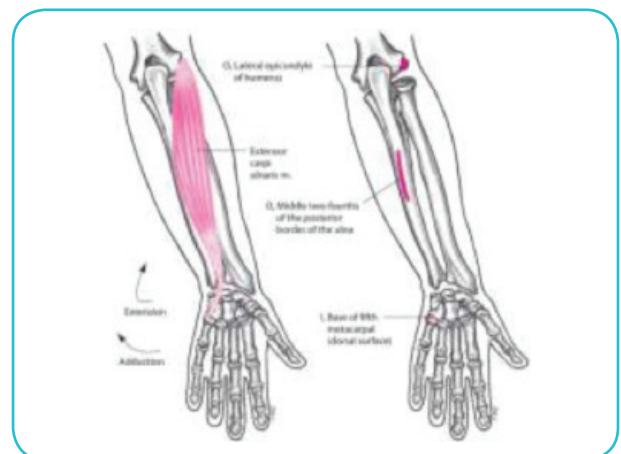
figure 6 - Gently stretch the hand backward as illustrated

Further details and a full video of this **Powerball® Tennis Elbow rehabilitation program** may be found on the powerballs.com website.

Muscles involved in this exercise



Extensor Carpi Radialis Brevis



Flexor Carpi Ulnaris

Remember

You are looking to achieve a smooth, progressive spin which will test your fingers by requiring them to grip Powerball® firmly as the speed increases; if you have strong, injury-free hands and fingers, you may find that lower speeds aren't challenging the muscles sufficiently. Therefore simply increase the spin speed until you arrive at a point where there is gentle fatigue building in the tissue and you're having to work hard to maintain that firm grip around the handle to avoid dropping Powerball®. Holding this state for 30 - 60 seconds will produce definite results.



Learn More

As always, progress is achieved by following a regular exercise programme, further details regarding usage frequency, repetition and spin technique can be found on our website powerballs.com.



Important

Should you experience any pain or discomfort when exercising with Powerball® or in general, speak to your physio or qualified healthcare practitioner to get the best advice and support.