



The Elbow Extensors

Purpose:

Designed to **improve the strength and function of the elbow extensors** (Triceps Brachii & Anconeus) and provide **maintenance of elbow joint health and movement**. The load placed upon the elbow extensors during this exercise is relatively significant due to the impact of gravity and the fact that the muscles involved in extension are not as powerful as those involved in flexion.

Because of the limb position, this exercise also recruits some of the larger shoulder muscles but these are targeted more specifically by later exercises in the series.

*NOTE: This exercise incorporates **Thumb, Finger Flexors and Extensors & Wrist Flexors and Extensors** exercises as both the finger and wrist flexor and extensor muscles are required to maintain a firm grip on your Powerball®. It is the additional movements that recruit the other muscles in this exercise.*

Useful For:

Anyone who needs or wants to improve the strength or maintain the condition of the elbow extensors. Suitable for enhancing a wide variety of sports activities, especially those which require an over-arm throwing actions, such as; Tennis, rugby, badminton, softball, American football, baseball (especially pitching), climbing, javelin, pole-vault etc.

In the non-sporting arena, anyone involved in manual work e.g. plumbers, electricians, carpenters, mechanics, assembly line workers etc.

Can be utilised as part of rehabilitation, recovery and maintenance following:

- **Fracture of radial head or proximal ulna where the range of elbow flexion has diminished as a result of surgery or immobilisation post-surgery**
- **Rupture of long-head of Biceps (to maintain strength of remaining muscle)**

Let's Begin

- 1 Grip Powerball® firmly in the palm of the hand and secure by gripping with thumb and four digits. For this exercise it is recommended to get your Powerball® moving before assuming the start position - if you don't know how to, check out the **Getting Started** page on **Powerballs.com** for videos and instructions.
- 2 Shoulder abducted to 90°, elbow flexed to 90° [see figures 1a & 1b]. Palm should be facing backwards and maintained in this orientation throughout the exercise.



figure 1a and 1b - Start Position

- 3 Once Powerball® has reached a moderate spin speed, begin to extend the elbow until the arm is straight [see figure 2]. Return the arm slowly to the starting position. This will specifically target the **Triceps Brachii and Anconeus** muscles.



figure 2 - End Position

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Although Powerball® itself is light-weight, the exercise is performed against the pull of gravity increasing the effort involved. Also because of the effect of gravity, the muscles are challenged both on the upward and the downward movement. Aim to count to FIVE [slowly] while straightening the arm and FIVE [slowly] while returning the arm to the start position.

Recommended Guideline Programme

Initial Session: 3 X 30 seconds with a 1 minute break between each one. Use this session to establish the RPM at which you are challenged but can still maintain a solid grip on Powerball®.

Progression:

- Week 1:** 3 X 30 seconds with a 1 minute break between each one on **alternate days**.
- Week 2:** 3 X 30 seconds with a 1 minute break between each one **daily**.
- Week 3:** 3 X 60 seconds with a 1 minute break between each one on **alternate days**.
- Week 4:** 3 X 60 seconds with a 1 minute break between each one **daily**.

Further progression can be achieved by increasing the frequency, repetitions or Powerball® spin speed and duration.

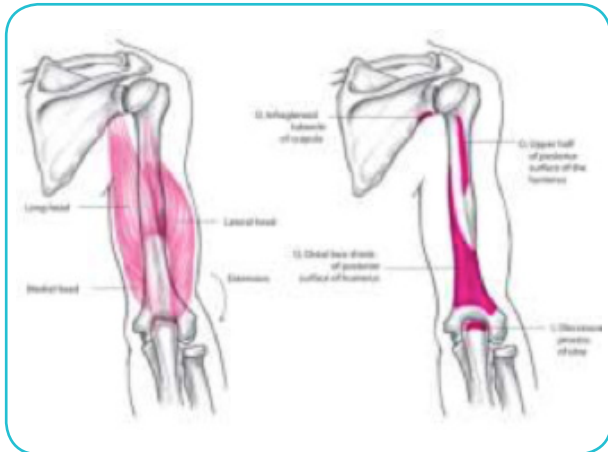
Caution: Rehabilitation following surgery should be approached with care to avoid aggravating structures that are still recovering. Powerball® develops resistance that is directly proportional to the speed at which the rotor is spinning, consequently, you should always spin *conservatively* when using this product for the first time until you fully establish the resistance levels you are able to tolerate.

Similarly, the frequency of exercise may need to be modified from that outlined above to allow for longer rest periods between individual exercise sessions. If you are experiencing pain or discomfort, consult a qualified healthcare practitioner before embarking on this exercise.

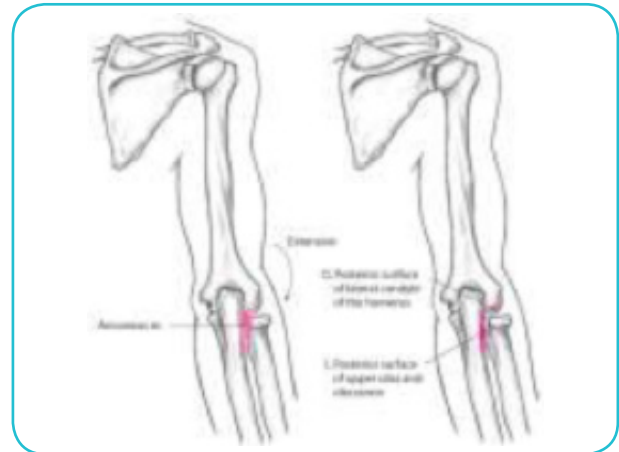
Some muscle fatigue is to be expected with this exercise much in the same way your muscles might react to a gym workout. However, if you experience actual pain, you should reduce the exercise frequency, repetitions or duration.

If the pain persists or increases, you should discontinue the exercise and consult a healthcare professional.

Muscles involved in this exercise



Triceps Brachii



Anconeus



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 fingers, you may find that 5,000 - 6,000rpm isn'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 shell 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.