



The Shoulder External Rotators

Purpose:

Designed to **improve the strength and function of the shoulder external rotators** (Infraspinatus, Teres Minor, Posterior Deltoid); **maintenance** of glenohumeral (shoulder) **joint health and movement**; maintenance of **strength of rotator cuff**.

The load placed upon the shoulder external rotators during this exercise is moderate. The length of the lever is relatively short given the arm position and little resistance is provided by gravity or the weight of your Powerball®. However, Infraspinatus and Teres Minor are small muscles whose main function is to stabilise the humeral head. Therefore, this exercise provides an adequate challenge.

*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 and stability of the glenohumeral joint. Suitable for a wide variety of sporting activities, including Tennis, table tennis, badminton, softball, baseball, golf, javelin, pole-vault, climbing, gymnastics etc.

In the non-sporting arena, anyone involved in manual work or overhead work e.g. construction workers, machine operatives, plumbers, electricians, carpenters, plasterers etc.

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

- **Sub-acromial bursitis**
- **Infraspinatus/Teres Minor (Rotator cuff) strain or instability**
- **Shoulder Impingement syndrome**
- **(Recovery from) dislocated or sub-luxated shoulder**
- **(Posterior) Deltoid strain**

Let's Begin

- 1 Grip Powerball® firmly in the palm of the hand and secure by gripping with thumb and four digits. We recommend that you get Powerball® moving in the usual way before assuming the start position - if you don't know how to, check out the **Getting Started** page on **Powerballs.com** for videos & instructions.
- 2 Begin with your upper arm & elbow firmly in contact with your side (figure 1). The palm can be facing the floor or in neutral.

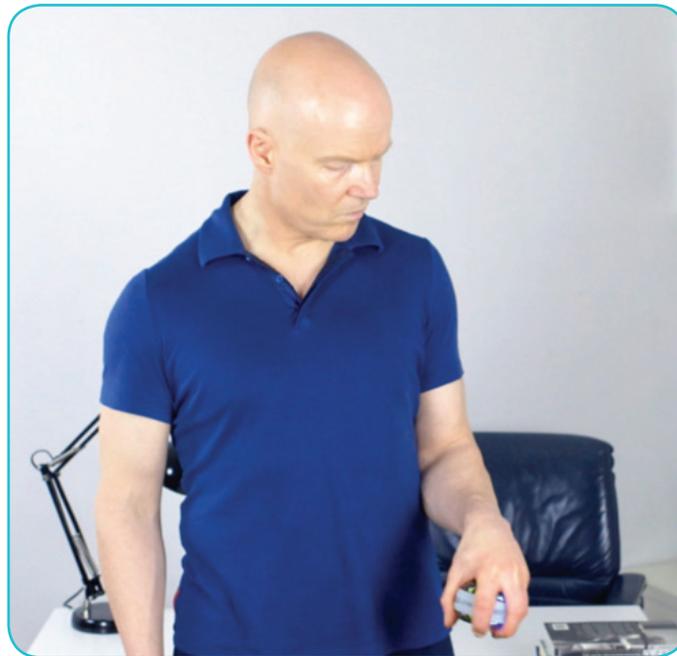


figure 1 - Start position (with palm facing floor)

- 3 Keeping the elbow FIRMLY against your side and while spinning Powerball® at a moderate speed, move your forearm to the right (when using right hand) or to the left (when using left hand) until you reach your limit (figure 2).

Hold your arm at the limit for the required period of time and then return slowly to the starting position.

The Shoulder External Rotators



figure 2 - Finish position

[IMPORTANT: note that elbow/upper arm is still firmly in contact with side]

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, the repetitions or the duration. Repetitions for this exercise have been modified due to the relative strength of the muscles being targeted.

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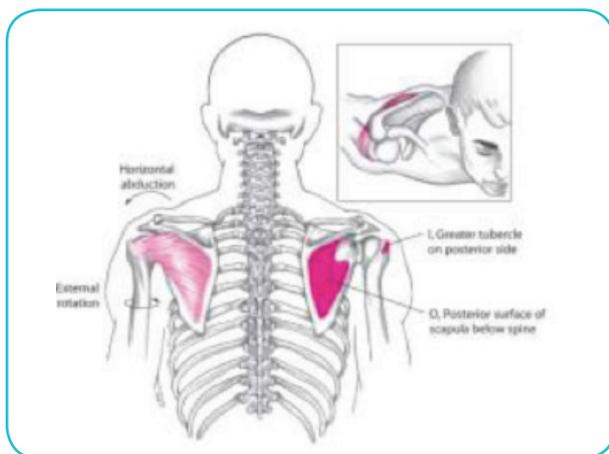
Caution:

The length of time the “hold position” is maintained for may need to be reduced depending on the relative strength of the individual performing the exercise. If you are experiencing pain or discomfort, consult a qualified healthcare practitioner before embarking on this exercise.

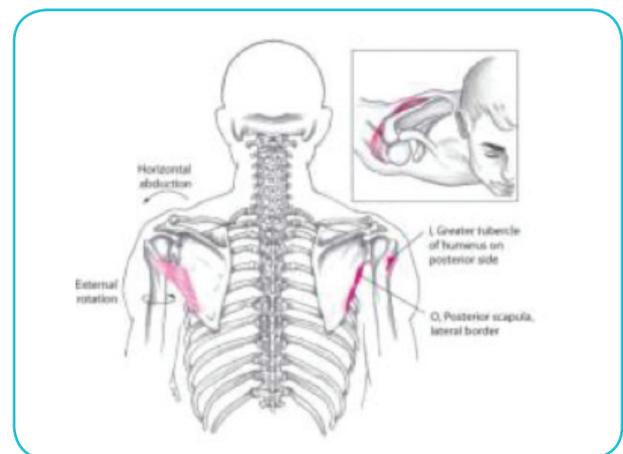
Some muscle fatigue is to be expected with this exercise much in the same way your muscles might react to a gym workout.

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.

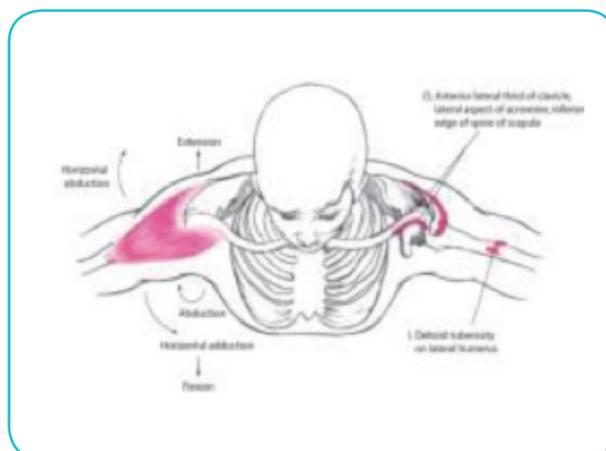
Muscles involved in this exercise



Infraspinatus



Teres Minor



Deltoid

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.