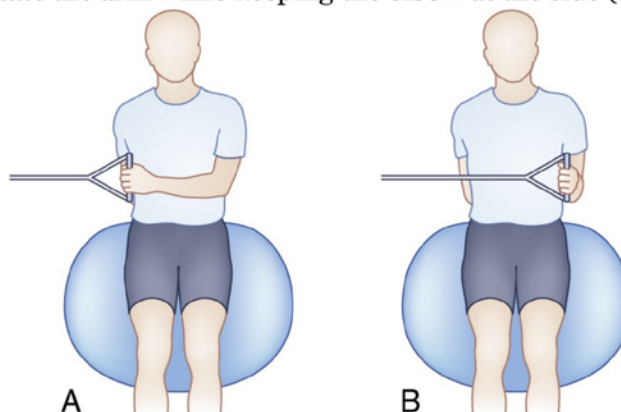


Advanced Throwers' Ten Program

Kevin E. Wilk, PT, DPT

External Rotation at 0° Abduction.

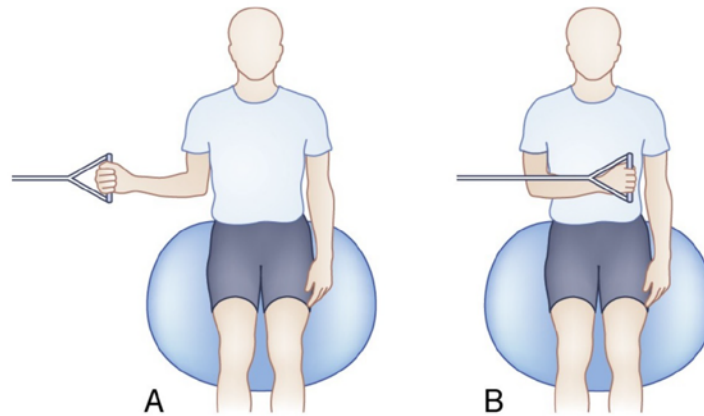
Sit on a stability ball with the elbow at the side fixed at 90° and the involved arm across the front of the body (internally rotated). Grip the tubing and externally rotate the arm while keeping the elbow at the side (Fig. D-1).



FIGURED-1 External rotation at 0° abduction. **A**, Starting p...

Internal Rotation at 0° Abduction.

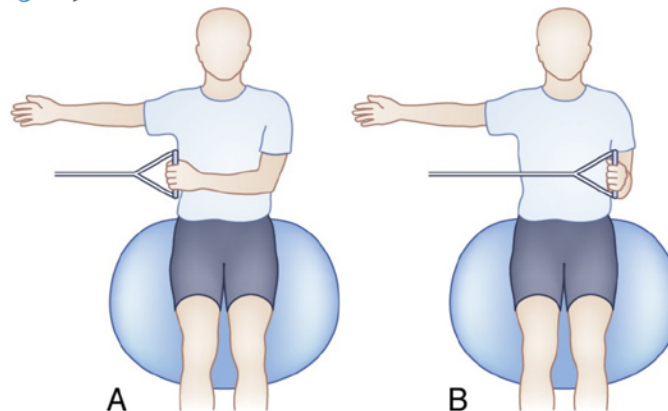
Sit on a stability ball with the elbow at the side fixed at 90° and the shoulder externally rotated. Grip the tubing and pull the arm across the body (internal rotation) while keeping the elbow at the side. Return the tubing slowly and in a controlled manner (Fig. D-2).



FIGURED-2 Internal rotation at 0° abduction. **A**, Starting p...

External Rotation at 0° Abduction With Sustained Hold.

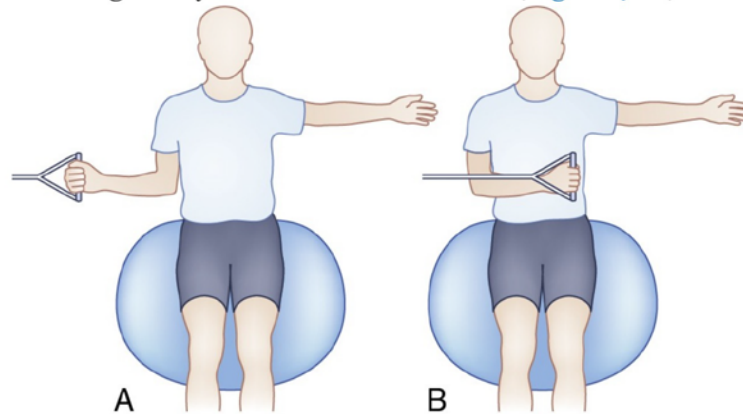
Sit on a stability ball with the elbow at the side fixed at 90°, the involved arm across the front of the body (internally rotated), and the uninvolved arm at the side, elbow straight, and palm against the side. Raise the uninvolved arm to the side, palm down, until the arm reaches 90° (shoulder level). Sustain the position of the uninvolved arm while the involved arm grips the tubing and pulls out (externally rotates) with the elbow kept at the side (Fig. D-3).



FIGURED-3 External rotation at 0° abduction with sustaine...

Internal Rotation at 0° Abduction With Sustained Hold.

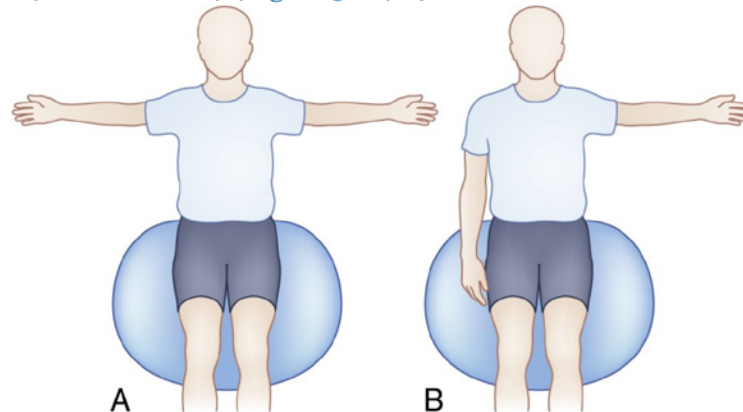
Sit on a stability ball with the elbow at the side fixed at 90° , the shoulder rotated out (externally rotated), and the uninvolved arm at the side, elbow straight, and palm against the side. Raise the uninvolved arm to the side, palm down, until the arm reaches 90° (shoulder level). Sustain the position of the uninvolved arm while the involved arm grips the tubing and pulls the arm across the body (internally rotates) with the elbow kept at the side. Return the tubing slowly in a controlled manner (Fig. D-4).



FIGURED-4 Internal rotation at 0° abduction with sustained...

Shoulder Abduction to 90° With Sustained Hold.

First Set: Sit on a ball with both arms at the side, elbows straight, and palms against the sides. Raise both arms to the side, palm down, until both arms reach 90° (shoulder level) (Fig. D-5 , A).



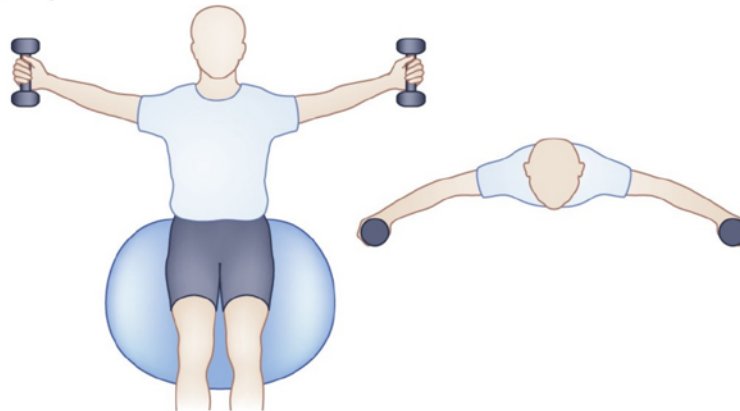
FIGURED-5 A and B, Shoulder abduction to 90° with sustai...

Second Set: Sit on a ball with both arms at the side, elbows straight, and palms against the sides. Raise both arms to the side, palm down, until both arms reach 90°. Return the involved arm to the side and repeat the motion while the uninvolved arm sustains the position for the duration of the set. Repeat for the uninvolved side with a sustained hold on the involved side (Fig. D-5 , B).

Third Set: Sit on a ball with both arms at the side, elbows straight, and palms against the sides. Raise both arms to the side until both arms reach 90°. Alternately return each arm to the side while the opposite arm sustains its position at shoulder level.

Scaption, External Rotation “Full Can” Position.

First Set: sit on a ball with both arms at the side, elbows straight, and thumbs up. Raise both arms to shoulder level at a 30° angle in front of the body. Do not go above shoulder height. Hold for 2 seconds and lower slowly (Fig. D-6).

**FIGURED-6 Scaption, external rotation “full can” position.**

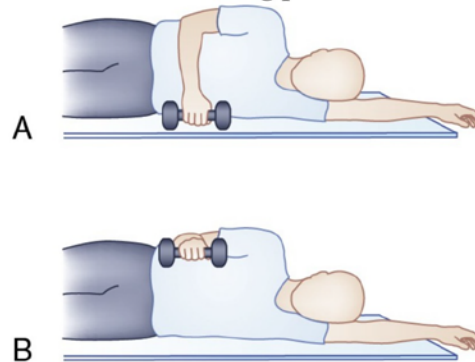
Second Set: Sit on a ball with both arms at the side, elbows straight, and thumbs up. Raise both arms to shoulder level at a 30° angle in front of the body. Return the involved arm to the side and repeat the motion while the

uninvolved arm sustains its position for the duration of the set. Repeat for the uninvolved side with a sustained hold of the involved arm.

Third Set: Sit on a ball with both arms at the side, elbows straight, and thumbs up. Raise both arms to shoulder level at a 30° angle in front of the body. Alternately return each arm to the side while the opposite arm sustains its position at shoulder level.

Side-Lying External Rotation.

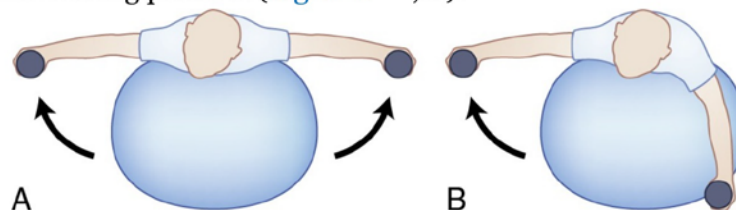
Lie on the uninvolved side with the involved arm at the side of the body and the elbow bent to 90°. Keep the elbow of the involved arm fixed to the side and raise the arm with a dumbbell in the hand (Fig. D-7). Hold for 2 seconds and lower it back to the starting position.



FIGURED-7 Side-lying external rotation. **A**, Starting positio...

Prone Horizontal Abduction.

First set: Lie prone on a stability ball, face down, with both arms hanging straight to the floor and the palms facing down. Raise both arms out to the side, parallel to the floor. Hold for 2 seconds and then lower the arms slowly back to the starting position (Fig. D-8 , A).



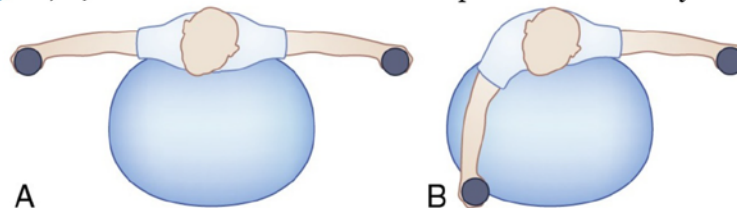
FIGURED-8 A and B, Prone horizontal abduction.

Second Set: Lie prone on a stability ball, face down, with both arms hanging straight to the floor and the palms facing down. Raise both arms out to the side, parallel to the floor. Return the involved arm to the starting position and repeat the motion while the uninvolved arm sustains the hold parallel to floor for the duration of the set. Repeat for the uninvolved arm (Fig. D-8 , B).

Third Set: Lie prone on a stability ball, face down, with both arms hanging straight to the floor and the palms facing down. Raise both arms out to the side, parallel to the floor. Alternately return each arm to the starting position while the opposite arm sustains the hold position.

Prone Horizontal Abduction (Full External Rotation, 100° Abduction).

First Set: Lie on a stability ball, face down, with both arms hanging straight to the floor and the thumbs rotated up (hitchhiker). Raise the arms out to the side with the arms slightly in front of the shoulders, parallel to the floor (Fig. D-9 , A). Hold for 2 seconds at the top and lower slowly.

**FIGURED-9 A and B, Prone horizontal abduction, (full exter...**

Second Set: Lie on a stability ball, face down, with both arms hanging straight to the floor and the thumbs rotated up (hitchhiker). Raise the arms out to the side with the arms slightly in front of the shoulders, parallel to the floor. Return the involved arm to the starting position and repeat the motion while the uninvolved arm sustains its position parallel to the floor (Fig. D-9 , B). Repeat for the uninvolved arm.

Third Set: Lie on a stability ball, face down, with both arms hanging straight to floor and the thumbs rotated up (hitchhiker). Raise the arms out to the side with the arms slightly in front of the shoulders, parallel to the floor. Alternately return each arm to the starting position while the opposite arm sustains the hold position.

Prone Row.

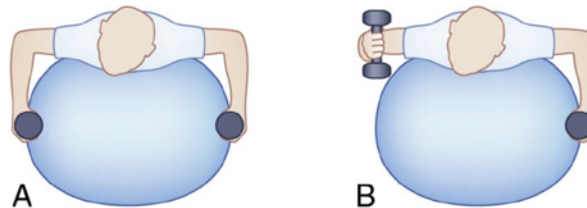
Lie on a stability ball, face down, with both arms hanging to the floor, dumbbells in hand, and elbows straight. Slowly raise each arm while bending the elbows and raise the dumbbells as high as possible (Fig. D-10).



FIGURED-10 Prone row.

Prone Row into External Rotation.

First Set: Lie on a stability ball, face down, with both arms hanging to the floor, dumbbells in each hand, and elbows straight. Slowly raise both arms up to the level of the top of the stability ball while bending the elbows. Pause 1 second and then externally rotate the shoulders upward until the dumbbells are parallel to floor with the elbows kept at 90° (Fig. D-11 , A). Hold at the top for 2 seconds and then slowly return back to the starting position.



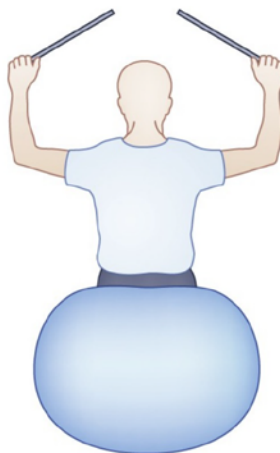
FIGURED-11 A and B, Prone row into external rotation.

Second Set: Lie on a stability ball, face down, with both arms hanging to the floor, dumbbells in each hand, and elbows straight. Slowly raise both arms up to the level of the top of the stability ball while bending the elbows. Pause 1 second and then externally rotate the shoulders upward until the dumbbells are parallel to the floor with the elbows kept at 90°. Return the involved arm to the starting position and repeat the motion while the opposite arm sustains the position at the top (Fig. D-11 , B). Repeat for the uninvolved arm.

Third Set: Lie on a stability ball, face down, with both arms hanging to the floor, dumbbells in each hand, and elbows straight. Slowly raise both arms up to the level of the top of the stability ball while bending the elbows. Pause 1 second and then externally rotate the shoulders upward until the dumbbells are parallel to the floor with the elbows kept at 90°. Alternately return each arm to the starting position while the opposite arm sustains the hold position.

Seated Scapular Retraction into External Rotation.

First Set: Sit on a stability ball with both arms straight ahead and grasping tubing. While keeping the arms at shoulder height, bend the elbows and pull the tubing toward the body until the elbows are at shoulder level and directly out to both sides (90° abduction). Hold for 1 second and then rotate the shoulders upward until the arms are at 90° external rotation and abduction (Fig. D-12). Hold at the top for 2 seconds and then return slowly to the starting position.



FIGURED-12 Seated scapular retraction into external rotati...

Second Set: Sit on a stability ball with both arms straight ahead and grasping tubing. While keeping the arms at shoulder height, bend the elbows and pull the tubing toward the body until the elbows are at shoulder level and directly out to both sides (90° abduction). Hold for 1 second and then rotate the shoulders upward until the arms are at 90° of external rotation and abduction. Return the involved arm to the starting position while the uninvolved arm holds its position at the top. Repeat for the uninvolved arm.

Third Set: Sit on a stability ball with both arms straight ahead and grasping tubing. While keeping the arms at shoulder height, bend the elbows and pull the tubing toward the body until the elbows are at shoulder level and directly out to both sides (90° abduction). Hold for 1 second and then rotate the shoulders upward until the arms are at 90° external rotation and abduction. Alternately return each arm to the starting position while the opposite arm sustains its hold position at the top.

Seated Low Trap.

Sit on a stability ball with both arms fixed at the side, elbows bent to 90° , and thumbs facing upward. Grasp the tubing with both hands, rotate both shoulders outward (external rotation), and rotate the thumbs until parallel

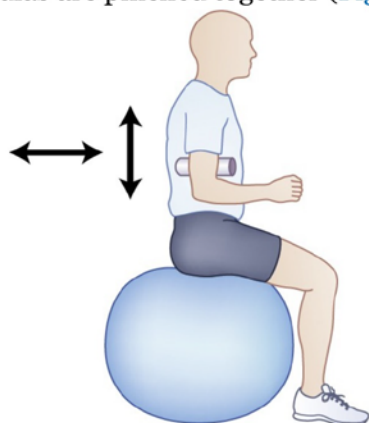
to the floor. Hold for 2 seconds and then return to the starting position (Fig. D-13).



FIGURED-13 Seated low trap.

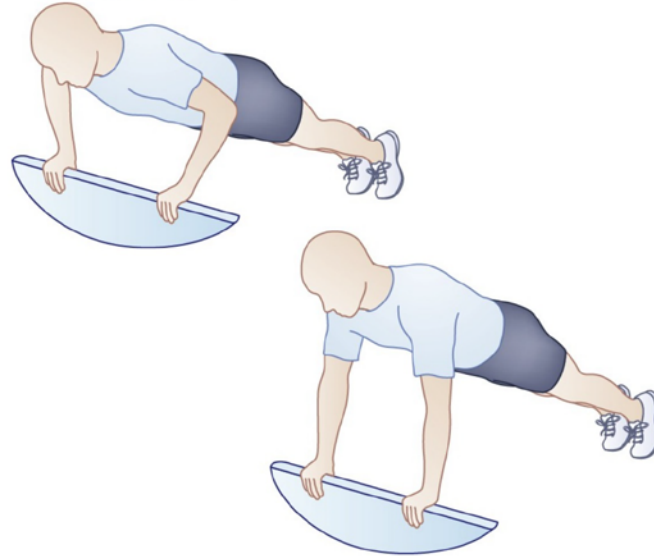
Seated Neuromuscular Control.

Sit on a stability ball with the involved arm at the side, a towel roll under the involved side, and the elbow flexed to 90°. Resistance is applied to the top of the shoulder as the shoulder is shrugged up against resistance. Resistance is then applied to the bottom of the towel roll as the shoulder is moved downward against resistance. Resistance is next applied to the front of the shoulder as the shoulder is moved forward against resistance. Apply resistance to the back of the shoulder as the shoulder moves back against resistance and the scapulas are pinched together (Fig. D-14).



FIGURED-14 Seated neuromuscular control.**Tilt Board Push-Ups.**

Start in the down position with the arms in a comfortable position and both hands no more than shoulder width apart on a tilt board. With the body kept in a straight line, push up as high as possible while rolling the shoulders forward after the elbows are straight. Return slowly to the starting position (Fig. D-15).

**FIGURED-15** Tilt board push-ups.**Elbow Flexion (Bicep Curl).**

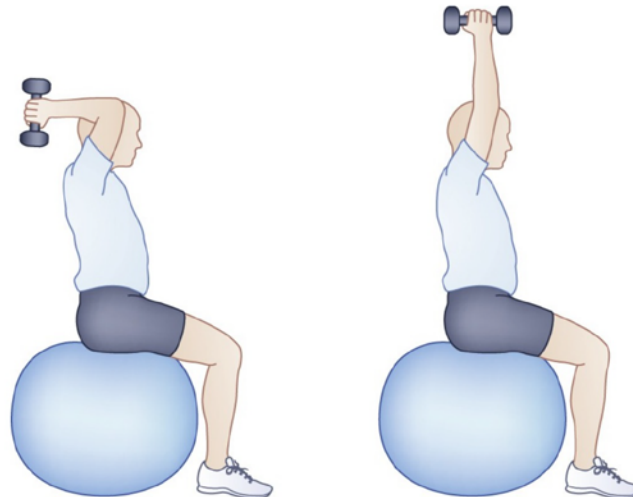
Sit on a stability ball with both arms facing inward, the elbows bent upward, and the palms turning up as you progress. Hold for 2 seconds at the top and lower the elbow slowly (Fig. D-16).



FIGURED-16 Elbow flexion (bicep curl).

Elbow Extension (Triceps).

Sit on a stability ball and raise the involved arm overhead. Provide support at the elbow with the uninvolved hand. Straighten the arm overhead. Hold for 2 seconds and lower slowly. Repeat on the uninvolved side (Fig. D-17).



FIGURED-17 Elbow extension (triceps).

Wrist Extension.

Support the forearm and, with the palm facing downward, raise the weight

in the hand as far as possible. Hold for 2 seconds and lower slowly (Fig. D-18).



FIGURED-18 Wrist extension. (Redrawn from Wilk, K.E., Andrews, J.R...

Wrist Flexion.

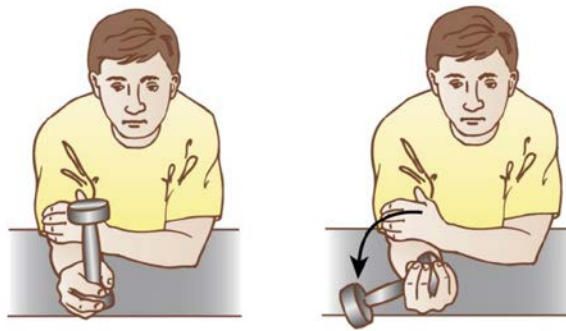
Support the forearm and, with the palm facing upward, lower a weight in the hand as far as possible and then curl it up as high as possible. Hold for 2 seconds and lower slowly (Fig. D-19).



FIGURED-19 Wrist flexion. (Redrawn from Wilk, K.E., Andrews, J.R., Ar...

Wrist Supination.

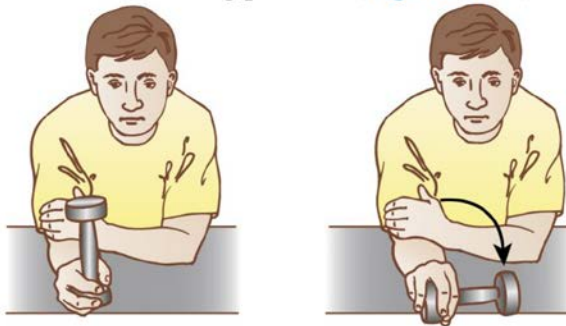
Support the forearm on a table with the wrist in neutral position. With a weight in the hand, roll the wrist while taking the palm upward. Hold for 2 seconds and return to the starting position (Fig. D-20).



FIGURED-20 Wrist supination. (Redrawn from Wilk, K.E., Andrews, J....

Wrist Pronation.

Support the forearm on a table with the wrist in neutral position. With a weight in the hand, roll the wrist while taking palm downward. Hold for 2 seconds and return to the starting position (Fig. D-21).



FIGURED-21 Wrist pronation.