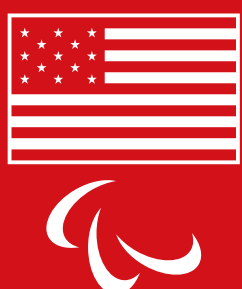
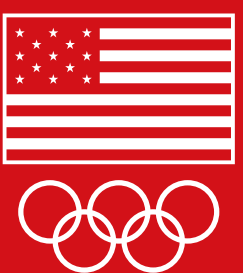


THE SHOULDER PLAYBOOK

Mobility

Activation

Dynamic Progressions



UNITED STATES
OLYMPIC & PARALYMPIC
COMMITTEE

Understanding Your Shoulder

The shoulder girdle is a highly mobile and flexible joint that is composed of the **humerus** (upper arm bone), **scapula** (“shoulder blade”) and **clavicle** (“collar bone”). Its unique but shallow design balances mobility with support while also achieving a large range of motion.

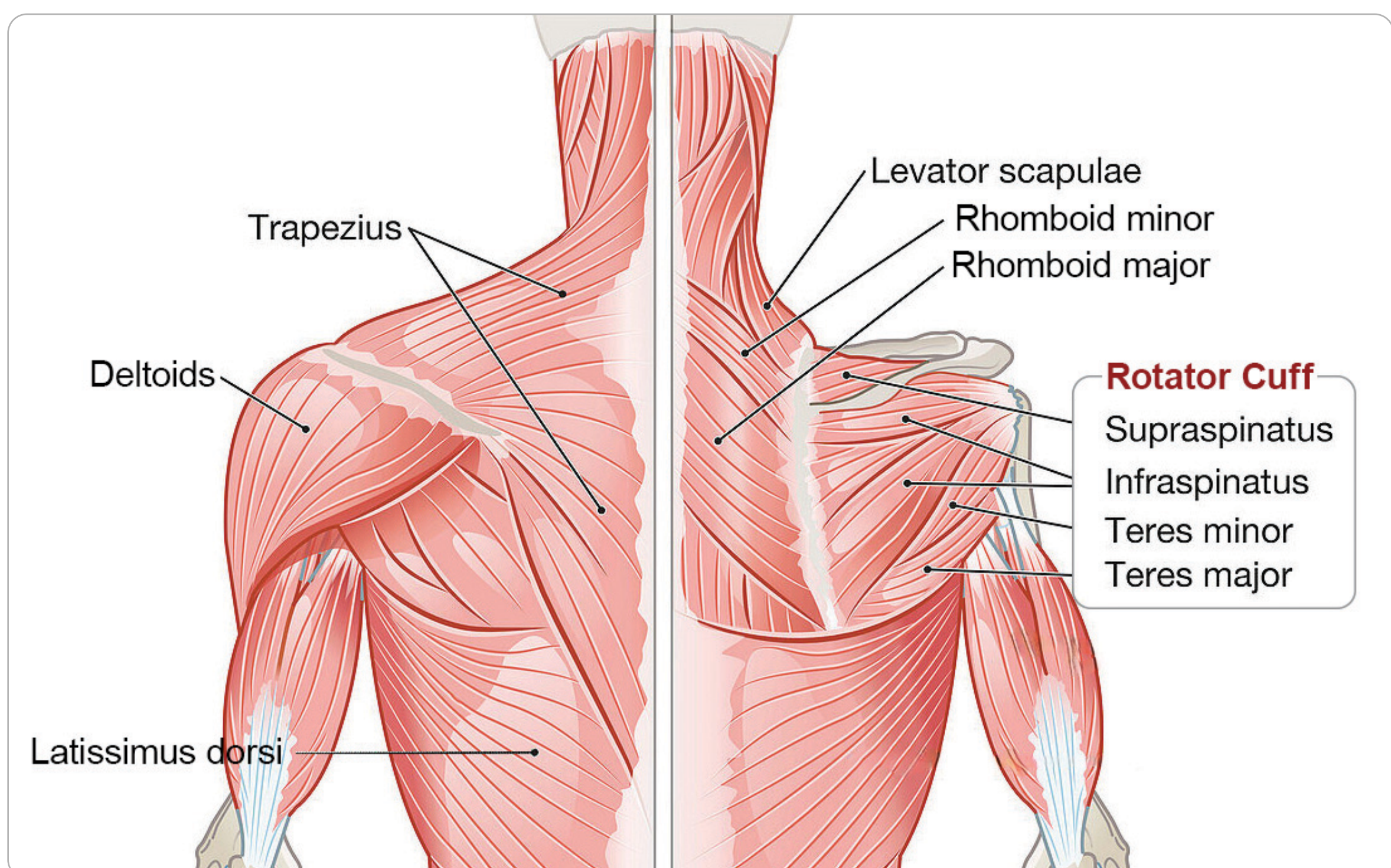
The Primary Stabilizers are:

Dynamic (i.e., Muscles):

1. Rotator Cuff (Supraspinatus, Infraspinatus, Subscapularis, Teres minor)
2. Biceps Brachii
3. Periscapular Muscles
(Trapezius, Rhomboids, Levator scapulae)

Static:

1. Labrum
2. Joint Capsule
3. Glenohumeral ligaments



Dynamic Shoulder Warm-Up

Improving the overall shoulder mobility, activation, and dynamic movement patterns will help with injury prevention. These exercises effectively move your shoulder to ensure proper activation before activity.

Mobility Exercises (1 x 10 mobilizations, 2 x 30s stretches)	<ol style="list-style-type: none">1. Sleeper stretch2. Cross body stretch3. Thoracic mobility (extension, rotation)
Activation Exercises (2 sets x 10 reps)	<ol style="list-style-type: none">1. Banded D2 pattern2. External rotation3. Scapular protraction
Dynamic Exercises (2 sets x 6 reps)	<ol style="list-style-type: none">1. Banded D2 pattern*: Perform diagonal pull with explosive speed.2. External rotation: Execute rapid external rotation, mimicking a throw.3. Scapular protraction: Engage powerful, quick protraction (e.g., ball toss).

* For dynamic movements, progress by increasing weight (medball), moving from supine to upright (seated or standing), and, if able, utilizing a split stance position for altered center of balance and increased core activation.

I. MOBILITY EXERCISES

1. Sleeper Stretch..... 4
2. Cross Body Stretch 4
3. Thoracic Mobility..... 5

I. MOBILITY EXERCISES

1. SLEEPER STRETCH (Perform 2x30s)



- Lie on the side you want to be stretched.
- Extend the bottom arm in front of you, keeping it perpendicular to your body.
- Bend the bottom elbow to achieve

- 90-degree angle (fingers should be pointed to the ceiling).
- With opposite hand, gently but firmly press down until you begin to feel a stretch in the back of the bottom shoulder.
- With control, return to starting position.

[WATCH VIDEO](#)

2. CROSS BODY STRETCH (Perform 2x30s)

- Maintain good upright posture.
- Cross one arm across your chest and use other arm to gently pull it closer to your chest to feel stretch in back of crossed arm.



Alternative Cross Body Stretch



[WATCH VIDEO](#)

I. MOBILITY EXERCISES

3. THORACIC MOBILITY (Perform 1x10)

1. Thoracic Extension on Foam Roller



- Place hands behind neck to support spine.
- Place foam roller under mid to upper back.
- Arch your spine over top of the foam roller to feel extension.

- Return to starting position.
- Repeat 5 times, then find another tight spot and repeat 5 more repetitions.

[WATCH VIDEO](#)

2. Thoracic Extension on Wall in Chair

- Place hands behind neck to support spine.
- Come close to the wall and keep elbows narrow.
- Begin to reach upwards and slide your elbows up the wall to feel extension through upper back.



[WATCH VIDEO](#)

I. MOBILITY EXERCISES

3. THORACIC MOBILITY *cont'* (Perform 1x10)

3. Quadruped Thoracic Rotation



- Start in quadruped position with knees under hips and hands under shoulders.
- Place one hand behind your head and rotate the trunk to bring the bent elbow toward the ceiling.
- Return to start position and repeat. Perform on other side.

[WATCH VIDEO](#)

4. Half Kneeling Thoracic Rotation on Wall



- In half kneeling position, maintain your knee and hip against the wall.
- Place your hands behind your head and maintain an open chest as you begin to rotate top elbow toward the ceiling and into upright position.
- Repeat.

[WATCH VIDEO](#)

I. MOBILITY EXERCISES

3. THORACIC MOBILITY *cont'* (Perform 1x10)

5. Sidelying Banded Resistance Thoracic Rotation



- Start lying on your side with your hips and knees bent at 90/90.
- Facing the same way as your knees, hold a band in both hands.

- Begin to rotate your trunk to the opposite side, while keeping knees together until back is flat on the ground.
- If you can not reach the opposite side without knees coming apart, stop rotation just before knees separate.

Tip: This movement can be performed without a band as needed.

[WATCH VIDEO](#)

II. ACTIVATION EXERCISES

1. Banded D2 Flexion 9
2. External Rotation..... 11
3. Scapular Protraction/
Bear Hug 13

II. ACTIVATION EXERCISES

1. BANDED D2 FLEXION PATTERN (Perform 2x10)

1. Gravity Minimized (Isometric Banded D2 Flexion)



- Maintain one arm over chest, other arm pulls band down toward opposite hip.
- Return to initial position. Ex. left arm still, right arm pulls toward right hip.

Tip: Maintain thumb pointed toward the ceiling.

[WATCH VIDEO](#)

2. Gravity Resisted (Supine Banded D2 Flexion)



- Lay on back with band or with dumbbell in hand down by hip.

(In this case the right arm is stationary at the right hip and the left arm actively lifts to the left shoulder.)

- Lift arm to opposite shoulder and with control, return back to hip.

Tip: Maintain thumb pointed toward the ceiling.

[WATCH VIDEO](#)

II. ACTIVATION EXERCISES

1. BANDED D2 FLEXION PATTERN *cont'* (Perform 2x10)

3. Gravity Resisted

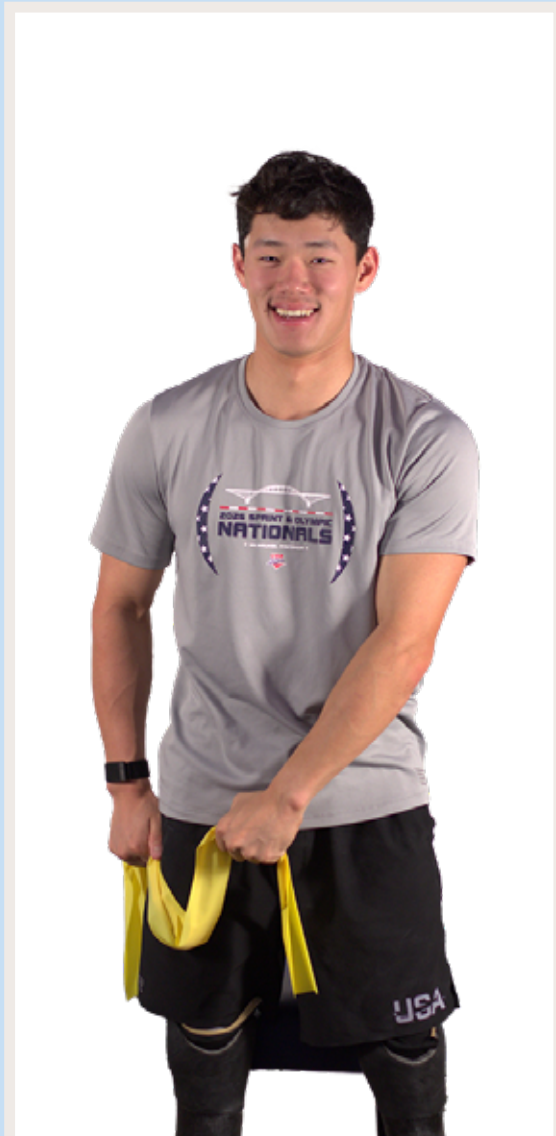
Seated Dumbbell D2 Flexion



- While seated, maintain one arm by side, other arm lifts the dumbbell diagonally over opposite shoulder.
- Return to initial position. Ex. left arm still, right arm pulls diagonally over right shoulder.

Tip: Maintain thumb pointed toward the ceiling.

Seated Dumbbell D2 Flexion



- While standing, maintain one arm by side, other arm pulls band diagonally over opposite shoulder.
- Return to initial position. Ex. left arm still, right arm pulls diagonally over right shoulder.

Tip: Maintain thumb pointed toward the ceiling.

[WATCH VIDEO](#)

II. ACTIVATION EXERCISES

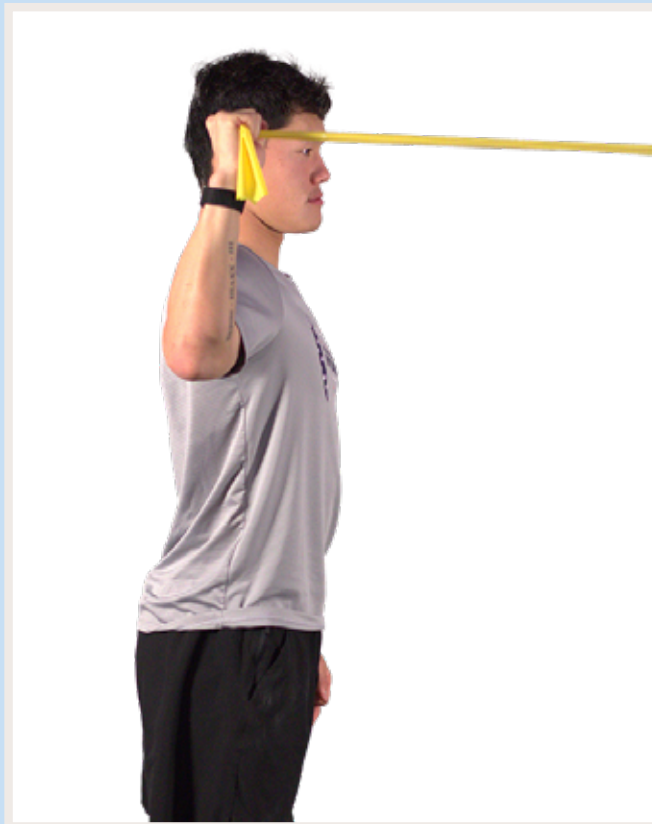
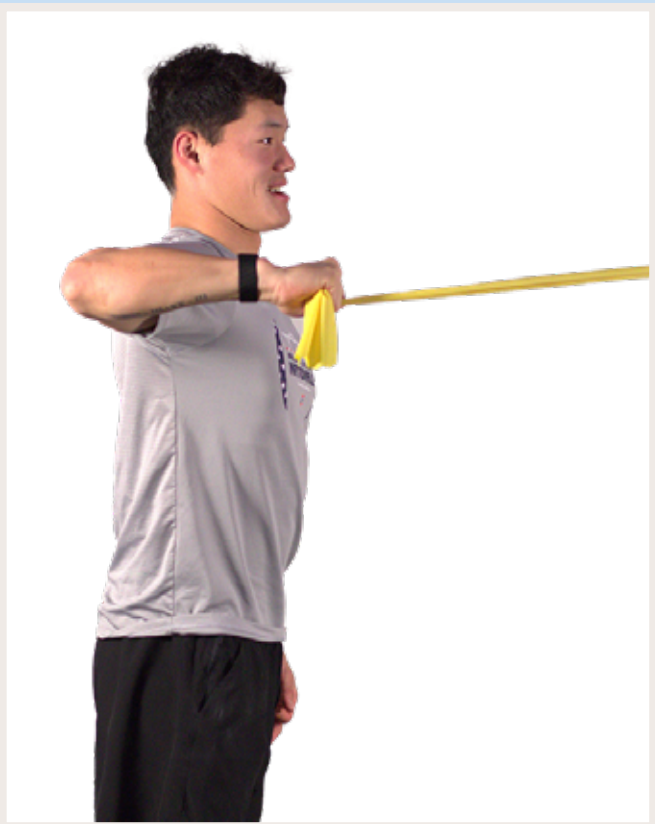
2. EXTERNAL ROTATION (Perform 2x10)

1. Gravity Assisted Begin in neutral at side, progress to 90-90 as able



- While seated, keep elbows in tight to body, move band away from stationary arm, hold.
- Return to starting position with control.

[WATCH VIDEO](#)



- While standing, maintain an upright position and tight core.
- Keep elbow at 90/90 position and externally rotate shoulder.

- If feeling is in low back, reposition with hips underneath torso.
- Begin with activation exercise (Standing ER 90-90).
- Progress to dynamic as able only once mastered the activation drill (standing dynamic ER 90-90).

[WATCH VIDEO](#)

II. ACTIVATION EXERCISES

2. EXTERNAL ROTATION *cont'* (Perform 2x10)

2. Gravity Resisted (Added Resistance)



- Squeeze shoulder blade back.
- Keep elbow tight to side.
- Rotate forearm up toward ceiling.
- If feeling is in back, bring torso forward, in line with hips to maintain 90/90 position.

Tip: Begin with light weight (1-2 lbs)

[WATCH VIDEO](#)

3. Gravity Resisted (Prone External Rotation)



- Lie flat on your stomach with your arm out to the side as shown.
- Rotate your arm down as you release the ball and stabilize before catching the ball and returning to the start position.
- Increase speed to mimic a throw.

Isometrics: begin with isometric holds with light weight for desired time (10-30 seconds as tolerated), 3 rounds

Isotonics: move through full range of motion internal to external rotation

Progression:

- Addition of light weight as tolerated
- Dynamic: increased speed to mimic a throw

[WATCH VIDEO](#)

II. ACTIVATION EXERCISES

3. SCAPULAR PROTRACTION/BEAR HUG

(Perform 2x10)

1. Gravity Minimized (Supine Banded Punch)

If athlete does not have core control to move both arms at the same time, can modify any level to unilateral movements.



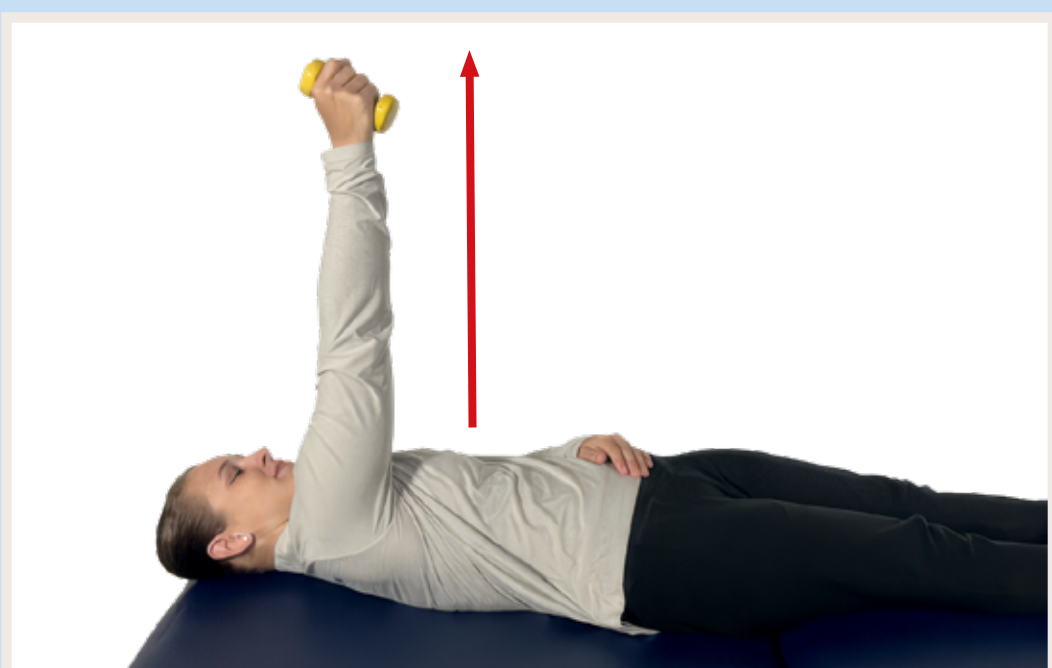
[WATCH VIDEO](#)

- Place band behind back, stretch band to desired resistance and hold in each hand.
- Reach arms toward ceiling against resistance then slowly return to starting position.

Progressions:

- Increase strength with addition of heavier weight.
- Increase stability with addition of balance challenge: upside down kettle bell.

2. Gravity Minimized (Supine Dumbbell Punch)



- Hold a dumbbell in one or both hands.
- Have shoulder in 90 degrees of flexion and reach dumbbell towards ceiling.
- Slowly return shoulder blade back to table.
- Repeat.

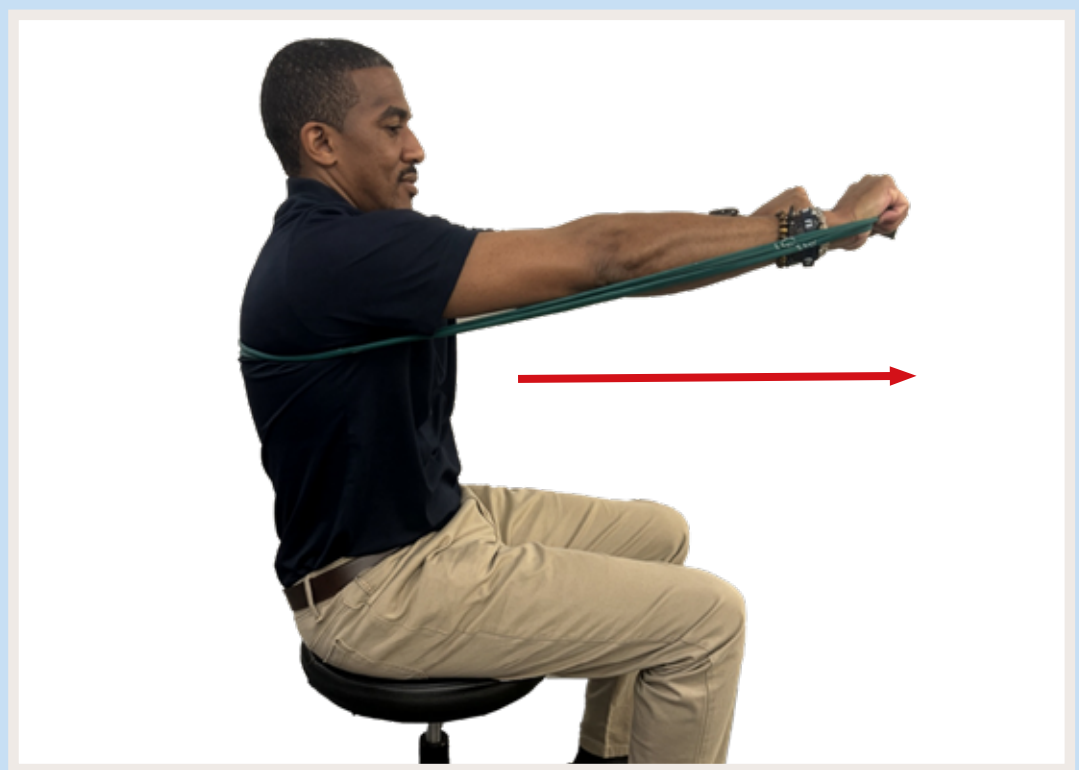
[WATCH VIDEO](#)

II. ACTIVATION EXERCISES

3. SCAPULAR PROTRACTION/BEAR HUG *cont'* (Perform 2x10)

3. Gravity Resisted (Seated or Standing Position)

- Place band behind back, stretch band to desired resistance and hold in each hand.
- Reach arms forward against resistance.
- Slowly return to starting position.



[WATCH VIDEO](#)

4. Gravity Resisted (Push Up Position)

- Keeping core tight, push upper body away from your hands and slightly round upper back.
- Slowly reverse the motion and return to neutral starting position.

Tip: Can add resistance such as band around back or weight vest.



[WATCH VIDEO](#)

III.

DYNAMIC EXERCISES

For the Banded D2 Flexion exercises, apply from the II. Activation Exercises section, focusing on performing the diagonal pull with explosive speed.

External Rotation	16
Scapular Protraction	17

III. DYNAMIC EXERCISES

EXTERNAL ROTATION (Dynamic Progression)

- Lie flat on your stomach with your arm out to the side as shown.
- Rotate your arm down as you release the ball and stabilize before catching the ball and returning to the start position (ball drop).



[WATCH VIDEO](#)

- Increase speed to mimic a throw (ball toss).

[WATCH VIDEO](#)

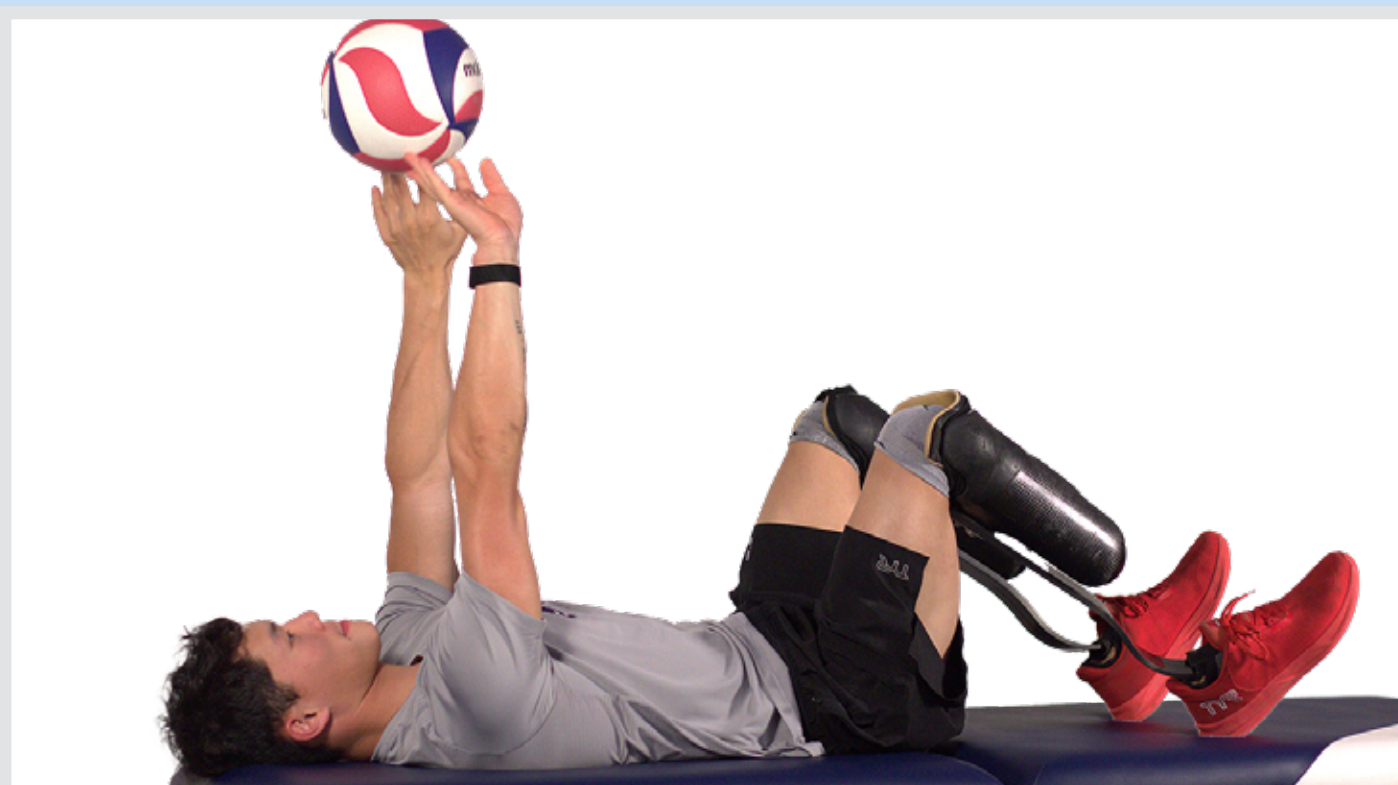
III. DYNAMIC EXERCISES

SCAPULAR PROTRACTION (Ball Toss)

- Begin with ball at your chest, then powerfully explode it away from you.
- Catch and return to starting position with control.

Progressions:

- *Increase weight with a medicine ball.*
- *Progress from supine to upright and chest passing to a wall.*
- *If able, split stance position for altered center of balance and increased core activation.*



[WATCH VIDEO](#)

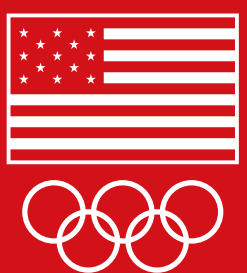
REFERENCES:

Effect of different trunk postures on scapular muscle activities and kinematics during shoulder external rotation — PubMed

(PDF) Thoracic spine function: assessment and self-management

<https://pubmed.ncbi.nlm.nih.gov/38322067/>

Shoulder muscle activity and function in common shoulder rehabilitation exercises - PubMed



UNITED STATES
OLYMPIC & PARALYMPIC
COMMITTEE