

Pittsburgh Pirates  
Shoulder  
&  
Arm Care Manual



Compliments of



## **Glossary of Medical Terms commonly used in these programs:**

**Abduction**: Movement of any extremity away from the midline of the body. (Example: Raising arms while performing a lateral raise.)

**Adduction**: Movement of any extremity toward the midline of the body. (Example: Lowering arms after performing a lateral raise.)

**Anterior**: In the front of; the frontside of the body.

**Closed Chain**: A movement which involves an extremity pushing against a fixed or immovable object. This forces the body to use multiple muscles and joints to execute an exercise. The distal segment is not free (like pushing against the ground) creating a more functional movement. (Examples: Performing a push-up; a squat.)

**Depression**: To move the scapula inferiorly (downward) along the rib cage. With this movement the shoulder goes in the direction of your feet.....depressing one's shoulder.

**Distal**: Farthest away from the midline of the body; farthest away from any point being described. (Example: The wrist is distal to the elbow.)

**Elevation**: To move the scapula superiorly (upward) along the rib cage. With this movement the shoulder gets closer to the ear. (An example would be a "shrug".)

**Extension**: The action of straightening a joint; increasing the joint angle. (Example: While performing triceps pressdowns the elbow extends; increasing its amount of extension.)

**External Rotation**: Lateral rotation of a joint; rotating towards the outside.

**Flexion**: The action of bending a joint; decreasing the joint angle. (Example: While performing bicep curls the elbow flexes; increasing elbow joint flexion.)

**Horizontal Abduction**: Moving the arm or leg away from the midline; the starting position being out in front of the body and while keep the arm or leg elevated, move it away from the midline (parallel to the ground). .....away from the body.

**Horizontal Adduction**: Moving the arm or leg toward the midline; the starting position being out away from the body and while keep the arm or leg elevated, move it toward the midline (parallel to the ground). .....toward the body.

**Inferior**: Beneath; below; lower aspect of a body part.

**Internal Rotation**: Medial rotation of a joint; rotating toward the midline.

**Lateral**: Applies to structures or descriptions of body parts that are located away or moving away from the midline; on the outer surface of the body.

**Manual Resistance**: Resistance against a movement is applied by a hand, either by a clinician or by one's self.

**Neutral**: Referred to as the "anatomical position" (proper erect standing position).

**Open Chain**: A movement which involves an extremity pushing against a movable object or movement of a body part without resistance. The distal segment is free to move and this type of exercise tends to isolate certain movements and muscle groups. (Examples: Performing a bicep curl; a lateral raise.)

**Posterior**: Towards the back of; the backside of the body.

**Pronation**: The act of lying face down (prone); the act of turning the hand and forearm so the palm faces downward; the act of turning the foot downward and outward.

**Prone**: Applies to the body lying horizontally, face down.

**Protraction**: To move the scapula anteriorly (forward) along the rib cage. (This is done for example, when reaching out for something.)

**Proximal**: Nearest the midline of the body; nearest any point being described. (Example: The elbow is proximal to the wrist.)

**Retraction**: To move the scapula posteriorly (backward) along the rib cage. During this movement, the scapula gets closer to the spine. (This done for example, when pinching one's scapulas together.)

**Rotator Cuff:** These are four small muscles which are responsible for not only rotating and assisting with movement of the humerus about the glenoid, but they give stability to the joint by synergistically steadying the head of the humerus in the glenoid cavity. This prevents and / or limits migration of the humeral head during work. The rotator cuff is made up of four small muscles: the supraspinatus, infraspinatus, teres minor and subscapularis. These muscles are considered the secondary restraints of the shoulder (maintaining the “ball in the socket”); whereas the ligaments and capsule are the primary restraints.....the first line of the defense against excessive migration of the humeral head about the glenoid. Maintaining the strength and flexibility of the rotator cuff are paramount to maintaining a healthy, stable shoulder.

**Rhythmic Stabilization:** These are exercises geared to stabilizing the humerus (upper arm) in the glenoid (shoulder socket). They act to improve the stability (limit migration) of the glenohumeral joint by increasing the functional strength and endurance of the rotator cuff muscles.

**Scapula:** Also known as “shoulder blade”. It is the large flat triangular shaped bone that rests along rib cage in your upper back. Attached to this bone are the humerus (upper arm bone), clavicle and countless muscles, tendons and ligaments. Most notably, all rotator cuff muscles originate (attach) on the scapula.

**Scapular Stabilization:** Exercises geared to stabilizing the scapula (shoulder blade) about the thorax (rib cage). Because all of the rotator cuff muscles originate (attach) on the scapula, weak scapular stabilizers cause a weakness and inefficiency in rotator cuff function, which can result in a decrease in performance and predisposes one’s shoulder or even elbow to possible injury.

**Superior:** On top of or toward the top of something else.

**Supination:** The act of lying flat upon the back; moving the forearm and hand into the palm up position; the act of turning the foot inward and upward.

**Supine:** Applies to the body lying horizontally, face up (on his or her back).



Anatomical Position



45°



90°



135°



180°



90 / 90

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Internal Rotation Stretching  
&  
Additional Shoulder  
Stretches

## Internal Rotation Stretching

### Sleeper Stretches-Side Lying

Start side lying on the throwing shoulder with shoulders perpendicular to table, elbow at shoulder height and chin on upper arm. Lateral border of scapula is pressed against the table. *All of the internal rotation stretches are designed to stretch the posterior part of the shoulder, increase internal rotation and should not be uncomfortable.* There should be no soreness or pinching the front of the shoulder. If discomfort is felt in the front of the shoulder, re-position elbow and repeat the stretch. If discomfort continues, move on to the next stretch. Hold these stretches for 3 to 5 seconds and repeat 5 times.



Starting position 90/90 from above



Starting position 90/90 from side



Finish position 90/90

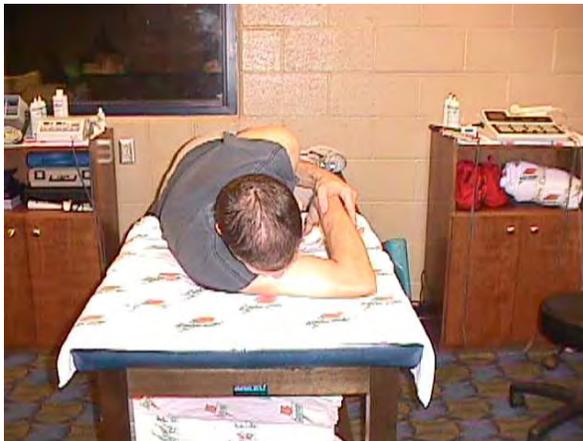


Starting position 45°



Finish position 45°

The roll in position is the same as the other sleeper stretches above except for the shoulders are “rolled in” towards the shoulder being stretched and not perpendicular to the table.



Roll In finish position 90/90



Roll In finish position 45°

## Sleeper Stretches-Standing

These stretches are done in the same fashion as the sleeper stretches above, except in the standing position. Lateral border of scapula is pressed against the wall. There should be no discomfort felt in the anterior part of the shoulder.

Hold each stretch for 3 to 5 seconds and repeat 5 times.



Starting position 90/90



Finish position 90/90



Roll In starting position 90/90



Roll in finish position 90/90



Starting position 45°



Finish position 45°



### Sleeper Stretches Standing in Corner

This group of stretches is the same as the standing stretch above. The lateral border of the scapula is placed against the wall and posterior scapula is placed against the wall behind. This will eliminate any scapula winging. There should be no discomfort felt in the anterior part of the shoulder. Hold each stretch for 3 to 5 seconds and repeat 5 times.



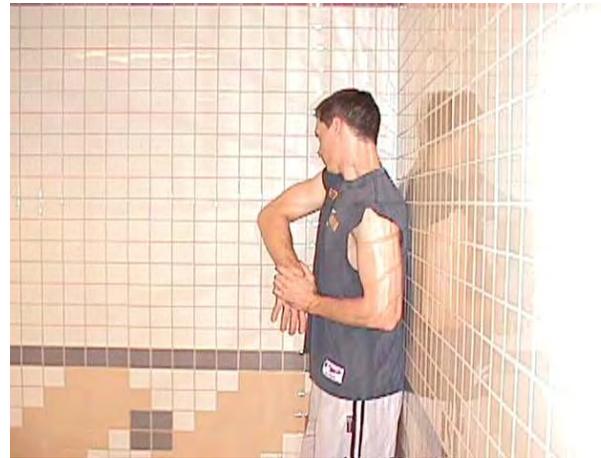
Starting position 90/90



Finish position 90/90



Starting position 45°



Finish position 45°

# Additional Shoulder Stretches

## Arm Swings



Shoulder-Flexion and Extension

Shoulder Horizontal Abduction and Adduction



Wax On

Wax Off

Arms swings should be done 10 times in each direction. Wax on and off also should be 10 times.

## Unassisted Shoulder Stretches



Horizontal Adduction

Hor. Add-Hand High

Hor. Add.-Hand Across

Hor. Add.-Hand Low



External Rotation-Left

Internal Rotation-Right

External Rotation-Right

Internal Rotation-Left



Wide Grip Hanging

Tricep

Hold each of these stretches 3 to 5 seconds and repeat 5 times

# Rotator Cuff Exercises

## Rotator Cuff Program

Start the first 4 exercises with the hands at the side and raise to shoulder height and repeat. Lower arms in these exercises slowly and controlled. 1 count to raise and a 2 count to lower.

### Flexion



Shoulder flexion

### Scaption



Shoulder scaption 30° with thumbs up

### Abduction



Shoulder abduction with palms down

### Abduction with Thumbs-Up



Shoulder abduction with thumbs up

### Bent Over T-Start



### Bent Over T-Finish



Start with head on edge of table for support, arms hanging down with palms facing each other, or thumbs up, and elbows straight. Retract your scapulas then raise arms up, hold for 2-3 seconds and return to the starting position.

### Side Lying External Rotation-Start



### Side Lying External Rotation-Finish



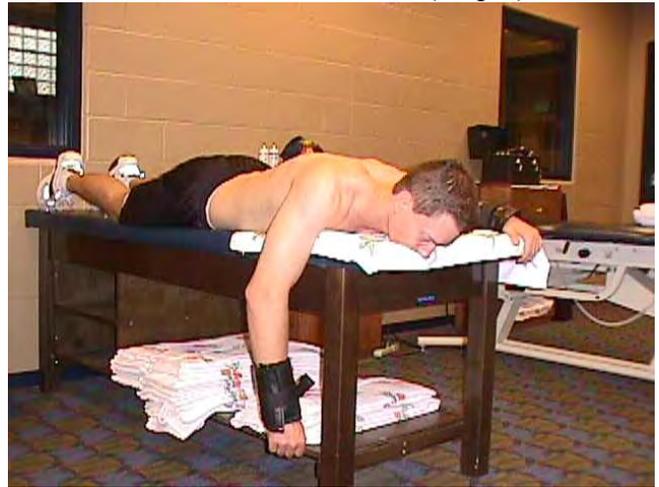
Place a towel roll under arm while keeping elbow flexed at 90°, externally rotate shoulder and then slowly return it to the starting position and repeat. Externally rotate for a 1 count and lower weight in a 2 count.

### 3 Step External Rotation

Starting Position



Shoulder Retraction (Step 1)



Horizontal Shoulder Abduction (Step 2)

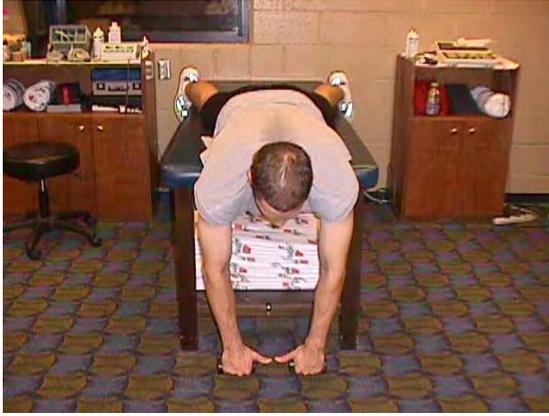


External Shoulder Rotation w/ Thumb-Up (Step 3)

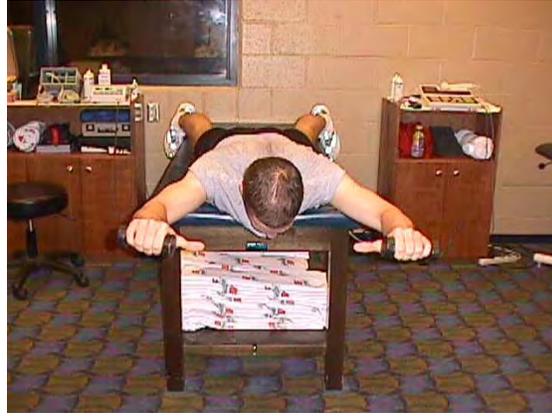


Start with shoulder protracted hanging off the edge of the table (Starting Position), then retract shoulder (Step 1). Bring arm into an abducted position with elbow flexed at 90° (Step 2). Then with thumb up, externally rotate shoulder (Step 3). Return to the starting position, reversing the steps. Hold each position for a 2 count.

## Y's, T's and I Below Table



Y-Position palms down start



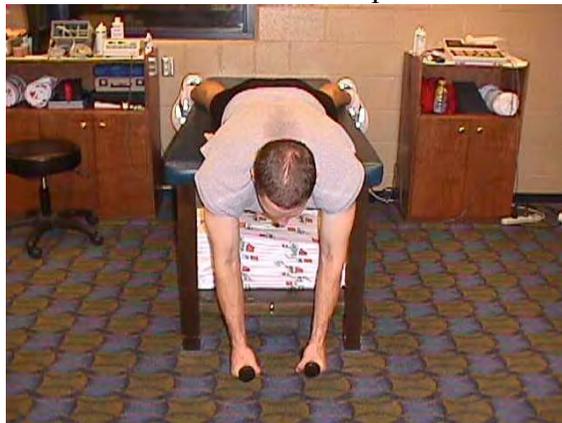
Y-Position palms down finish



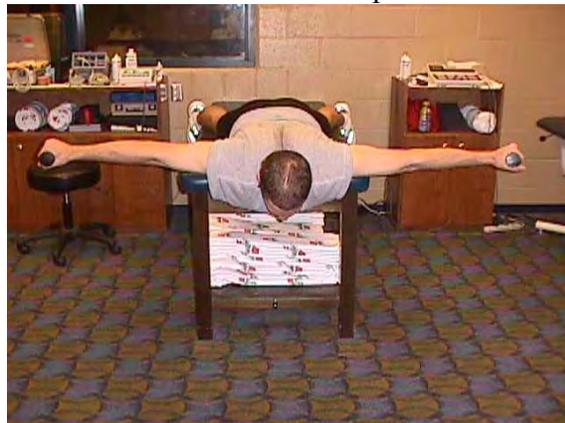
Y-Position thumbs-up start



Y-Position thumbs-up finish



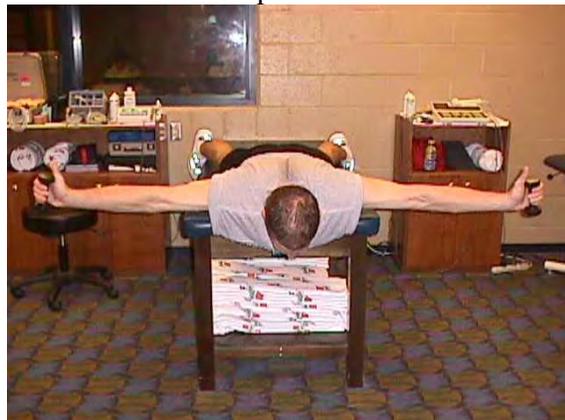
T-Position palms down start



T-Position palms down finish



T-Position thumbs-up start



T-Position thumbs-up finish



I-Position hand neutral start



I-Position hand neutral finish

In the Y's, T's and I positions, hold each of the end positions for a 2 count and lower the weight slowly. Complete the number of reps and sets in your program.

**Wall Dribble**



Starting position



End position

Start by bouncing the ball along the wall until it is overhead and return to starting position. Keep ball bouncing through the entire pattern. Elbow remains straight throughout motion.

**Plyo-back One Hand Toss**



90/90 throw-start



90/90 throw-finish

Start by facing the plyo-back and in the 90/90 position. Execute the throw and have the ball return to your hand in the same position as ball release. Control the ball as it forces the shoulder into external rotation.



Neutral internal rotation-start

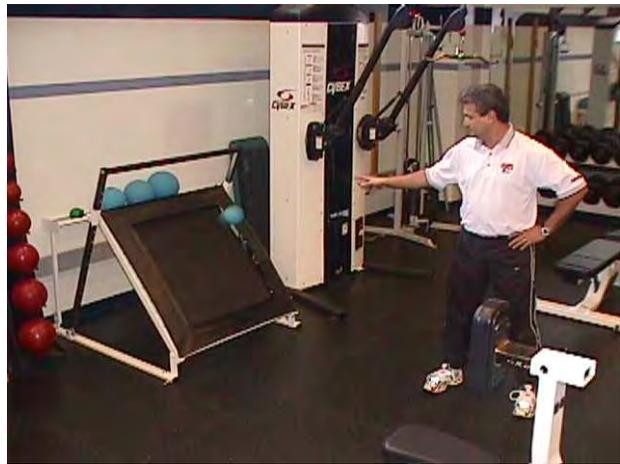


Neutral internal rotation-finish

Stand with non-throwing shoulder facing the plyo-back, throwing shoulder externally rotated, elbow at side and flexed to 90°. Internally rotate shoulder and release ball. Ball should return to hand at ball release point. Control the ball as it forces the shoulder into external rotation.



Neutral external rotation-start



Neutral external rotation-finish

Stand with throwing shoulder facing the plyo-back, throwing shoulder internally rotated, elbow at side and flexed to 90°. Externally rotate shoulder and release ball. Ball should return to hand at ball release point. Control the ball as it forces the shoulder into internal rotation.



Horizontal abduction-start



Horizontal abduction-finish

Start with throwing shoulder facing the plyo-back, throwing shoulder horizontally adducted and arm straight. Horizontally abduct shoulder and release ball. Ball should return to hand at ball release point. Control the ball as it forces shoulder into horizontal adduction.



Horizontal adduction-start

Start with non-throwing shoulder facing the plyo-back, throwing shoulder horizontally abducted and arm straight. Horizontally adduct shoulder and release ball. Ball should return to hand at ball release point. Control the ball as it forces the shoulder into horizontal abduction.



Horizontal adduction-finish



90/90 external rotation-start

Start with your right knee down, back facing the plyo-back, shoulder in the 90/90 position and internally rotated. Externally rotate shoulder and release ball. Ball should return to hand in the ball release position. Control the ball as it forces the shoulder into internal rotation.



90/90 external rotation-finish



Overhand throw-start

Start by facing the plyo-back in the normal throwing position. Execute the throw and follow-through. Have the ball return to your hand in the same position as ball release. Control the ball as it forces the shoulder into external rotation.



Overhand throw-finish

## D2 Diagonal Extension



D2 Start and finish position



D2 throw- middle of movement position

Start with right knee down, back facing the plyo-back, arm straight and internally rotated. Externally rotate shoulder and release ball. Ball should return to hand in the ball release position. Control the ball as it forces the shoulder into internal rotation. Upper body rotation will also occur with shoulder motion.

## Plyo-back (Overhead Pass, Chest Pass, Chops)

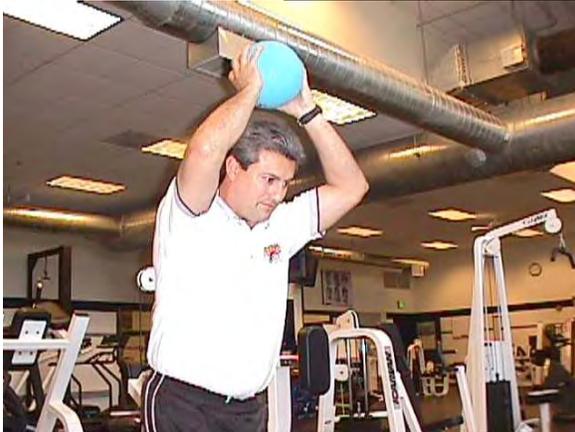


Photo 1

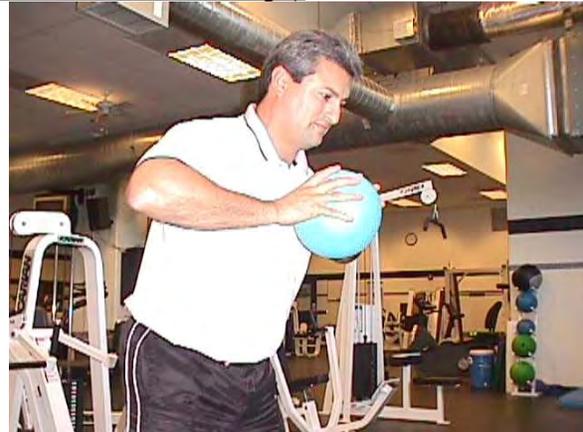


Photo 2

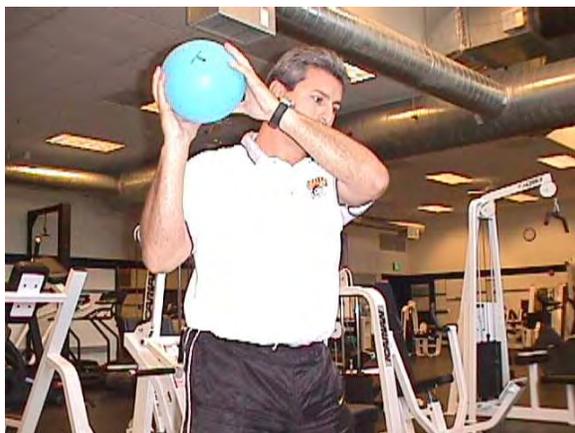


Photo 3



Photo 4

Start by facing the plyo-back, feet shoulder width apart parallel to the plyo-back and firmly planted. Overhead pass starts with the ball above the head. Aim for the center of the plyo-back and the ball should return in the same area, above the head (photo 1). Chest pass starts with hands at chest level and your scapulas retracted. Extend arms and throw the ball in the middle of the plyo-back and on return the ball will come back to its starting point, again scapulas retracted (photo 2). Chops begin above the shoulder on either side. There is upper body rotation on this as the thrown ball goes to the middle of the plyo-back and returns over the opposite shoulder. Continue to throw the ball from side to side in a continuous motion (photo 3-4).

# Scapular Stabilization Exercises

## “Phase 1”

# Scapular Stabilization-“ Phase 1”

## Wall Sits



**Wide-I Position**



**T-Position**



**90/90 Position**



**Y-Position**

Place low back and back of hands against wall, depress and retract scapulas. Hold this position for a period of time in your program. After successful completion of maintaining Wide-I Position, advance to T-Position, 90/90 Position and Y-Position.

## Dips Plus



Positioning is important and there should be no stress to the anterior shoulder. Start with scapulas elevated, retracted and depressed. Elbows remain straight. Raise up for a 1 count and drop down in a 2 count.

## Push-Up Plus



**Position 1**



**Position 2**



**Position 3**



Start with hands shoulder width apart and keep elbows straight. Head and neck should be kept in a neutral position and scapulas in a retracted position. Protract scapulas and return to starting position. Raise up in a 1 count and drop down in a 2 count.

## Retraction and Protraction



**Retraction-Start**

**Retraction-Finish**

**Protraction-Start**

**Protraction-Finish**

*Retraction*-Start with shoulder off the table and scapula protracted. Retract scapula while maintaining elbow extension. *Protraction*-Start with the scapula off the table and scapula retracted. Raise fist to the ceiling while maintaining elbow extension. Return to retracted position. Raise the weight in a 1 count and drop the weight down in a 2 count.

## Retraction and Protraction Seated



Start with left shoulder in 90 degrees of abduction, left hand on back of head and left scapula retracted, retract right scapula. While maintaining the position of the left side, protract right scapula and return to starting position. Hold the retraction position for 6 seconds. Repeat on opposite side.

## Shrugs



Start with weights in both hands and relaxed at your sides. Elevate shoulders, hold for 5 seconds, then retract scapulas while holding the shoulders in elevation for 5 seconds and lower the weights slowly. Relax and repeat.

## Ys', Ts' and I



**Y-Position Palms Down**



**Y-Position Thumbs Up**

Start in the Y-position with palms facing down, arms straight out and at the height of the table. Retract scapulas and lift arms above table and hold position for 6 seconds. Next in the Y-position, thumbs pointed up and repeat the movement with a 6 second hold.



**T-Position Palms Down**



**T-Position Thumbs Up**

Start in the T-position with palms facing down, arms straight out and at the height of the table. Retract scapulas and lift arms above the table and hold position for 6 seconds. Next in the T-position, thumbs pointed up and repeat the movement with a 6 second hold.



**I-Position Palms Down**

Start in the I-position with palms facing down, arms straight and at the height of the table. Retract scapulas

## Wall Exercises with Retraction-Elevation and Depression



Start with elbows straight and scapulas retracted. Elevate then depress scapulas while maintaining scapula retraction. Head remains in a neutral position. A 2 count for elevation and a 6 count for depression.

## Thumbtack



Starting position is thumbs against the wall, elbows straight and hands at shoulder height. Depress scapulas when palms face the ceiling. Elevate scapulas when back of hands face one another. Use full range of motion of shoulders when rotating palms and elevating and depressing scapulas. Head remains in a neutral position. Hold

## No Money Exercise



**Position 1**



**Position 2**



**Position 3**



**Position 1 from back**



**Position 2 from back**



**Position 3 from back**

Start with elbows at the side and elbows bent to 90 degrees (Position 1). Retract scapulas and externally rotate shoulders (Position 2). Hold position for 6 seconds and then extend elbows at a 45 ° angle while maintaining scapula retraction (Position 3) hold for 6 seconds. Head remains in a neutral position.

### Modified Lat Pull Down



Start with a wide grip on the lat pull down machine with arms straight. Pull the weight, moving the stack only several inches. Create a slight bend in the elbows, while depressing and retracting scapulas. Hold for a 6 count.

### Lat Pull Down



Start with a wide grip on the lat pull down machine. Pull weight down keeping the bar in front of the chest. Scapulas are depressed and retracted. Pull the weight towards you in a 1 count and return to the starting position in a 2 count.

### Modified Lat Pull-Down at 45 °



Start with a wide grip on the lat pull down machine. Lean your body back at a 45° angle. Pull weight down keeping the bar in front of your chest. Scapulas are depressed and retracted. Pull the weight towards you in a

### Seated Row-Narrow Grip



Start with a narrow grip on the rowing machine. Pull weight back and retract scapulas. Head remains in a neutral position. Pull the weight towards you in a 1 count and return to the starting position in a 2 count.

### Seated Row-Wide Grip



Start with a wide grip on the rowing machine. Pull weight back and retract scapulas. Head remains in a neutral position. Pull the weight towards you in a 1 count and return to the starting position in a 2 count.

# Scapular Stabilization Exercises “Phase 2”

## Scapula Stabilization-“ Phase 2”

### Ys', Ts', & I With Weights



**Y-Position Palms Down-Start**



**Y-Position Palms Down-Finish**

Start in the Y-position with the palms facing down and the arms straight out and at the height of the table, then retract your scapulas and lift your arms and hold that position for 2-3 seconds. Lower weight slowly, (controlled) to starting position.



**Y-Position Thumbs Up-Start**



**Y-Position Thumbs Up-Finish**

Start in the Y-position with the thumbs pointed up and the arms straight out and at the height of the table then retract your scapulas and lift your arms and hold that position for 2-3 seconds. Lower weight slowly, (controlled) to starting position.



**T-Position Palms Down-Start**



**T-Position Palms Down-Finish**

Start in the T-position with the palms facing down and the arms straight out and at the height of the table, then retract your scapulas and lift your arms and hold that position for 2-3 seconds. Lower weight slowly, (controlled) to starting position



**T-Position Thumbs Up-Start**



**T-Position Thumbs Up-Finish**

Start in the T-position with the thumbs pointed up and the arms straight out and at the height of the table, then retract your scapulas and lift your arms and hold that position for 2-3 seconds. Lower weight slowly, (controlled) to starting position.



**I-Position Palms Down Start**



**I-Position Palms Down Finish**

Start in the I-position with the arms to the side and the palms facing up, raise your arms straight off the table while retracting your scapulas and hold that position for 2-3 seconds. Lower weight slowly, (controlled) to starting position.

### **Prone Bilateral External Rotation**



Start with your arms in the T-position and have your elbows bent to a 90° angle. With your thumbs pointed up, retract your scapulas by raising your bent arms and externally rotate your shoulders. Hold that position

## Kibler Scapula Exercises



**Lateral Punch Start**



**Lateral Punch Finish**

Start with the hands at your chest, retract and depress your scapulas. Do a lateral step to the right as you lateral punch in the same direction at  $135^\circ$ , palm facing down. Return to the starting point and then step to left and lateral punch in the same direction.



**Forward Punch Start**



**Forward Punch Finish**

Start with the hands at your chest, retract and depress your scapulas. Step forward with your left leg while you do a forward punch with both hands at a  $135^\circ$  angle, palm facing down. Return to the starting position and repeat with the opposite leg.



**Horizontal Punch Start**



**Horizontal Punch Finish**

Start with the hands at your chest and arms abducted to  $90^\circ$ , retract your scapulas. Do a lateral step with your left leg and rotate your torso in that direction while you perform a horizontal punch with your right hand, return to the

## 4 Point Tubing



**Neutral Tubing-Start**



**Neutral Tubing-Finish**

Neutral position start; the elbows are bent to 90° with the arms at your side. In the neutral position finish, scapulas are retracted and the arms are externally rotated while keeping the elbows at your side. Hold this position for 6 seconds and repeat.



**Y-Position Tubing-Start**



**Y-Position Tubing-Finish**

Y-position start; the shoulders are flexed so that the tubing is eye level with the shoulders in protraction. In Y-position finish, the scapulas are retracted before the arms are taken into abduction and held in that position for 6 seconds and then repeat.



**T-Position Tubing-Start**



**T-Position Tubing-Finish**

T-position start; the shoulders are flexed to 90° of horizontal adduction with the shoulders in protraction. In T-position finish, the scapulas are retracted before the arms are taken into horizontal abduction and held in that position for 6 seconds and repeat.



**Wide I-Position Tubing-Start**



**Wide I-Position Tubing-Finish**

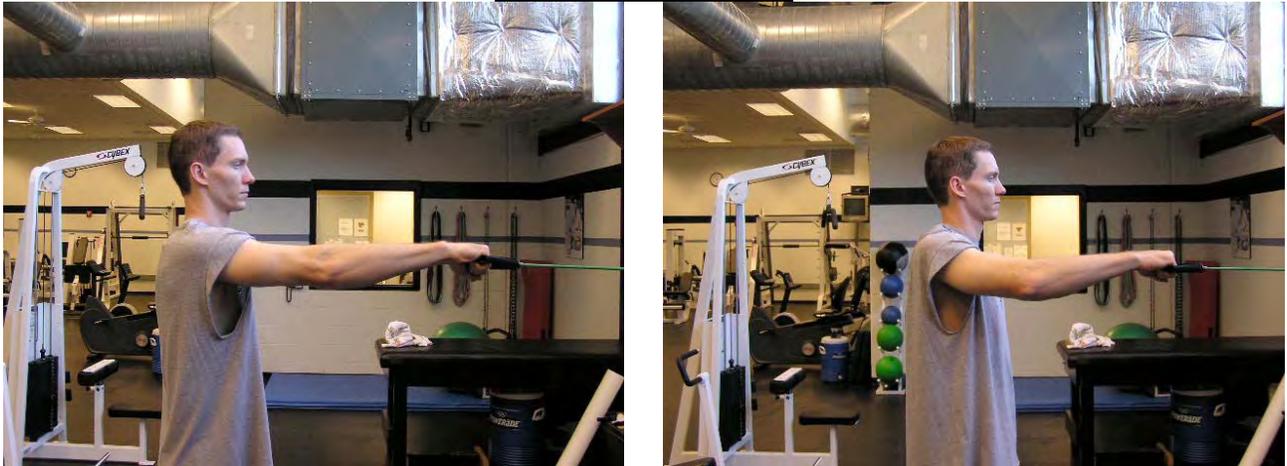
Wide I-position start; the arms are at waist level with the elbows in tight and the scapulas in protraction. In Wide I-position finish, keep the tubing at waist level, retract your scapulas and extend your arms. Hold for 6 seconds and then repeat.

# Shoulder Tubing Exercises

## **Shoulder Tubing Program**

These exercises need to be done on the dominant (throwing) side. They may be added to the non-throwing side for a change in the overall workout program. Exercises should be executed at a 1 count when performing the movement and a 2 count when returning to the starting position.

### **Horizontal Abduction**



Tubing should be anchored at shoulder height. Start with shoulder protracted with the palm facing down, retract shoulder (mid range), then move into horizontal abduction with the shoulder at 90° and retract scapula.

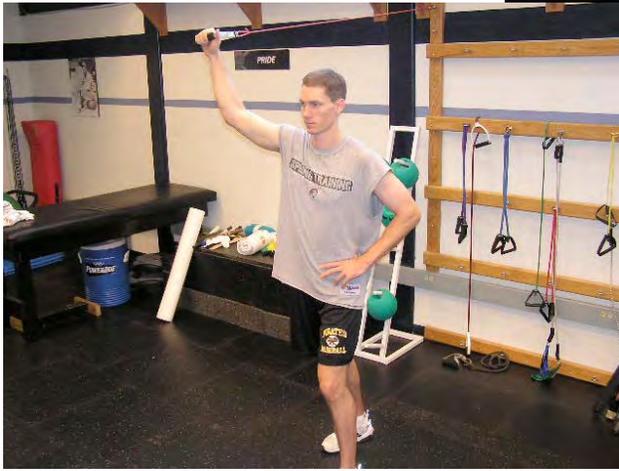
Return to the starting position and repeat.

### **D2 Diagonal Extension**



Tubing should be anchored low to the ground. With right hand start, with the tubing at left hip and pull into diagonal extension with thumb pointed up and return to the left hip with the thumb down. Make sure that arm travels in a path in front of body. Return to the starting position and repeat.

### D2 Diagonal Flexion



Tubing should be anchored above shoulder height. Right hand starts with the tubing above shoulder height with the thumb up. Pull into diagonal flexion to the left hip with the thumb down. Return to the starting position and repeat.

### Internal Rotation w/Towel Roll



Tubing should be anchored so that when elbow is bent at 90°, arm is parallel to the ground. Place a towel roll under right arm and start with shoulder in external rotation; pull the tubing into internal rotation (towards body). Return to the starting position and repeat.

### External Rotation w/Towel Roll



Tubing should be anchored so that when elbow is bent at 90°, arm is parallel to the ground. Place a towel roll under right arm and start with shoulder in internal rotation; pull the tubing into external rotation (away from body). Return to the starting position and repeat.

### Bicep Curl



Tubing should be anchored under right foot. Start in full arm extension with the palm facing out, curl arm up towards right shoulder. Return to the starting position and repeat.

### Triceps Extension



Tubing should be anchored at shoulder height and behind you. Start with the right shoulder flexed to 90° and the right elbow flexed with the palm facing out. Push the right forearm into extension while supporting right arm with left hand under right elbow. Return to starting position and repeat.

### Shoulder Scaption



Tubing should be anchored under right foot. Start with right hand down at right hip and thumb pointed upwards. Raise right arm up to shoulder height keeping thumb pointed up and arm at a 30° angle (scaption). Return to the starting point and repeat.

### Shoulder Abduction



Tubing should be anchored under right foot. Start with right hand down at right hip with palm facing leg. Raise right arm up to shoulder height while keeping palm facing the floor. Return to the starting point and repeat.

### Shoulder Retraction



Tubing should be anchored at shoulder height. Start with right arm parallel to the floor and palm facing down. Retract right shoulder while keeping right arm as straight as possible, return and repeat.

### Shoulder Protraction



Tubing should be anchored at shoulder height and behind you. Start with right arm parallel to the floor and palm facing down. Protract right shoulder while keeping right arm as straight as possible. Return and repeat.

### Shoulder Extension



Tubing should be anchored above shoulder height. Start with right arm in forward flexion just above shoulder height and with thumb pointed up. Extend right shoulder so that right hand comes down to right hip. Return and repeat.

### Shoulder Flexion



Tubing should be anchored under right foot. Start with right hand at right hip with thumb pointed up. Flex right shoulder until it is parallel to the floor while keeping thumb pointed up. Return and repeat.

### Shoulder Bi-Lateral Row @ 90°



Tubing should be anchored at shoulder height and have two ends, one for each hand. Start with both shoulders protracted and parallel to the floor. Retract both shoulders at 90° into horizontal abduction while squeezing both scapulas. Return and repeat.

### Shoulder Bi-Lateral Row @ 45°



Tubing should be anchored below shoulder height and have two ends, one for each hand. Start with both shoulders protracted and at 45° of shoulder flexion. Retract both shoulders at a 45° angle into a lower horizontal abducted position while squeezing both scapulas. Return and repeat.

### Shoulder Horizontal Abduction with External Rotation



Tubing should be anchored at shoulder height. Start with right shoulder protracted, arm straight and palm facing down. Retract shoulder while moving into horizontal abduction and rotating thumb up. Finish with shoulder external rotation in the 90/90 position. Return to the starting position by reversing the steps and repeat.

## Shoulder Horizontal Abduction with External Rotation Bi-Laterally (Fab 5)



**Fab 1**



**Fab 2**



**Fab 3**



**Fab 4**



**Fab 5**

Tubing should be anchored at shoulder height and with two ends, one for each hand. Start with both shoulders protracted and palms facing down (Fab 1). Retract both shoulders while keeping palms down and arms straight (Fab 2). Bring both arms into horizontal abduction and palms still remaining facing the floor (Fab 3). While in horizontal abduction turn your palms so that they face each other, thumbs up, maintain retraction of scapulas (Fab 4). Finally, while holding your arms in horizontal abduction and thumbs up, externally rotate your shoulders while maintaining scapula retraction (Fab 5). Reverse the steps and return to the starting position and repeat. *Yellow the only color tubing needed to do this exercise properly with slow and controlled movements.*

# Wrist and Forearm Exercises

## Wrist and Forearm Exercises

The wrist and forearm exercises should be done under control within the range shown in the photos. Form is very important. Start with a light weight that can be handled to successfully complete the number of repetitions in the program. Do not have the weight any more that 15 inches from the wrist on the first four exercises. Lightweight and multiple repetitions are more important than heavier weight and fewer repetitions.



Starting Position Above Table



Wrist-Pronation Above Table



Wrist-Supination Above Table



Starting Position Below Table



Wrist Pronation Below Table



Wrist-Supination Below Table



Radial Deviation Start



Radial Deviation Finish



Ulnar Deviation Start

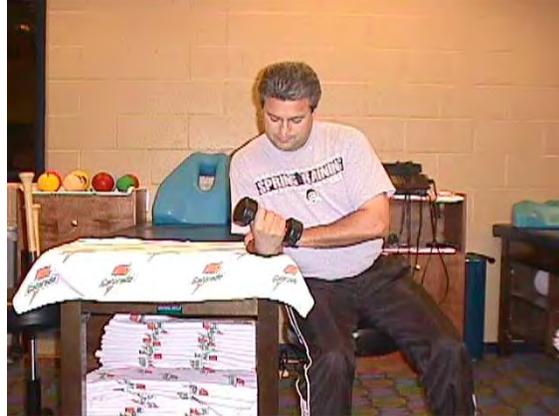


Ulnar Deviation Finish

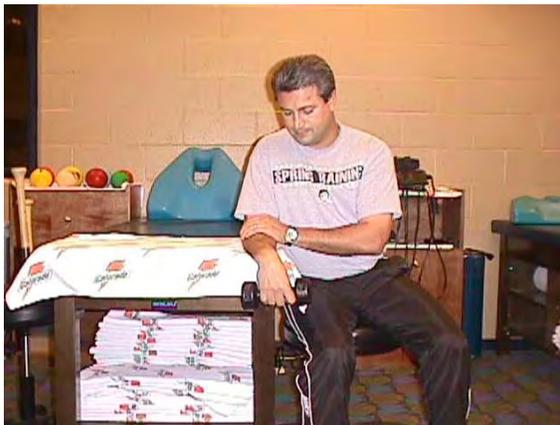
These exercises should be done as shown in the photos. Start with a light weight that can be handled to successfully complete the number of repetitions in the program. Maximum weight should be 10 lbs. on wrist flexion and extension. Maximum of 15 lbs. on biceps and triceps. Light weight and multiple repetitions are more important than heavier weight and fewer repetitions.



Wrist-Flexion Start



Wrist-Flexion Finish



Wrist-Extension Start



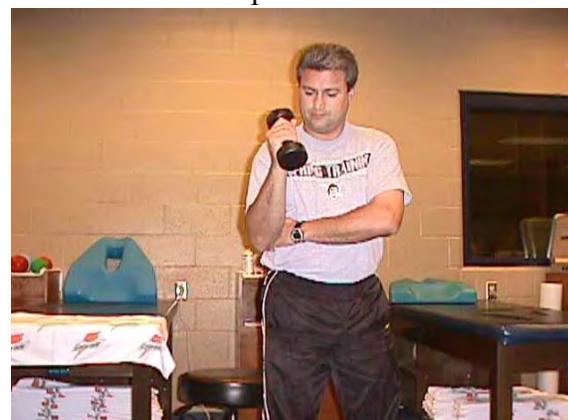
Wrist-Extension Finish



Bicep Curl Start



Bicep Curl Finish





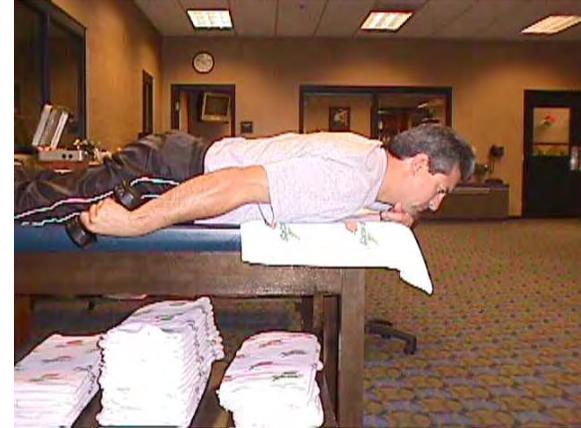
Tricep Extension Start



Tricep Extension Finish



Tricep Kickback Start



Tricep Kickback Finish

### Forearm Stretching



Wrist-Extension



Wrist-Flexion



Wrist-Pronation



Wrist-Supination

These forearm stretches are done with the arm straight at shoulder height and held for 3 to 5 seconds.