



# FLEXTEND<sup>®</sup>-AG

## TRAINING MANUAL

# INSTRUCTION MANUAL FOR THE FLEXTEND® AC

## Exercise System for The Acromioclavicular (AC) / Shoulder Joint

### FLEXTEND®-AC:

Congratulations! You have chosen to use the FLEXTEND®-AC Upper Extremity Training System, a tremendous training tool for increasing strength and dexterity of the entire upper extremity; including the shoulders, biceps, triceps, forearms chest and back.

FLEXTEND®-AC provides assists in providing relief from upper extremity conditions by correcting the strength/length imbalance between the posterior and anterior shoulder girdle. Creating strength equality between these muscle groups decreases pressure on the shoulder and reduces soft-tissue impingement, irritation and inflammation, thus correcting many types of musculoskeletal disorders affecting the upper extremity / shoulder.

The FLEXTEND®-AC Exercises and its Exercise Programs target specific muscles and injury sites using a variety of physician recommended exercises. Choose specific exercises or exercise program based on recommendations from your therapist or physician. You will find the exercises quick and easy to perform in just minutes a day!

FLEXTEND®-AC corrects muscle imbalances within and around the shoulder joint, providing long-lasting results so you can continue to do the things you love!

***“With FLEXTEND®-AC, YOUR HEALTH is in YOUR HANDS...”***



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## **Safety Precautions**

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### **Safety Precautions**

- Always consult your Physician before starting any type of exercise program. Bring FLEXTEND®-AC and Instruction Manual with you to assist the therapist or physician in recommending the correct exercise(s) for you.
- FLEXTEND®-AC is for use by adults who have read this instruction manual and understand how to use the FLEXTEND®-AC system properly.
- The FLEXTEND®-AC is not intended to diagnose, prevent or cure any condition or disease.
- Keep the FLEXTEND®-AC and any spare parts out of children's reach.
- The FLEXTEND®-AC cannot be subjected to heavy resistance as the glove may become damaged or may tear and cause injury. The FLEXTEND®-AC may ONLY be used with the resistance bands that it came with or the warranty is void.

**Note:** The FLEXTEND® GLOVE is NOT machine washable! Hand wash using a warm, damp cloth with a mild liquid detergent. For spills on leather, use damp cloth only followed by a leather cleaner (if necessary). Let dry completely before re-assembling and further use.

### **Parts and Accessories**

The FLEXTEND®-AC Kit comes with the following parts and accessories:

- Anchor Strap (1)
- Resistance Band Interlocking Hook (1)
- 4' Foot Light/Medium Resistance Band (1)
- 4' Foot Medium/Heavy Resistance Band (1)
- 6' Foot Medium/Heavy Resistance Band (1)
- FLEXTEND®-AC Instruction Manual CD



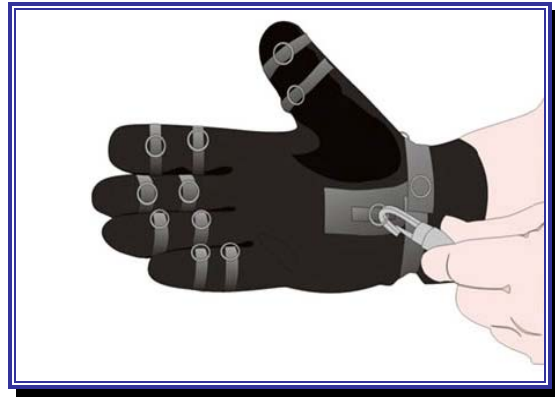
### **Choosing the Correct Resistance**

FLEXTEND®-AC comes with light and medium resistance bands. To know which resistance best suits your needs, please obtain the advice of your therapist or healthcare professional.

**! IMPORTANT:** The FLEXTEND® glove cannot be subjected to heavy resistance exercises as the glove may tear, causing injury and/or damage.

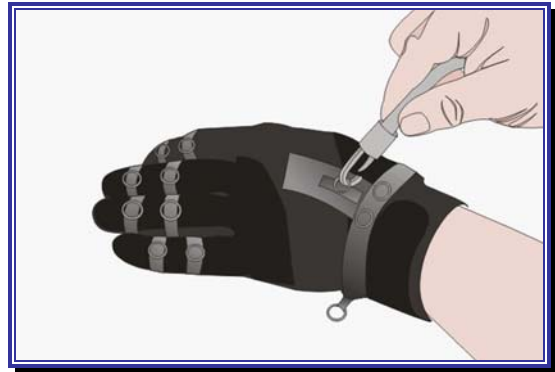
### Securing Anchor Strap to FLEXTEND®: (Front)

Attach the secure hook system of one end of the Anchor Strap to the O-Ring located on the front / palm area of the FLEXTEND® glove.



### Securing Anchor Strap to FLEXTEND®: (Back)

Attach the secure hook system of one end of the Anchor Strap to the O-Ring located on the Back of the FLEXTEND® glove.



### Securing Anchor Strap to FLEXTEND®: (Single Side)

Attach the secure hook system of one end of the Anchor Strap to the O-Ring located on either side of the wrist area of the FLEXTEND® glove. *NOTE: Attachment to the thumb or little finger side of FLEXTEND® is based on the type of exercises that are performed. (i.e. Thumb-Up Triceps Press Downs / Biceps Curls, etc.)*



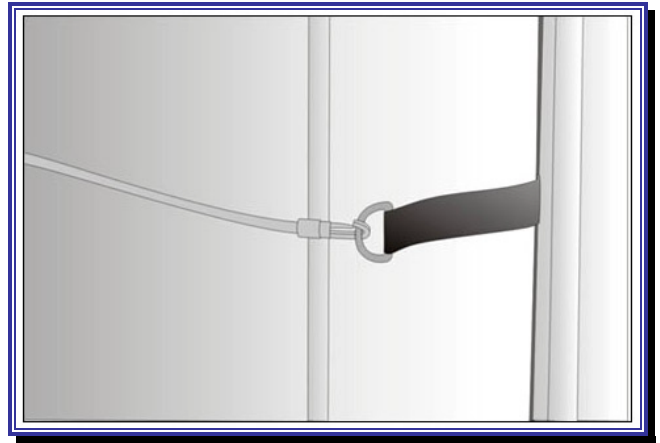
### Securing Anchor Strap to FLEXTEND®: (Both Sides)

Attach the secure hook system of each end of the Anchor Strap to the both O-Rings located on each side of the wrist area of the FLEXTEND® glove.



### Methods for Securing Door-Jam Strap in Door-Jam

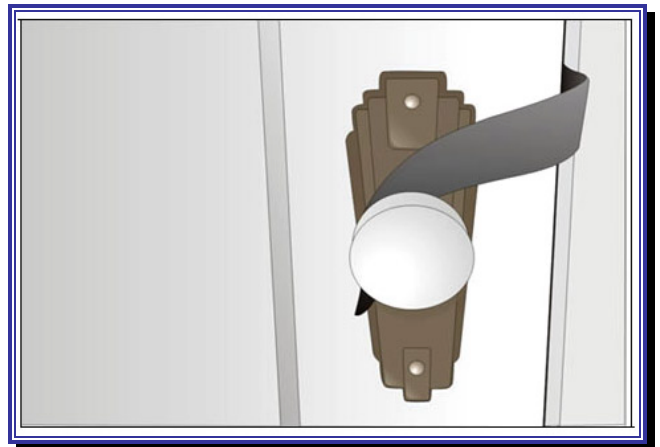
**Door-Jam:** Perform exercise on side of door without hinges. Place “Safety Knot” on opposite side of door-jam. Close and lock or latch door securely. Secure resistance band to D-Ring on end of Anchor strap. Attach resistance band to D-Ring. Pull slowly to be sure that the Anchor Strap is tight and secure before performing exercises.



### Methods for Securing Door-Jam Strap on Doorknob

**Door Knob:** Perform exercises on side of door without hinges. Place Anchor Strap on the OPPOSITE side of the door in which you are standing. The side of door that has hinges. Place loop on doorknob, keep safety stop on side with looped doorknob. Be sure to securely close and lock or latch door securely. Secure resistance band to D-Ring on end of Anchor Strap. Pull slowly to be sure that the Anchor Strap is tight and secure before performing exercises.

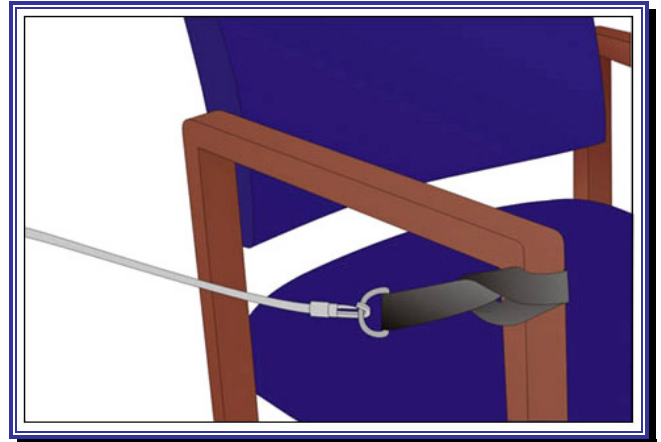
**! NOTE:** Exercises are to be performed on the opposite side of the door than what is shown below.



### **Methods for Securing Door-Jam Strap to Stationary Object**

**Stationary Object:** Connect Anchor Strap to stationary / non-movable object. Place either large loop end through small loop or vice versa. Once the Anchor Strap is secure, attach resistance band to D-Ring of loop end that has been pulled through opposing loop end. Pull slowly to be sure Anchor

Strap is secure before performing exercises.



### **Methods for Securing Door-Jam Strap on Foot**

**Foot:** Place large loop of Door-Jam Strap around foot and secure resistance band to D-Ring of small loop. Pull slowly to be sure that the Door-Jam Strap is tight and secure before performing exercises.



## Shoulder Press

**Attach:** Front or back of Wrist

**Action:** Begin Palm-Forward with the elbow bent at a 90-degree angle. Push your hand upward until it reaches a 180-degree angle/position above your head. Return to the starting position.

**Muscles Utilized:** Anterior & Middle Deltoid.



Figure 1: Shoulder Press

## Shoulder Abduction: Angled

**Attach:** Front of wrist.

**Action:** Begin Palm-Down with the arm at your side. Raise your arm to the side at a 90-degree angle. Return to the starting position.

**Muscles Utilized:** Supraspinatus, Anterior, Middle & Posterior Deltoid.

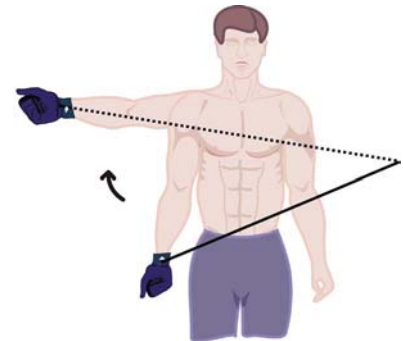


Figure 2: Shoulder Abduction - Angled

## Shoulder Abduction: Vertical

**Attach:** Front or back of Wrist

**Action:** Begin Thumb-Up, with the arm straight down at your side. Raise your arm to a 180-degree angle/position above your head. Return to the starting position.

**Muscles Utilized:** Supraspinatus, Anterior, Middle, Posterior Deltoid & Trapezius.

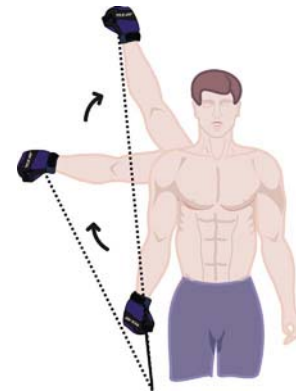


Figure 3: Shoulder Abduction - Vertical

## Shoulder Abduction: Horizontal

**Attach:** Front of wrist.

**Action:** Begin Thumb-Up with the arm straight in front of you at a 90-degree angle. Extend your arm laterally away from you. Return to the starting position.

**Muscles Utilized:** Rear Deltoid, Infraspinatus, Teres Minor, Rhomboid & Middle Trapezius.

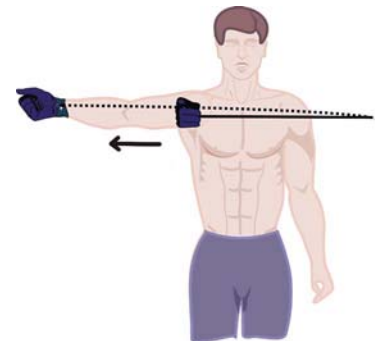


Figure 4: Shoulder Abduction - Horizontal

### Shoulder Adduction: Vertical

**Attach:** Back of Wrist

**Action:** Begin Palm-Down with your arm straight to the side at a 90-degree angle. Lower your arm down to your side until you come into contact with your upper thigh. Return to the starting position.

**Muscles Utilized:** Pectoralis Major, Latissimus Dorsi, Long Head of Triceps, Coracobrachialis & Teres Major.

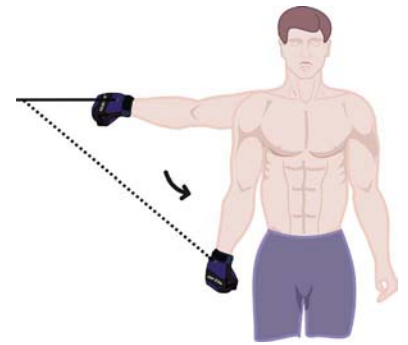


Figure 5: Shoulder Adduction - Vertical

### Shoulder Adduction: Horizontal

**Attach:** Back of Wrist

**Action:** Begin Thumb-Up with the arm straight to the side at a 90-degree angle. Move your arm in front of you past midline. Return to the starting position.

**Muscles Utilized:** Pectoralis Major, Anterior Deltoid, Coracobrachialis, Pectoralis Minor & Serratus Anterior.

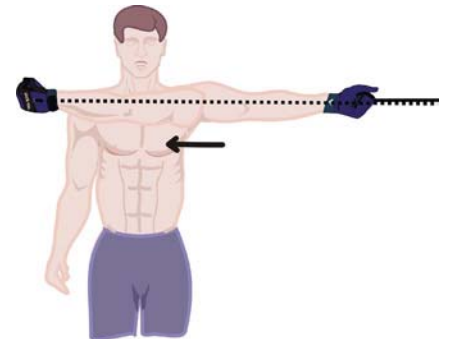


Figure 6: Shoulder Adduction – Horizontal

### Shoulder Flexion

**Attach:** Front of wrist.

**Action:** Begin Palm-Down with the arm straight down at your side. Raise your arm straight out in front, ending between a 90-120 degree angle. Return to the starting position.

**Muscles Utilized:** Pectoralis Major, Anterior Deltoid, Biceps Brachii, coracobrachialis, Trapezius.

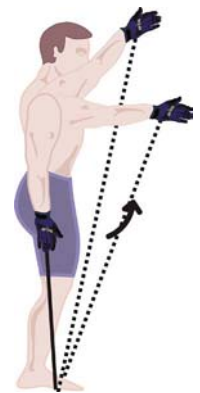


Figure 7: Shoulder Flexion

### Diagonal Shoulder Flexion: #1

**Attach:** Back of Wrist

**Action:** Begin Palm-Up with the hand at your side. Raise your arm through a 45-degree angle across the front of your body, reaching across to the opposite shoulder and above your head. Return to the starting position.

**Muscles Utilized:** Upper Division of Pectoralis Major, Anterior Deltoid, Coracobrachialis, Biceps Brachii, Subscapularis & Teres Major.

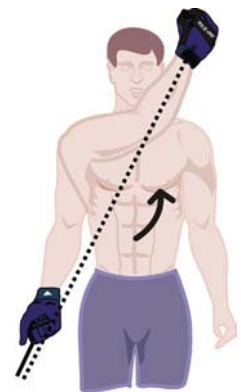


Figure 8: Shoulder Flexion - Diagonal #2

## Diagonal Shoulder Flexion: #2

**Attach:** Back of Wrist

**Action:** Begin Palm-Down, with the arm above your head at a 45-degree angle. Lower your arm across the front of your body until it reaches the opposite hip. Return to the starting position.

**Muscles Utilized:** Lower Division of Pectoralis Major, Latissimus Dorsi, Anterior Deltoid, Teres Major Subscapularis, Serratus Anterior, Coracobrachialis.



Figure 9: Shoulder Flexion - Diagonal #2

## Shoulder Flexion with Supination

**Attach:** Front of Wrist

**Action:** Begin Palm-Down, with your arm at your side. As you begin to raise your arm, rotate the hand so that it ends in the Palm-up position at a 90-degree angle out in front of you. Return to the starting position.

**Muscles Utilized:** Pectoralis Major, Anterior Deltoid, Coracobrachialis & Biceps Brachii.

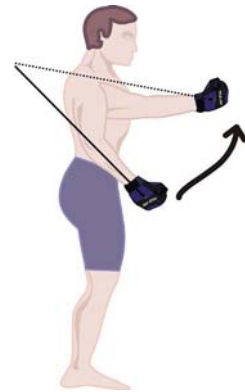


Figure 10: Shoulder Flexion w/ Supination

## Shoulder Extension

**Attach:** Front or Back of Wrist

**Action:** Begin Palm-Up, Palm-Down or Thumb-Up, the arm straight in front of you. Extend the arm backwards at the shoulder until your arm is straight down at your side or a few degrees back. Return to the starting position.

**Muscles Utilized:** Posterior Deltoid & Long Head of Triceps.

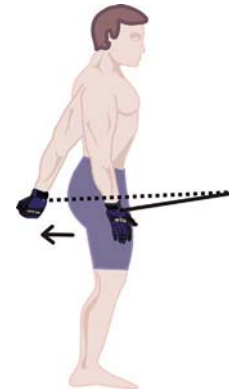


Figure 11: Shoulder Extension

## Diagonal Shoulder Extension: #1

**Attach:** Front of Wrist

**Action:** Begin Palm-Up with the arm angled across the front of the body, reaching above the opposite shoulder. Extend your arm at a 45-degree angle across your body and end with your arm straight down at your side. Return to the starting position.

**Muscles Utilized:** Posterior Deltoid, Latissimus Dorsi, Long Head of Triceps, Infraspinatus, Teres Minor, Rhomboid & Middle Trapezius.

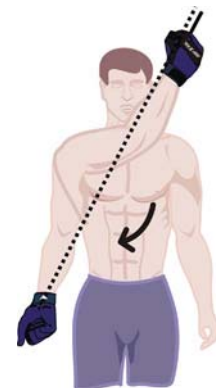


Figure 12: Shoulder Extension - Diagonal #1

## Diagonal Shoulder Extension: #2

**Attach:** Front of Wrist

**Action:** Begin Palm-Down with the arm at a 45-degree angle across the front of the body with the hand placed on the opposite hip. Extend the arm across the body, ending with the hand at a 145-degree angle above the head. Return to the starting position.

**Muscles Utilized:** Supraspinatus, Posterior Deltoid, Teres Minor, Infraspinatus, Rhomboid & Middle Trapezius.

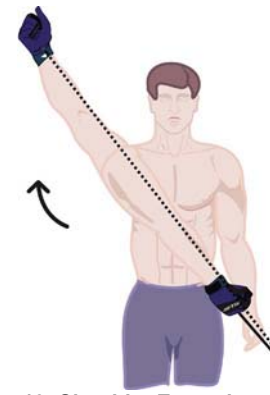


Figure 13: Shoulder Extension - Diagonal #2

## Triceps Extension

**Attach:** Front or Back of Wrist

**Action:** Begin Palm-Down, Palm-Up or Thumb-Up, elbow flexed to a 90-degree angle. Extend the elbow until your arm is straight down at your side. Return to the starting position.

**Muscles Utilized:** Triceps Brachii & Anconeus. (Emphasis on specific heads changes depending upon your hand position, i.e. Palm-Down, Palm-Up or Thumb-Up.)

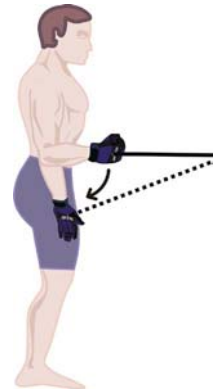


Figure 14: Triceps Extension

## Triceps Overhead Extension

**Attach:** Front or Back of Wrist

**Action:** Begin Palm-Down, Palm-Up or Thumb-Up, hand above your head with elbow flexed to a 90-degree angle. Extend the elbow into your arm is straight out in front of you. Return to the starting position.

**Muscles Utilized:** Triceps Brachii & Anconeus. (Emphasis on specific heads changes depending upon hand position, i.e. Palm-Down, Palm-Up or Thumb-Up.)

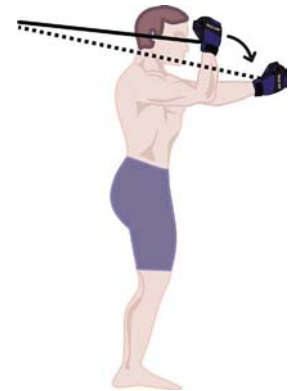


Figure 15: Triceps - Overhead Extension

## Brachialis Curl: Standing

**Attach:** Front of Wrist

**Action:** Begin Palm-Down with the elbow straight down at your side. Flex the elbow until your hand reaches between 90-160 degrees. Return to the starting position.

**Muscles Utilized:** Biceps Brachii, Brachialis & Brachioradialis (Emphasis on specific muscles changes depending upon hand position, i.e. Palm-Down, Palm-Up or Thumb-Up.)



Figure 16: Brachialis Curl - Standing

### **Biceps Curl: Standing**

**Attach:** Front or Back of Wrist

**Action:** Begin Palm-Down, Palm-Up or Thumb-Up with the elbow straight down at your side. Flex the elbow until your hand reaches between 90-160 degrees. Return to the starting position.

**Muscles Utilized:** Biceps Brachii, Brachialis & Brachioradialis (Emphasis on specific muscles changes depending upon hand position, i.e. Palm-Down, Palm-Up or Thumb-Up.)



Figure 17: Biceps Curl: Standing

### **Biceps Curl: Seated**

**Attach:** Front or Back of Wrist

**Action:** Begin Palm-Down, Palm-Up or Thumb-Up with the elbow straight down at your side. Flex the elbow until your hand reaches between 90-160 degrees. Return to the starting position.

**Muscles Utilized:** Biceps Brachii, Brachialis & Brachioradialis. (Emphasis on specific muscles changes depending upon your hand position, i.e. Palm-Down, Palm-Up or Thumb-Up.)



Figure 18: Biceps Curl - Seated

### **External Rotation: 90-Degrees / Standing**

**Attach:** Front of Wrist

**Action:** Begin Thumb-Up, elbow bent at a 90-degree angle and placed on the opposite hip. Rotate the hand outward and away from the opposite hip towards the same-arm side of the body. Return to the starting position.

**Muscles Utilized:** Posterior Deltoid, Teres Minor & Infraspinatus.

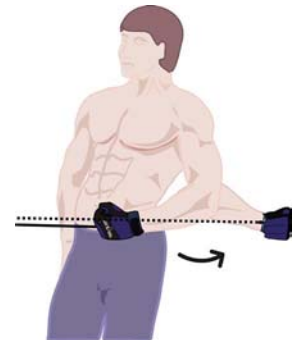


Figure 19: External Rotation 90-Degrees / Standing

### **External Rotation: 90-Degree / Seated**

**Attach:** Front of Wrist

**Action:** Begin Palm-Forward, arm straight out to the side with elbow bent at a 90-degree angle. Rotate the hand backward. Return to the starting position.

**Muscles Utilized:** Posterior Deltoid, Teres Minor & Infraspinatus.

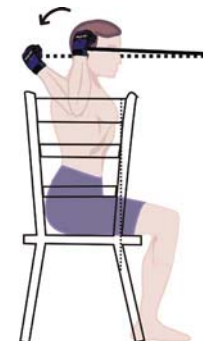


Figure 20: External Rotation / Seated

### External Rotation: 45-Degrees

**Attach:** Front of Wrist

**Action:** Begin Thumb-Up, elbow bent at a 90-degree angle and hand placed on the hip, same-arm side. Rotate the hand outward, upward and away from the immediate hip. Return to the starting position.

**Muscles Utilized:** Posterior Deltoid, Teres Minor & Infraspinatus.

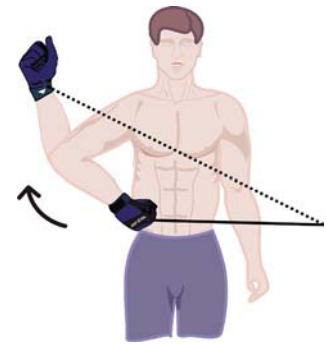


Figure 21: External Rotation 45-Degrees / Standing

### Internal Rotation: 90-Degrees

**Attach:** Back of Wrist

**Action:** Begin Thumb-Up, elbow bent at a 90-degree angle with hand straight out in front. Rotate the hand inward across the front of the body toward the opposite hip. Return to the starting position.

**Muscles Utilized:** Pectoralis Major, Anterior Deltoid, Subscapularis, Teres Major & Latissimus Dorsi.

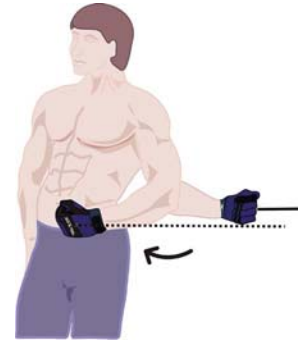


Figure 22: Internal Rotation 90-Degree / Standing

### Variations: Shoulder - Internal Rotation

**Action:** 45-Degree Angle Standing, Seated & Supine. Refer to Figures 19 & 20.

### Shoulder Scaption

**Attach:** Front or back of Wrist

**Action:** Begin Thumb-Up with the arm straight down at your side. Raise your arm to a 180-degree angle/position above your head. Return to the starting position.

**Muscles Utilized:** Upper Division of Pectoralis Major, Anterior Deltoid, Coracobrachialis, Biceps Brachii & Trapezius.



Figure 23: Shoulder Scaption

### Supraspinatus / Thumb-down

**Attach:** Front of wrist.

**Action:** Begin Thumb-Down, hand straight in front of you, waist-high. Raise your arm straight out in front until your hand is between a 45-90 degree angle. Return to the starting position.

**Muscles Utilized:** Supraspinatus & Anterior Deltoid.



Figure 24: Supraspinatus - Thumb Down

### Shoulder Elevation / Shrugs

**Attach:** Front or Back of Wrist

**Action:** Begin with the arms straight down at your sides. Shrug the shoulder upwards as high as you can. Return to the starting position.

**Muscles Utilized:** Upper Trapezius, Levator Scapula & Rhomboid.

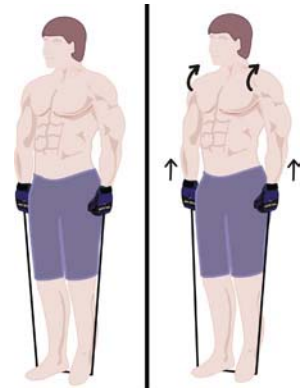


Figure 25: Shoulder Elevation - Shrugs

### Shoulder Protraction

**Attach:** Front or back of wrist.

**Action:** Begin Palm-Down or Thumb-Up, Arm straight out in front. Push your hand out in front until your arm is fully extended. Return to the starting position.

**Muscles Utilized:** Pectoralis Major & Anterior Deltoid.

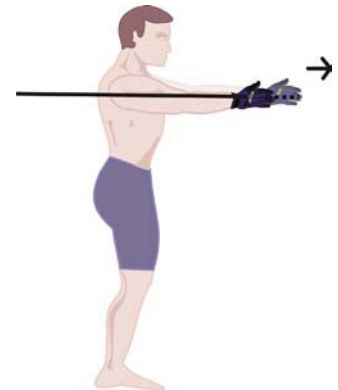


Figure 26: Shoulder Protraction

### Shoulder Retraction

**Attach:** Front or back of wrist.

**Action:** Begin Palm-Down or Thumb-Up, Arm straight out in front. Pull your shoulder backward as if squeezing your shoulder blades together. Return to the starting position.

**Muscles Utilized:** Rhomboids, Trapezius & Posterior Deltoid.

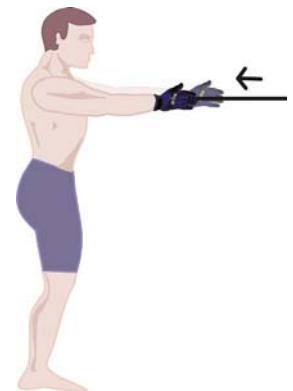


Figure 27: Shoulder Retraction

### Incline Chest / Shoulder Elevation

**Attach:** Front or back of wrist.

**Action:** Begin Palm-Down or Thumb-Up, Arm at your side with elbow bent at a 90-degree angle. Push your hand out in front at a 45-degree angle until your arm is fully extended. Return to the starting position.

**Muscles Utilized:** Upper Division of Pectoralis Major, Anterior Deltoid, Coracobrachialis, Pectoralis Minor, Serratus Anterior & Triceps Brachii

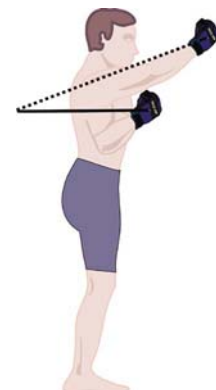


Figure 28: Incline Chest Press / Shoulder Elevation

## Flat Chest

**Attach:** Front or back of wrist.

**Action:** Begin Palm-Down or Thumb-Up, Arm at your side with elbow bent at a 90-degree angle. Push your hand straight out in front until your arm is fully extended. Return to the starting position.

**Muscles Utilized:** Pectoralis Major, Anterior Deltoid, Coracobrachialis, Pectoralis Minor, Serratus Anterior & Triceps Brachii.

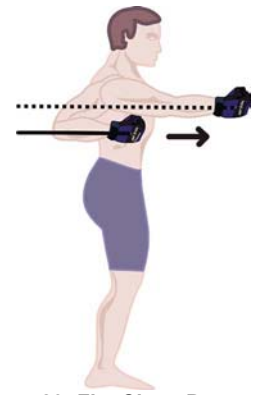


Figure 29: Flat Chest Press

## Variations: Chest Exercises

*Other chest exercise variations that can be performed either seated, standing or lying down (Supine):* \*Decline Chest Press \*Incline Fly's \*Flat Fly's \*Decline Fly's

## Back / Bent Over Row

**Attach:** Front or back of wrist.

**Action:** Begin Palm-Up, Palm-Down or Thumb-Up, leaning over slightly with knees bent and the arm straight out in front. Pull back until the elbow is bent to a 90-degree angle. Return to the starting position.

**Muscles Utilized:** Latissimus Dorsi, Posterior Deltoid, Trapezius, Rhomboids & Teres Major.



Figure 30: Back - Bent Over Row

## Back / Seated Row

**Attach:** Front or back of wrist.

**Action:** Begin Palm-Up, Palm-Down or Thumb-Up, seated on the floor, with the arm straight out in front. Pull back until the elbow is bent to a 90-degree angle. Return to the starting position.

**Muscles Utilized:** Latissimus Dorsi, Posterior Deltoid, Trapezius, Rhomboids & Teres Major.



Figure 31: Back / Seated Row

## Back / Pull Down

**Attach:** Front or back of wrist.

**Action:** Begin Palm-forward with the arm(s) above your head. Pull down until the elbow is bent to a 75- 90degree angle. Return to the starting position.

**Muscles Utilized:** Latissimus Dorsi, Posterior Deltoid, Trapezius, Rhomboids & Teres Major.

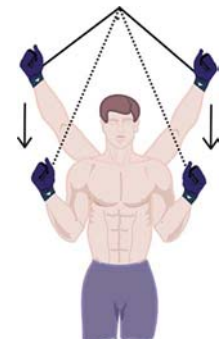


Figure 32: Back / Pull Down

### Horizontal Shoulder Abduction: Supine

**Attach:** Front of Wrist.

**Action:** Begin Thumb-Up with the arm straight in front of you at a 90-degree angle. Extend your arm laterally away from you. Return to the starting position.

**Muscles Utilized:** Posterior Deltoid, Infraspinatus, Teres Minor, Rhomboid & Middle Trapezius.

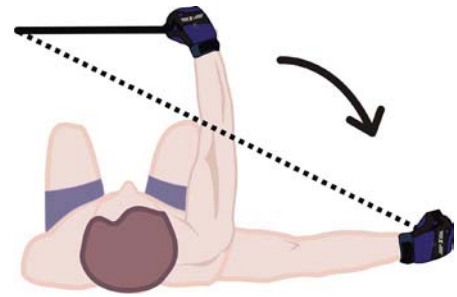


Figure 33: Horizontal Shoulder Abduction - Supine

### Horizontal Shoulder Adduction: Supine

**Attach:** Back of Wrist

**Action:** Begin Thumb-Up with the arm straight to the side at a 90-degree angle. Move your arm in front of you past midline. Return to the starting position.

**Muscles Utilized:** Pectoralis Major, Anterior Deltoid, Coracobrachialis, Pectoralis Minor & Serratus Anterior.

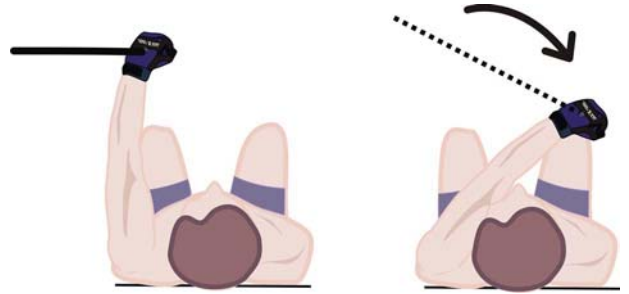


Figure 34: Horizontal Shoulder Adduction - Supine

### Diagonal Shoulder Extension: Supine #1

**Attach:** Front of Wrist

**Action:** Begin Palm-Up with the hand located above the opposite shoulder. Extend the arm across the body at a 45-degree angle until it is straight down at your side. Return to the starting position.

**Muscles Utilized:** Posterior Deltoid, Latissimus Dorsi, Long Head of Triceps, Infraspinatus, Teres Minor, Rhomboid & Middle Trapezius.

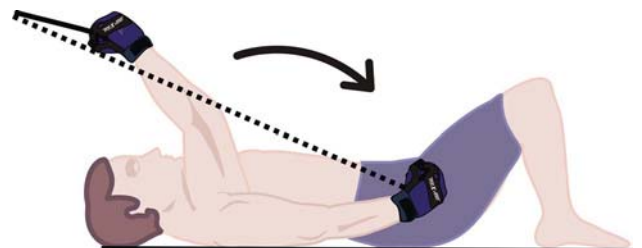


Figure 35: Diagonal Shoulder Extension - Supine #1

### Diagonal Shoulder Extension: Supine #2

**Attach:** Front of Wrist

**Action:** Begin Palm-Down with the hand placed on the opposite hip. Extend your arm at a 45-degree angle across the body, ending with the hand at a 145-degree angle above the head. Return to the starting position.

**Muscles Utilized:** Supraspinatus, Posterior Deltoid, Middle Deltoid, Teres Minor, Infraspinatus, Rhomboid & Middle Trapezius.

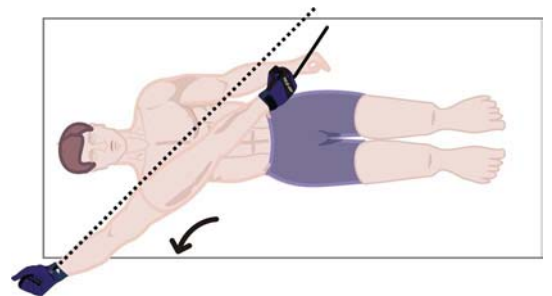


Figure 36: Diagonal Shoulder Extension - Supine #2

### Diagonal Shoulder Flexion: Supine #1

**Attach:** Back of Wrist

**Action:** Begin Palm-Up with the arm at your side. Flex the arm at a 45-degree angle across the front of the body, reaching across to the opposite shoulder and above your head. Return to the starting position.

**Muscles Utilized:** Upper Division of Pectoralis Major, Anterior Deltoid, Coracobrachialis, Biceps Brachii, Subscapularis & Teres Major.

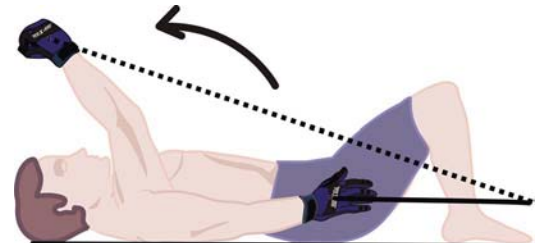


Figure 37: Diagonal Shoulder Flexion - Supine #1

### Diagonal Shoulder Flexion: Supine #2

**Attach:** Back of Wrist

**Action:** Begin Palm-Down, with the arm above your head at a 45-degree angle. Lower your arm across the front of your body until it reaches the opposite hip. Return to the starting position.

**Muscles Utilized:** Lower Division of Pectoralis Major, Latissimus Dorsi, Anterior Deltoid, Teres Major Subscapularis, Serratus Anterior, Coracobrachialis.

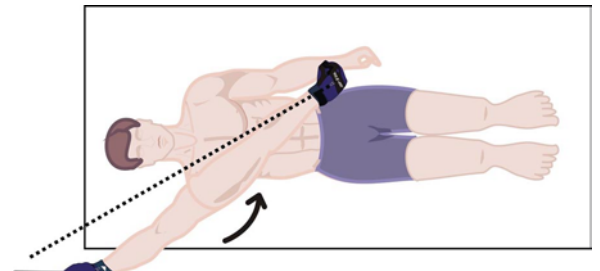


Figure 38: Diagonal Shoulder Flexion - Supine #2

### External Rotation: 45-Degrees / Supine

**Attach:** Front of Wrist

**Action:** Begin Thumb-Up, elbow bent at a 90-degree angle and hand placed on the hip, same-arm side. Rotate the hand outward, upward and away from the immediate hip. Return to the starting position.

**Muscles Utilized:** Posterior Deltoid, Teres Minor & Infraspinatus.

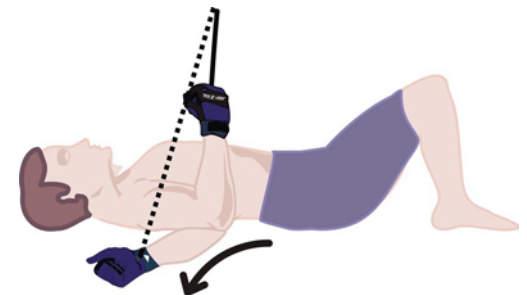


Figure 39: External Rotation 45-Degrees / Supine

### External Rotation: 90-Degrees / Supine

**Attach:** Back of Wrist

**Action:** Begin Thumb-Up, elbow bent at a 90-degree angle with hand straight out in front. Rotate the hand inward across the front of the body toward the opposite hip. Return to the starting position.

**Muscles Utilized:** Posterior Deltoid, Teres Minor & Infraspinatus.

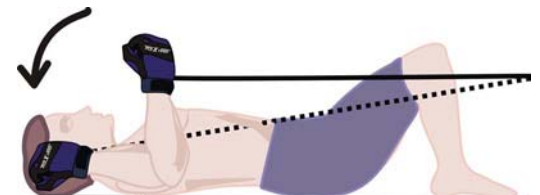


Figure 40: External Rotation 90-Degrees / Supine

### **Protraction: Supine**

**Attach:** Back of wrist.

**Action:** Begin Thumb-Up, Arm at your straight out in front. Push your hand straight out in front until your arm is fully extended. Return to the starting position.

**Muscles Utilized:** Pectoralis Major, Pectoralis Minor & Anterior Deltoid.

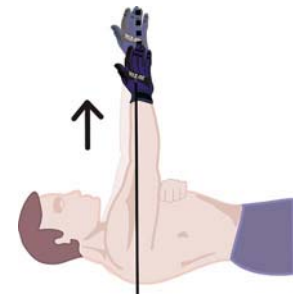


Figure 41: Protraction - Supine

### **Wrist / Elbow Pronation**

**Attach:** Thumb-Side of Wrist

**Action:** Begin Palm-Up, elbow at the side and bent at a 90-degree angle. Rotate your hand so that it ends in the Thumb-Up or Palm-Down position. Return to the starting position.

**Muscles Utilized:** Wrist and Elbow Pronators.

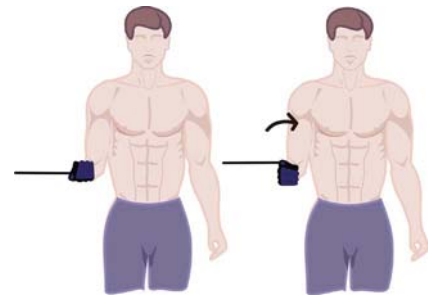


Figure 42: Wrist / Elbow Pronation

### **Wrist / Elbow Supination**

**Attach:** Side of Wrist

**Action:** Begin Palm-Down, elbow at the side and bent at a 90-degree angle. Rotate your hand so that it ends in the Palm-Up position. Return to the starting position.

**Muscles Utilized:** Wrist and Elbow Pronators.

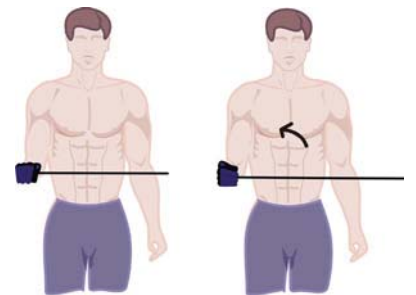


Figure 43: Wrist / Elbow Supination

### **Wrist Flexion**

**Attach:** Back of Wrist

**Action:** Begin Palm-Up, arm straight out in front or elbow down at the side and bent at a 90-degree angle. Flex your hand/wrist forward (Up). Return to the starting position.

**Muscles Utilized:** Wrist Flexors.



Figure 44: Wrist Flexion

### **Wrist Extension**

**Attach:** Front of Wrist

**Action:** Begin Palm-Down, arm straight out in front or elbow down at the side and bent at a 90-degree angle. Extend your hand/wrist backward (Up). Return to the starting position.

**Muscles Utilized:** Wrist Extensors.



Figure 45: Wrist Extension

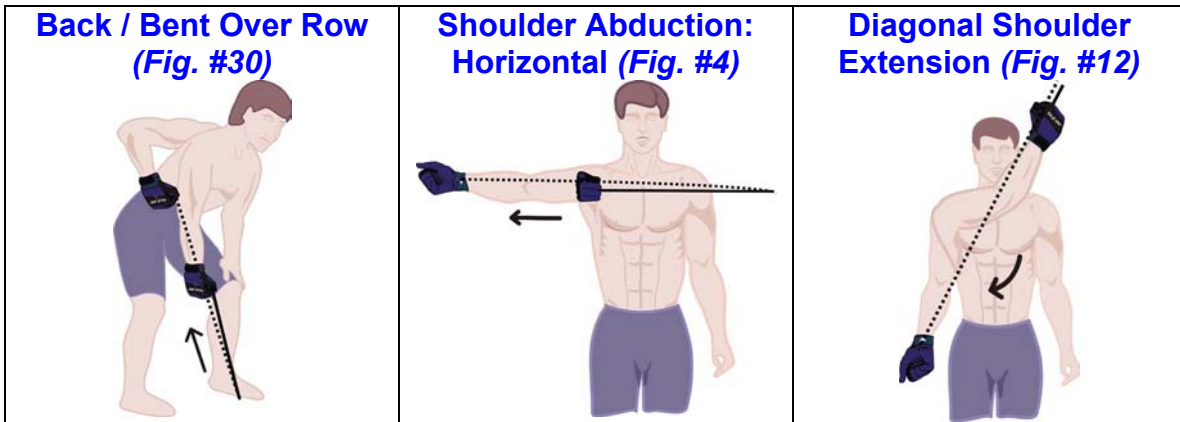
**Anterior Shoulder Impingement:**

**Symptoms:** Pain in anterior (front) of shoulder(s) when raising arm above head or reaching across the front of the body as if trying to touch the opposing shoulder.

**Solution:** Strengthen posterior (back) and posterior shoulder muscles in order to relieve compression on the anterior shoulder joint. (Pulls head of the humerus posterior in the AC-Joint.)

**QuickTIME Routine:** Perform each exercise for 20-Seconds Straight. You are finished!

**Regular Routine:** Perform the exercise program as outlined below.



**Week #1:** Perform 1x Daily, 3-Days per week.

**2-Sets, 10 Repetitions Figure #30**

**2-Sets, 10 Repetitions Figure #4**

**2-Sets, 10 Repetitions Figure #12**

**Week #2-4:** Perform 1x Daily, 4-Days per week.

**3-Sets, 10-12 Repetitions Figure #30**

**3-Sets, 10-12 Repetitions Figure #4**

**3-Sets, 10-12 Repetitions Figure #12**

**Week #5-8:** Perform 1x Daily, 5-Days per week **OR** 2x Daily 3-Days per week.

**4-Sets, 12-15 Repetitions Figure #30**

**4-Sets, 12-15 Repetitions Figure #4**

**4-Sets, 12-15 Repetitions Figure #12**

**NOTE: ALTERNATE EXERCISES:** If one exercise bothers you, or if you want to vary the program, you may exchange the following exercises:

EXERCISE	EXCHANGE FOR
30	31
4	34
12	35, 34, 13

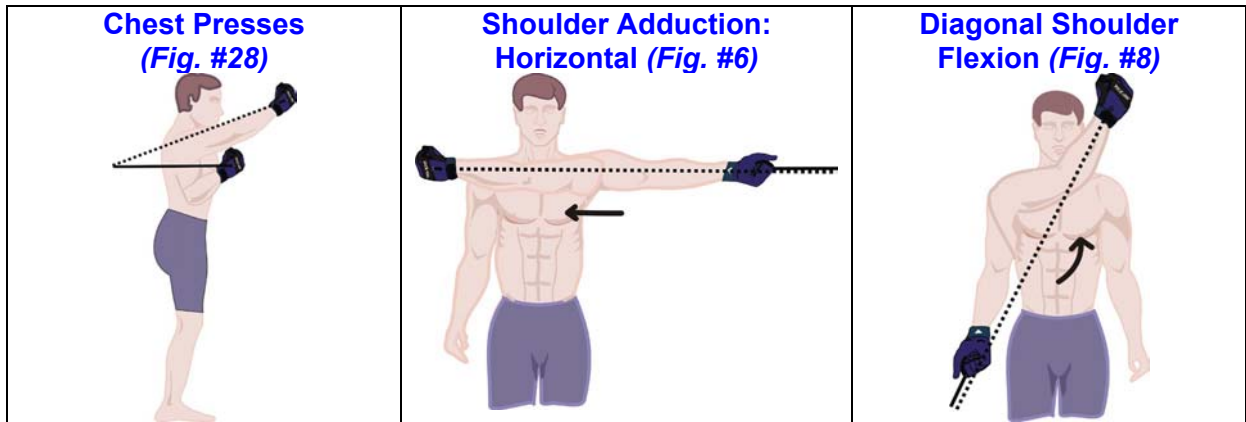
## Posterior Shoulder Impingement:

**Symptoms:** Pain in posterior (back) of shoulder(s) when pushing or lifting objects.

**Solution:** Strengthen chest and anterior (front) shoulder muscles in order to relieve compression on the anterior shoulder joint. (Pulls head of the humerus posterior in the AC-Joint.)

**QuickTIME Routine:** Perform each exercise for 20-Seconds Straight. You are finished!

**Regular Routine:** Perform the exercise program as outlined below.



**Week #1:** Perform 1x Daily, 3-Days per week.

**2-Sets, 10 Repetitions Figure #28**

**2-Sets, 10 Repetitions Figure #6**

**2-Sets, 10 Repetitions Figure #8**

**Week #2-4:** Perform 1x Daily, 4-Days per week.

**3-Sets, 10-12 Repetitions Figure #28**

**3-Sets, 10-12 Repetitions Figure #6**

**3-Sets, 10-12 Repetitions Figure #8**

**Week #5-8:** Perform 1x Daily, 5-Days per week **OR** 2x Daily 3-Days per week.

**3-Sets, 12-15 Repetitions Figure #28**

**3-Sets, 12-15 Repetitions Figure #6**

**3-Sets, 12-15 Repetitions Figure #8**

**NOTE: ALTERNATE EXERCISES:** If one exercise bothers you, or if you want to vary the program, you may exchange the following exercises:

EXERCISE	EXCHANGE FOR
28	29
6	34
8	9, 37, 38

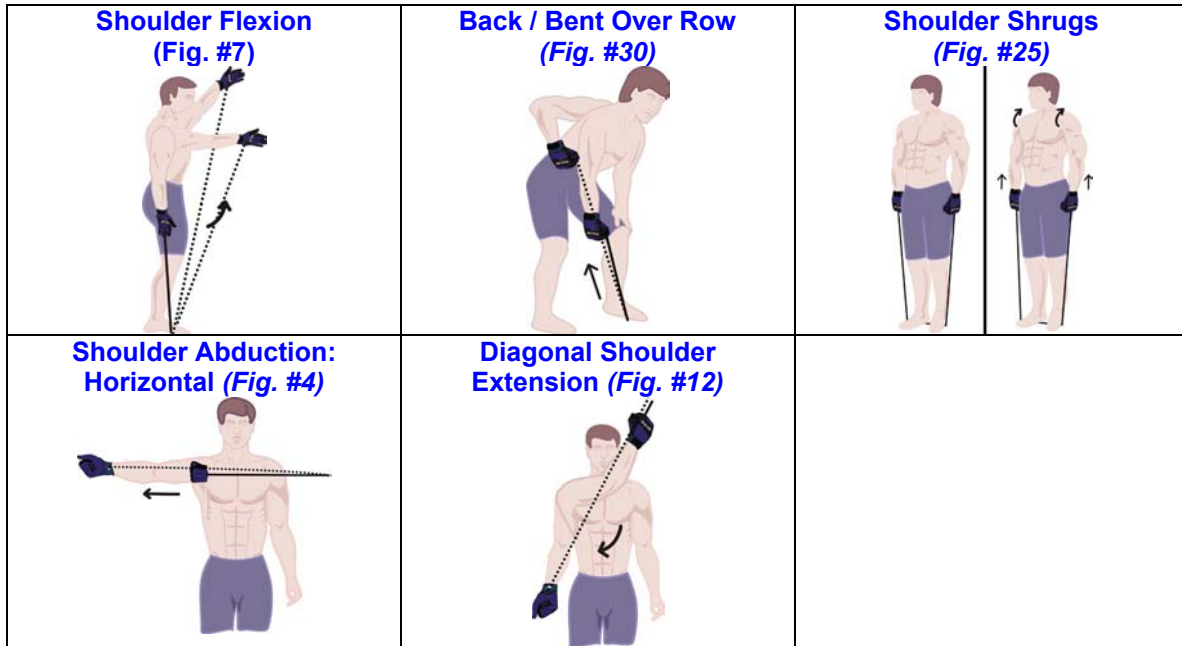
## Hyperkyphosis: Forward Head, Neck and Rounded Shoulders

**Symptoms:** Excessive thoracic flexion. Forward head and neck, slouched shoulders – A general display of poor posture when standing or seated. Symptoms can vary greatly, from pain in the front of shoulders, soreness/stiffness in the neck and upper back.

**Solution:** Strengthen neck, upper, middle and lower back and posterior shoulder girdle. (Corrects posture by straightening neck and pulling shoulders back.)

**QuickTIME Routine:** Perform each exercise for 20-Seconds Straight. You are finished!

**Regular Routine:** Perform the exercise program as outlined below.



**Week #1:** Perform 1x Daily, 3-Days per week.

**2-Sets, 10 Repetitions Figure #30**

**2-Sets, 10 Repetitions Figure #25**

**2-Sets, 10 Repetitions Figure #4**

**Week #2-4:** Perform 1x Daily, 4-Days per week.

**3-Sets, 10-12 Repetitions Figure #7**

**3-Sets, 10-12 Repetitions Figure #30**

**3-Sets, 10-12 Repetitions Figure #25**

**3-Sets, 10-12 Repetitions Figure #4**

**Week #5-8:** Perform 1x Daily, 5-Days per week **OR** 2x Daily 3-Days per week.

**3-Sets, 12-15 Repetitions Figure #7**

**3-Sets, 12-15 Repetitions Figure #30**

**3-Sets, 12-15 Repetitions Figure #25**

**3-Sets, 12-15 Repetitions Figure #4**

**3-Sets, 12-15 Repetitions Figure #12**

**NOTE: ALTERNATE EXERCISES:** If one exercise bothers you, or if you want to vary the program, you may exchange the following exercises:

EXERCISE	EXCHANGE FOR
7	
30	31
25	
4	33
12	36, 35,13

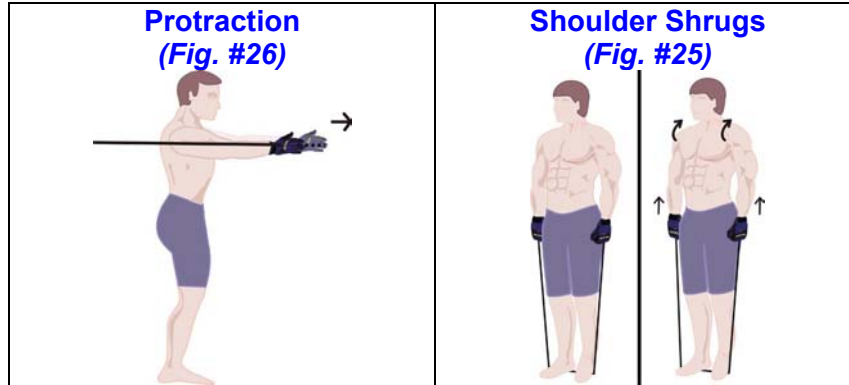
## Scapular Winging:

**Symptoms:** Excessive winging of scapula at vertebral border. A winging scapula is often associated with partial or complete paralysis of either OR both the serratus anterior and trapezius muscles. Weakness or paralysis of the serratus anterior, secondary to palsy of the long thoracic nerve, is the most common cause of scapular winging

**Solution:** Strengthen the serratus anterior and trapezius muscles.

**QuickTIME Routine:** Perform each exercise for 20-Seconds Straight. You are finished!

**Regular Routine:** Perform the exercise program as outlined below.



**Week #1:** Perform 1x Daily, 3-Days per week.

**3-Sets, 10 Repetitions Figure #26**

**3-Sets, 10 Repetitions Figure #25**

**Week #2-4:** Perform 1x Daily, 4-Days per week.

**4-Sets, 10-12 Repetitions Figure #26**

**4-Sets, 10-12 Repetitions Figure #25**

**Week #5-8:** Perform 1x Daily, 5-Days per week **OR** 2x Daily 3-Days per week.

**5-Sets, 12-15 Repetitions Figure #26**

**5-Sets, 12-15 Repetitions Figure #25**

**NOTE: ALTERNATE EXERCISES:** If one exercise bothers you, or if you want to vary the program, you may exchange the following exercises:

EXERCISE	EXCHANGE FOR
26	41
25	

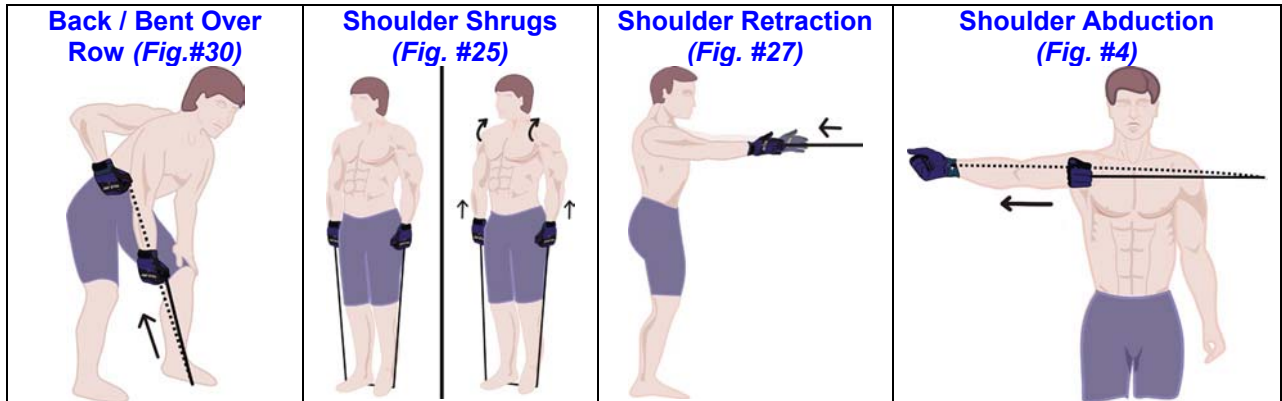
## Lateral Deviation of Scapula:

**Symptoms:** Lateral deviation of the scapula at the vertebral border. Lateral deviation occurs due to weakness in the rhomboid and trapezius muscles, causing the scapula to shift towards the outside of the shoulder / back.

**Solution:** Strengthen the rhomboid and trapezius muscles.

**QuickTIME Routine:** Perform each exercise for 20-Seconds Straight. You are finished!

**Regular Routine:** Perform the exercise program as outlined below.



**Week #1:** Perform 1x Daily, 3-Days per week.

2-Sets, 10 Repetitions Figure #30

2-Sets, 10 Repetitions Figure #25

2-Sets, 10 Repetitions Figure #27

2-Sets, 10 Repetitions Figure #4

**Week #2-4:** Perform 1x Daily, 4-Days per week.

3-Sets, 10-12 Repetitions Figure #30

3-Sets, 10-12 Repetitions Figure #25

3-Sets, 10-12 Repetitions Figure #27

3-Sets, 10-12 Repetitions Figure #4

**Week #5-8:** Perform 1x Daily, 5-Days per week OR 2x Daily 3-Days per week.

4-Sets, 12-15 Repetitions Figure #30

4-Sets, 12-15 Repetitions Figure #25

4-Sets, 12-15 Repetitions Figure #27

4-Sets, 12-15 Repetitions Figure #4

**NOTE: ALTERNATE EXERCISES:** If one exercise bothers you, or if you want to vary the program, you may exchange the following exercises:

EXERCISE	EXCHANGE FOR
30	31
25	
27	
4	33

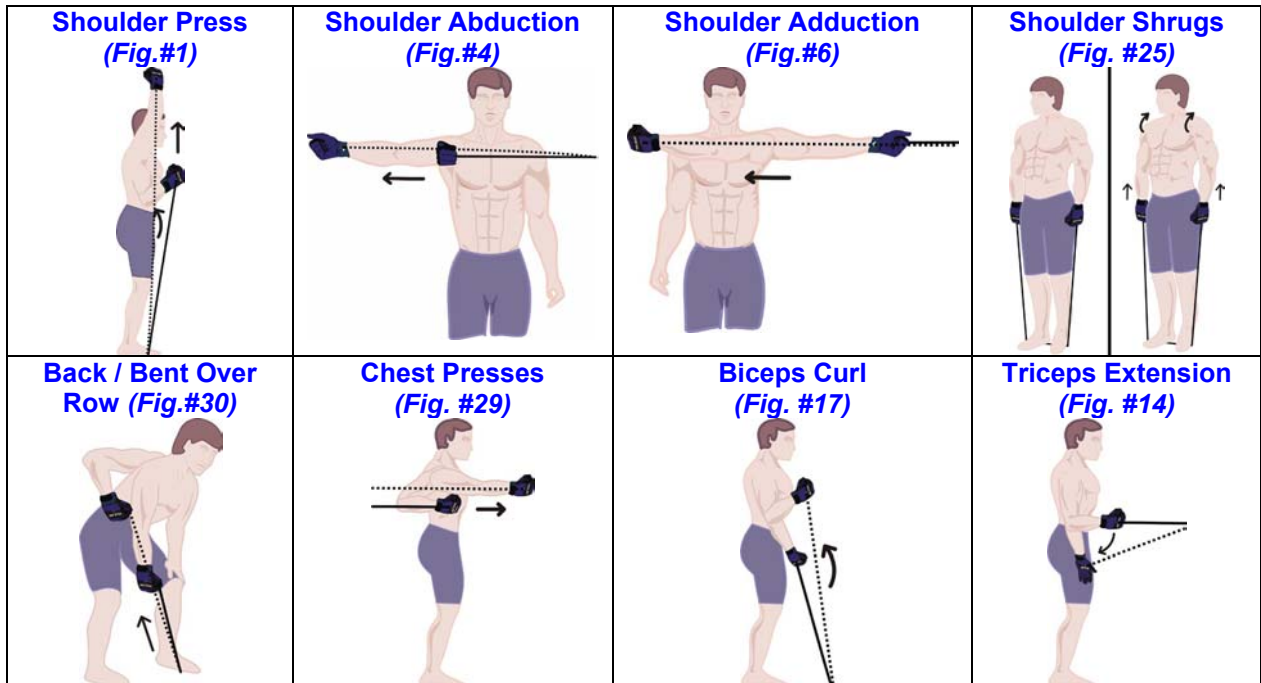
## General Upper Body Strengthening:

**Symptoms:** Weakness of the upper body, including the arms, chest and back.

**Solution:** Strengthen complete upper body.

**QuickTIME Routine:** Perform each exercise for 20-Seconds Straight. You are finished!

**Regular Routine:** Perform the exercise program as outlined below.



**Week #1-4:** Perform 1x Daily, 3-Days per week.

2-Sets, 10 Repetitions Figure #1

2-Sets, 10 Repetitions Figure #25

2-Sets, 10 Repetitions Figure #30

2-Sets, 10 Repetitions Figure #29

2-Sets, 10 Repetitions Figure #17

2-Sets, 10 Repetitions Figure #14

**Week #5-8:** Perform 1x Daily, 3-Days per week.

3-Sets, 12-15 Repetitions Figure #1

3-Sets, 12-15 Repetitions Figure #4

3-Sets, 12-15 Repetitions Figure #6

3-Sets, 12-15 Repetitions Figure #25

3-Sets, 12-15 Repetitions Figure #30

3-Sets, 12-15 Repetitions Figure #29

3-Sets, 12-15 Repetitions Figure #17

3-Sets, 12-15 Repetitions Figure #14

**NOTE: ALTERNATE EXERCISES:** If one exercise bothers you, or if you want to vary the program, you may exchange the following exercises:

EXERCISE	EXCHANGE FOR
1	
4	12, 13, 33, 35, 36
6	8, 9, 34, 37, 38
25	
30	31
29	28
17	16, 18
14	15

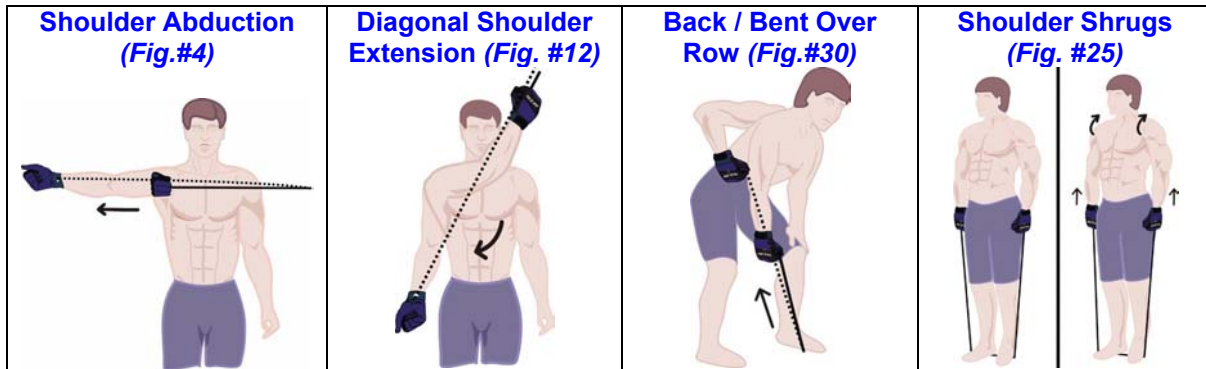
## Upper Extremity Repetitive Strain Injury:

**Symptoms:** Weakness, poor posture, stiffness or other symptoms that may be related to an upper extremity repetitive strain injury (RSI).

**Solution:** Strengthen specific posterior muscles, such as the back, trapezius and posterior deltoid in order to create balance.

**QuickTIME Routine:** Perform each exercise for 20-Seconds Straight. You are finished!

**Regular Routine:** Perform the exercise program as outlined below.



**Week #1:** Perform 1x Daily, 3-Days per week.

2-Sets, 10 Repetitions Figure #6

2-Sets, 10 Repetitions Figure #12

2-Sets, 10 Repetitions Figure #30

2-Sets, 10 Repetitions Figure #25

**Week #2-4:** Perform 1x Daily, 4-Days per week.

3-Sets, 10-12 Repetitions Figure #6

3-Sets, 10-12 Repetitions Figure #12

3-Sets, 10-12 Repetitions Figure #30

3-Sets, 10-12 Repetitions Figure #25

**Week #5-8:** Perform 1x Daily, 5-Days per week OR 2x Daily 3-Days per week.

4-Sets, 12-15 Repetitions Figure #6

4-Sets, 12-15 Repetitions Figure #12

4-Sets, 12-15 Repetitions Figure #30

4-Sets, 12-15 Repetitions Figure #25

EXERCISE	EXCHANGE FOR
6	34
12	36, 35, 13
30	31
25	

**Scapular Elevators:**Shoulder Shrugs (*Fig. #25*)

3-Sets of 10-Repetitions

**Scapular Adductors:**Shoulder Abduction: Horizontal (*fig. #4,32*)

3-Sets of 10-Repetitions

Back / Bent Over or Seated Row (*Fig. #29-30*)

3-Sets of 10-Repetitions

Diagonal Shoulder Extension (*Fig. #12,13,34,35*)

3-Sets of 10-Repetitions

**Scapular Abductors:**Chest Presses (*Fig. 27,28*)

3-Sets of 10-Repetitions

Shoulder Adduction: Horizontal (*Fig. #6,33*)

3-Sets of 10-Repetitions

Diagonal Shoulder Flexion (*Fig. #8,9,36,37*)

3-Sets of 10-Repetitions

**Shoulder Adduction:**Shoulder Adduction: Vertical (*fig. #5*)

3-Sets of 10-Repetitions

Shoulder Adduction - Supine (*fig. #33*)

3-Sets of 10-Repetitions

**Shoulder Abduction:**Shoulder Abduction: Angled (*Fig. #2*)

3-Sets of 10-Repetitions

Shoulder Abduction: Vertical (*fig. #3*)

3-Sets of 10-Repetitions

**Shoulder Medial Rotators: (Internal Rotation)**Internal Rotation 90-Degrees (*Fig. #22*)

3-Sets of 10-Repetitions

**Shoulder Lateral Rotators: (External Rotation)**External Rotation 45-Degrees/Standing (*Fig. #21*)

3-Sets of 10-Repetitions

External Rotation 90-Degrees/Standing (*Fig. #19*)

3-Sets of 10-Repetitions

External Rotation/Seated (*Fig. #20*)

3-Sets of 10-Repetitions

External Rotation 45-Degrees Supine (*Fig. #38*)

3-Sets of 10-Repetitions

External Rotation 90-Degrees Supine (*Fig. #39*)

3-Sets of 10-Repetitions

**Elbow Extensors (Triceps)**Triceps Extension (*Fig. #14*)

3-Sets of 10-Repetitions

Triceps – Overhead Extension (*Fig. #15*)

3-Sets of 10-Repetitions

**Elbow Flexors (Biceps)**Brachialis Curl - Standing (*Fig. #16*)

3-Sets of 10-Repetitions

Biceps Curl - Standing (*Fig. #17*)

3-Sets of 10-Repetitions

Biceps Curl - Seated (*Fig. #18*)

3-Sets of 10-Repetitions

**Elbow Pronators**Pronation (*Fig. #41*)

3-Sets of 10-Repetitions

**Elbow Supinators**Supination (*Fig. #42*)

3-Sets of 10-Repetitions

**Wrist Flexors**Flexion (*Fig. #43*)

3-Sets of 10-Repetitions

**Wrist Extensors**Extension (*Fig. #44*)

3-Sets of 10-Repetitions