

SHOULDER INSTABILITY, MULTIDIRECTIONAL



■ ■ ■ Description

Multidirectional shoulder instability is a problem of the shoulder joint in which the upper arm (humerus) is displaced from its normal position in the center of the socket (glenoid) and the joint surfaces no longer touch each other. With this type of instability, the humerus may move in front of (anterior), below (inferior), or behind (posterior) the glenoid. Because the shoulder has more motion than any other large joint in the body, it is the most commonly dislocated large joint. The shoulder is like a golf ball on a golf tee. A few of the many structures that provide shoulder stability include the cartilage rim (labrum), which helps provide depth to the socket; the capsule, with thickenings that are the ligaments of the shoulder; and the muscles of the rotator cuff, which surround the shoulder. To dislocate the shoulder, the rotator cuff muscles need to be stretched or torn, the capsule and ligaments need to be stretched, and often the labrum is pulled off the glenoid. Subluxation of this joint is also common in sports; this is when the ball of the humerus does not stay centered in the socket with shoulder motion and feels like it wants to slip out of place. Subluxation of the shoulder leads to overuse of the rotator cuff muscles by trying to keep the humeral head in the center of the socket causing rotator cuff symptoms. Further, fatigue of the rotator cuff muscles as the deltoid muscle contracts may push the humeral head up to the roof of the shoulder, pinching the subacromial bursa and supraspinatus tendon (part of the rotator cuff). This type of instability tends to occur in loose-jointed (“double-jointed”) people.

■ ■ ■ Common Signs and Symptoms

- Severe pain in the shoulder at the time of injury, although many people do not have an injury and may not have pain that is severe
- Pain when using the arm overhead or carrying heavy objects with the arm at the side
- Loss of shoulder function and pain when attempting to move the shoulder
- Commonly, both shoulders affected
- Feeling like your shoulder wants to slip out of place
- Tenderness, deformity (fullness in the armpit and prominent roof of the shoulder or fullness in the back of the shoulder), and occasionally swelling
- Pain with moving the shoulder, especially when reaching overhead; pain with heavy lifting; pain that awakens you at night
- Loss of strength
- Numbness or paralysis in the upper arm and deltoid muscle from pinching, stretching, or pressure on the blood vessels or nerves
- Feeling and sound of crepitation (“crackling”) when the injured area is touched or with shoulder motion
- Decreased or absent pulse at the wrist because of blood vessel damage (rare)

■ ■ ■ Causes

- Direct blow to the shoulder or backward force on an extended or outstretched arm or arm overhead (traumatic causes are not as common)
- Usually, microtraumatic or atraumatic onset
- Repetitive throwing motion or swimming
- End result of a severe shoulder sprain
- Congenital abnormality (you are born with it), such as a shallow or malformed joint surface or a ligament disorder
- Powerful muscle twisting or violent muscle contraction

Some people can willfully produce a recurrent dislocation.

■ ■ ■ Risk Increases With

- Loose joints
- Contact sports (football, wrestling, and basketball)
- Sports that involve repetitive overhead activity, such as baseball, volleyball, swimming
- Sports that require forceful lifting, hitting, or twisting
- Previous shoulder dislocations or sprains
- Shoulder fracture
- Repeated shoulder injury of any kind
- Poor physical conditioning (strength and flexibility)
- Congenital abnormality (you are born with it), such as a shallow or malformed joint surface or a ligament disorder

■ ■ ■ Preventive Measures

- Appropriately warm up and stretch before practice or competition.
- Maintain appropriate conditioning:
 - Shoulder strength
 - Flexibility and endurance
 - Cardiovascular fitness
- For participation in contact sports, wear protective shoulder pads.

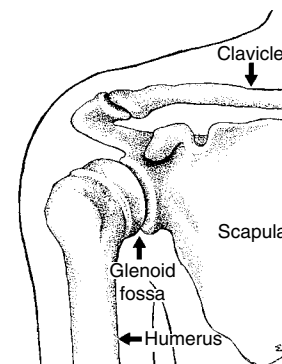


Figure 1

From Economou SG, Economou TS: Instructions for Surgery Patients. Philadelphia, WB Saunders, 1998, p. 551.

Expected Outcome

With appropriate reduction (repositioning of the joint) and immobilization for 3 to 6 weeks, healing of ligaments can be expected in 6 weeks. Repeated shoulder dislocations and subluxations are common. If customary treatment does not prevent a recurrence, athletic activities should be modified until surgery can be performed to cure the problem. For those whose symptoms aren't caused by injury, rehabilitation has a high likelihood of success.

Possible Complications

- Damage to nearby nerves or major blood vessels, causing temporary or permanent weakness, paralysis, numbness, coldness, and paleness
- Fracture or joint cartilage injury due to the dislocation or reduction of the dislocation
- Prolonged healing or recurrent dislocation if activity is resumed too soon
- Rotator cuff tear
- Repeated shoulder dislocations, particularly if the previous dislocation is not healed completely or appropriately rehabilitated; most recurrent dislocations are caused by repeated injury, but with increasing number of dislocations, less force is necessary to cause dislocation
- Unstable or arthritic shoulder following repeated injury or if there is associated fracture

General Treatment Considerations

After reduction (repositioning of the bones of the joint), treatment consists of ice and medications to relieve pain. Reduction usually can be performed without surgery; surgery may rarely be necessary to restore the joint to its normal position, as well as to repair ligaments. Often patients are able to

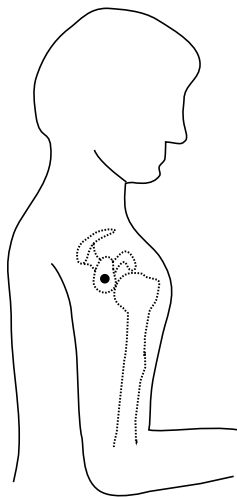


Figure 2

From Rockwood CA Jr., Matsen FA III: The Shoulder, 2nd ed. Philadelphia, WB Saunders, 1998, p. 671.

reduce the shoulder themselves. Immobilization by sling or immobilizer for 3 to 8 weeks is usually recommended to protect the joint while the ligaments heal. After immobilization, stretching and strengthening of the stiff, injured, and weakened joint and surrounding muscles (due to the immobilization and the injury) are necessary. These may be done with or without the assistance of a physical therapist or athletic trainer. Surgery is uncommonly recommended after the first dislocation to tighten the shoulder ligaments and repair the labrum. Surgery is usually reserved for those who have recurrent dislocations despite appropriate rehabilitation. This can be done arthroscopically or through a standard incision.

Medication

- General anesthesia or muscle relaxants may be used to help make the joint repositioning possible.
- Nonsteroidal anti-inflammatory medications, such as aspirin and ibuprofen (do not take within 7 days before surgery), or other minor pain relievers, such as acetaminophen, are often recommended. Take these as directed by your physician. Contact your physician immediately if any bleeding, stomach upset, or signs of an allergic reaction occur.
- Strong pain relievers may be prescribed as necessary. Use only as directed and only as much as you need.

Cold Therapy

Cold is used to relieve pain and reduce inflammation. Cold should be applied for 10 to 15 minutes every 2 to 3 hours for inflammation and pain after injury. Use ice packs or an ice massage.

Notify Our Office If

- Pain, tenderness, or swelling worsens despite treatment
- You experience pain, numbness, or coldness in the arm
- Blue, gray, or dusky color appears in the fingernails
- New, unexplained symptoms develop (drugs used in treatment may produce side effects)

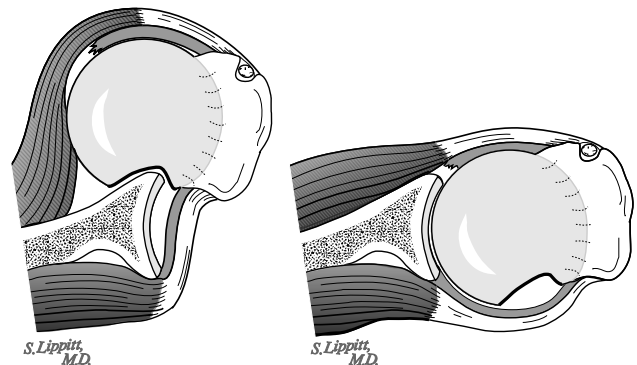


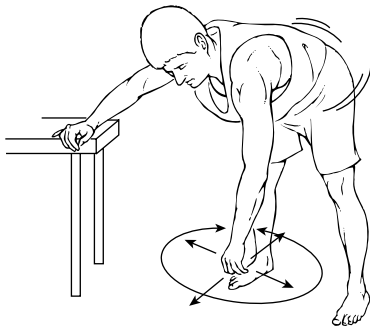
Figure 3

From Rockwood CA Jr., Matsen FA III: The Shoulder, 2nd ed. Philadelphia, WB Saunders, 1998, p. 613.

➤ **RANGE OF MOTION AND STRETCHING EXERCISES** • Shoulder Instability, Multidirectional

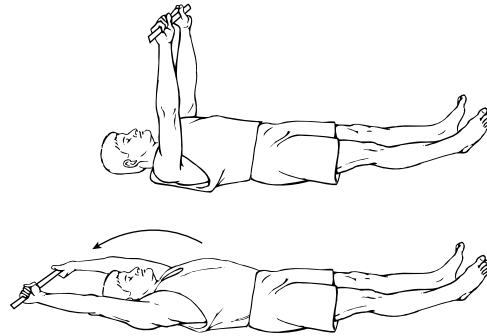
These are some of the *initial* exercises you may start your rehabilitation program with after your surgeon has stated that you may begin moving your shoulder. The period of time your shoulder is immobilized (often 3 to 8 weeks) will vary depending on the type and severity of injury. Continue these exercises as instructed until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. You should attempt to avoid the extreme end ranges of motions that place your elbow all the way across the front of your body or place your hand and elbow behind the midline of your body. Please remember:

- Flexible tissue is more tolerant of the stresses placed on it during activities.
- Each stretch should be held for 20 to 30 seconds.
- A *gentle* stretching sensation should be felt.



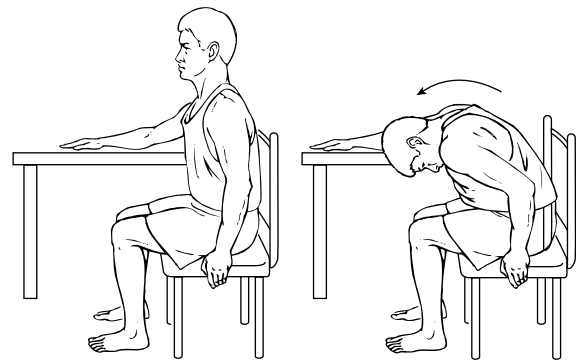
SHOULDER • Pendulum

1. Lean forward at the waist, letting your _____ arm hang freely. Support yourself by placing the opposite hand on a chair, table, or counter as shown.
2. Sway your *whole body* slowly forward and back. This will cause your arm to move. Let your arm hang freely. Do not tense it up.
3. Repeat the above swaying side to side and moving in circular patterns, clockwise and counterclockwise.
4. Do _____ repetitions in each direction.
5. Repeat exercise _____ times, _____ times per day.



SHOULDER • Flexion

1. Lie on your back holding a stick in both hands, keeping your hands shoulder-width apart.
2. Raise both hands over your head until you feel a gentle stretch.
3. Repeat exercise _____ times, _____ times per day. Hold each repetition 5 to 10 seconds.



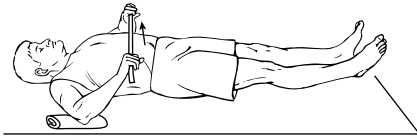
SHOULDER • Flexion

1. Sit in a chair with your _____ arm on a table as shown.
2. Lean forward, sliding your arm forward on the table until you feel a gentle stretch.
3. Return to the starting position.
4. Repeat exercise _____ times, _____ times per day. Hold each repetition 5 to 10 seconds.



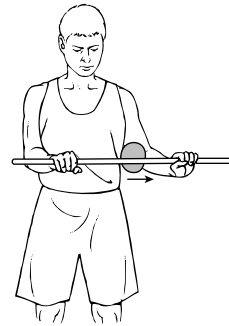
SHOULDER • Flexion

1. While standing near a wall as shown, slowly “walk” your fingers up the wall until you feel a gentle stretch.
2. Repeat exercise _____ times, _____ times per day. Hold each repetition 5 to 10 seconds.



SHOULDER • Internal Rotation

1. Lie on your back with your _____ arm out away from your body about 60 degrees and a rolled-up towel placed under your elbow as shown.
2. Turn/rotate your arm inward toward your body from the shoulder.
3. To assist in this stretch you may use a rope or towel to gently pull the arm farther inward as shown.
4. Make sure to keep your shoulders flat on the floor/bed on which you are lying.



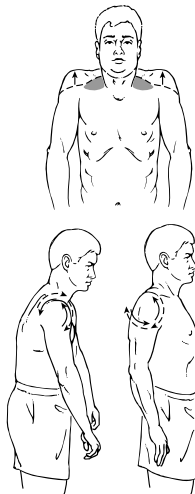
SHOULDER • External Rotation

1. Lie on your back or stand with your _____ arm at your side and your elbow bent to 90 degrees. Hold a stick, umbrella handle, or golf club in your hands as shown.
2. Using the stick turn/rotate your hand and forearm away from your body as shown.
3. ***Make sure you keep your upper arm and elbow next to your side.***
4. Repeat exercise _____ times, _____ times per day. Hold each repetition 5 to 10 seconds.

➤ **STRENGTHENING EXERCISES** • Shoulder
Instability, Multidirectional

These are some of the *initial* exercises you may start your rehabilitation program with after your surgeon has stated that you may begin moving your shoulder. The period of time your shoulder is immobilized will vary depending on the type and severity of injury. Initially, when performing these exercises you should not raise your arm above shoulder height unless specifically instructed to do so by your physician, physical therapist, or athletic trainer. Continue these exercises as instructed until you see your physician, physical therapist, or athletic trainer again or until your symptoms are resolved. You should attempt to avoid the extreme end ranges of motions that place your elbow all the way across the front of your body or place your hand and elbow behind the midline of your body. Please remember:

- Strong muscles with good endurance tolerate stress better.
- Do the exercises as *initially* prescribed by your physician, physical therapist, or athletic trainer. Progress slowly with each exercise, gradually increasing the number of repetitions and weight used under their guidance.



SHOULDER • Scapular Elevation, Shrugs

1. Stand with your arms at your side in a *good erect posture*.
2. Subtly “shrug” your shoulders up and back toward your ears.
3. Hold this position for _____ seconds and then *slowly* return to the starting position.
4. Repeat exercise _____ times, _____ times per day.
5. You may perform this exercise with a _____ pound weight in each hand.
6. Avoid standing in a slouched position with poor posture by using this technique intermittently throughout the day.



SHOULDER • Internal Rotation, Isometric

1. Bend your _____ elbow to 90 degrees as shown, holding the arm slightly in front of the body.
2. Place your opposite hand on the inside of your wrist as shown.
3. Try to turn/rotate your arm inward, toward the body, as if it were a gate swinging closed. Resist this motion with the opposite hand that is on the inside of your wrist. Do not let any motion occur.
4. Hold this position for _____ seconds.
5. Repeat exercise _____ times, _____ times per day.



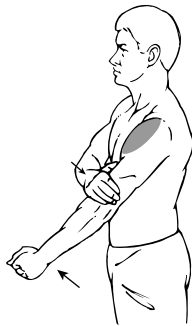
STRENGTH • Shoulder, External Rotation, Isometric

1. Bend your _____ elbow to 90 degrees as shown, holding your arm slightly in front of your body.
2. Place your opposite hand over your wrist as shown.
3. Try to turn/rotate your arm outward, away from your body, as if it were a gate swinging open. Resist this motion with the opposite hand that is on your wrist. Do not let any motion occur.
4. Hold this position for _____ seconds.
5. Repeat exercise _____ times, _____ times per day.



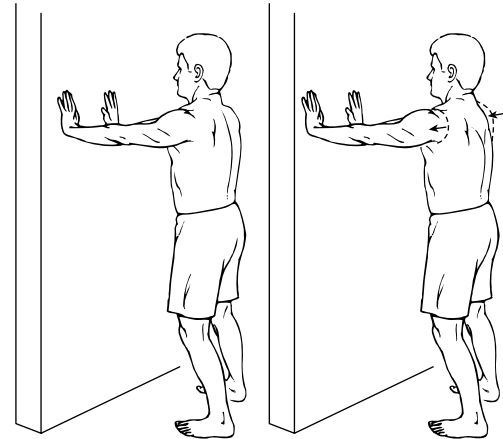
STRENGTH • Shoulder Abduction, Isometric

1. While standing, raise the _____ arm slightly away from the body as shown.
2. Place the other hand on top of your arm and push down. Do not allow your arm to move. Push as hard as you can without having any pain or moving the arm.
3. Hold this position for _____ seconds and then *slowly* return to the starting position.
4. Repeat exercise _____ times, _____ times per day.



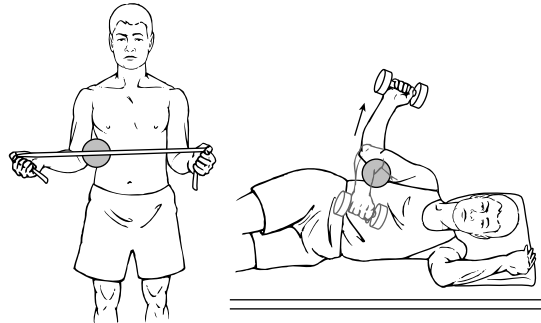
STRENGTH • Shoulder Flexion, Isometric

1. While standing, raise your _____ arm straight in front of your body as shown.
2. Place the other hand on top of your arm and push down. Do not allow your arm to move. Push as hard as you can without having any pain or moving the arm.
3. Hold this position for _____ seconds and then *slowly* return to the starting position.
4. Repeat exercise _____ times, _____ times per day.



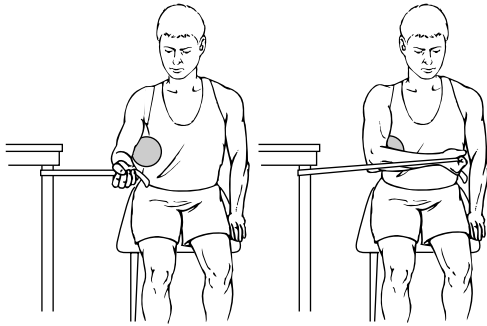
SHOULDER • Scapular Protraction

1. Stand with your hand against a wall as shown.
2. Keep your elbows straight and push down with your hands, raising the back of your shoulders away from the wall as shown in the drawing.
3. The farther away from the wall you stand, the harder the exercise.
4. Hold this position for _____ seconds and then *slowly* return to the starting position.
5. Repeat exercise _____ times, _____ times per day.



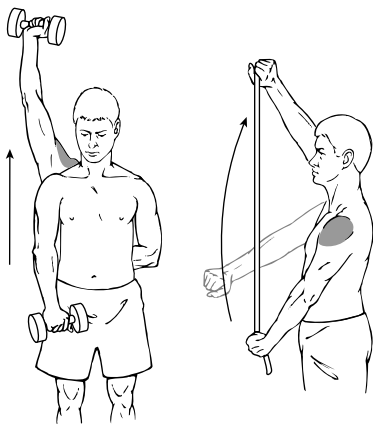
STRENGTH • Shoulder External Rotation

1. Lie on your side with your _____ arm up and the elbow bent to 90 degrees, or stand with your arms at your side and the elbows bent to 90 degrees as shown. Place a small rubber ball (4 to 6 inches in diameter) or rolled-up towel between your elbow and your side as shown.
2. Hold a _____ pound weight in your hand and turn the arm up toward the ceiling, keeping the elbow bent as shown. If using rubber band/tubing, turn the arm(s) out from your side while keeping the elbows bent.
3. Do this slowly and in control through your *pain free* range of motion only. If this is painful, stop and discuss this with your physician, physical therapist, or athletic trainer.
4. Hold this position for _____ seconds and then *slowly* return to the starting position.
5. Repeat exercise _____ times, _____ times per day.



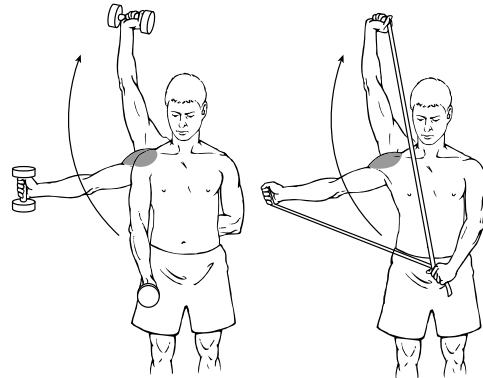
SHOULDER • Internal Rotation

1. Anchor the rubber band/tubing to a heavy/solid object as shown.
2. Place a small ball or towel between your elbow and body as shown in the drawing and bend your elbow to 90 degrees. Squeeze the ball gently to the side of your chest with your elbow.
3. Turn/rotate your arm in toward your body (across your chest/stomach). Do not let the ball move/fall away from the side of your chest.
4. Hold this position for _____ seconds and then *slowly* return to the starting position.
5. Repeat exercise _____ times, _____ times per day.



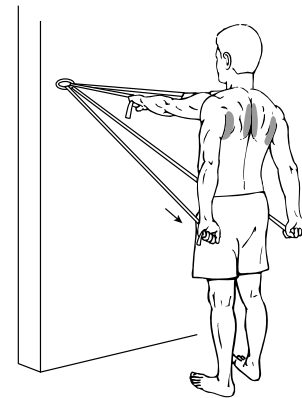
STRENGTH • Shoulder Flexion

1. Stand holding a _____ pound weight in your _____ hand as shown, or hold the rubber band/tubing as shown.
2. Slowly raise your arm overhead as far as you can in your *pain free* range of motion. Do not allow your shoulder to “shrug up” while doing this exercise.
3. Keep your hand in a “thumbs-up” position.
4. Hold this position for _____ seconds and then *slowly* return to the starting position.
5. Repeat exercise _____ times, _____ times per day.



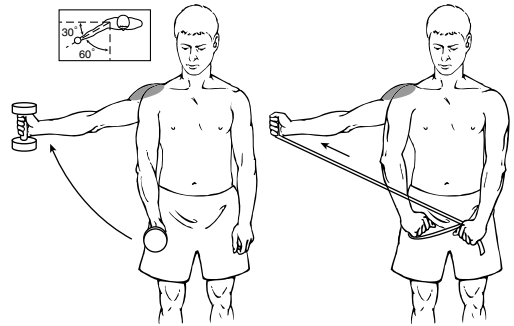
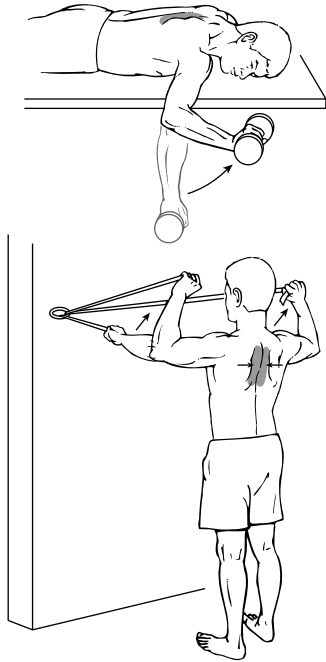
STRENGTH • Shoulder Abduction

1. Stand holding a _____ pound weight in your _____ hand and your palm facing your body as shown, or hold the rubber band/tubing as shown.
2. Slowly raise the arm up to the side and as far overhead as you can in your *pain free* range. If this is painful, stop and discuss this with your physician, physical therapist, or athletic trainer. *You should not progress above shoulder height unless instructed to do so by your physician, physical therapist, or athletic trainer.* If you are cleared to go above shoulder height, as you raise the arm to shoulder height begin to turn the palm toward the ceiling.
3. *Slowly* return to the starting position.
4. Repeat exercise _____ times, _____ times per day.



STRENGTH • Shoulder Extension

1. Anchor/secure rubber band/tubing around a stable object such as a stair post or around the knob of a closed door.
2. Stand holding the rubber band/tubing in front of you with your arms extended as shown.
3. Squeeze/pinch your shoulder blades together and pull your arms down and backward as shown. *Do not pull arms past the midline of your body.*
4. Hold this position for _____ seconds and then *slowly* return to the starting position.
5. Repeat exercise _____ times, _____ times per day.



SHOULDER • Scapular Retraction and External Rotation

1. **If using a weight**—Lie on your stomach with your _____ arm out to the side and over the edge of the bed as shown. The elbow should be bent to 90 degrees and the upper arm should be supported by the bed. Hold a _____ pound weight in your hand.
2. Turn/rotate your arm up toward the ceiling while keeping the elbow bent.
3. Squeeze/pinch your shoulder blades together.
4. Hold this position for _____ seconds and then *slowly* return to the starting position.
5. Repeat exercise _____ times, _____ times per day.
1. **If using rubber band/tubing**—Hold one end of the band/tubing in each hand. Your elbows should be bent 90 degrees and at shoulder height.
2. Squeeze/“pinch” your shoulder blades together.
3. Keeping your shoulder blades pinched together, turn your arms up as if someone had said “Stick ’em up!” Your hands should be in the position shown when you finish. *Do not bring your elbows or your hands past the middle of your body.*
4. Hold this position for _____ seconds and then *slowly* return to the starting position.
5. Repeat exercise _____ times, _____ times per day.

STRENGTH • Scaption, Thumb Up

1. Hold a _____ weight in your _____ hand with your arm at your side but slightly forward (approximately 30 degrees; see small diagram). This exercise may also be done with rubber band/tubing as shown.
2. Your hand should be in a “thumbs-up” position.
3. Slowly raise your arm in the “thumbs-up” position through your *pain free* range. If this is painful, stop and discuss this with your physician, physical therapist, or athletic trainer. Do not allow your shoulder to “shrug up” while doing this exercise.
4. Hold this position for _____ seconds and then *slowly* return to the starting position.
5. Repeat exercise _____ times, _____ times per day.



SHOULDER • Horizontal Adduction

1. ***If using a weight***—Lie on your back with your _____ arm on the bed as shown, holding a _____ pound weight in your hand.
 2. Raise your arm up slowly toward the ceiling, straightening out your elbow.
 3. Hold this position for _____ seconds and then ***slowly*** return to the starting position.
 4. Repeat exercise _____ times, _____ times per day.
1. ***If using rubber band/tubing***—Anchor the rubber band/tubing to a solid object.
 2. Hold one end of the band/tubing in each hand as shown with your elbows bent. Your elbows should be in line with your body, ***not*** behind your body.
 3. Push your arms forward, straightening out your elbows. Keep your arms parallel to the floor.
 4. Hold this position for _____ seconds and then ***slowly*** return to the starting position.
 5. Repeat exercise _____ times, _____ times per day.

Notes:

(Up to 4400 characters only)

Notes and suggestions