Sports Medicine
MASSACHUSETTS GENERAL HOSPITAL ORTHOPAEDICS

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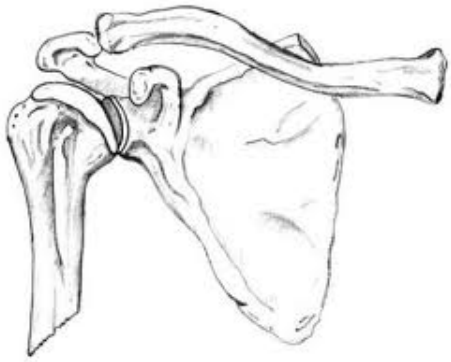
www2.massgeneral.org/sports

Clavicle Fracture (Broken Collarbone)

A broken collarbone is also known as a clavicle fracture. This is a very common fracture that occurs in people of all ages.



Anatomy

The collarbone (clavicle) is located between the ribcage (sternum) and the shoulder blade (scapula), and it connects the arm to the body. The clavicle lies above several important nerves and blood vessels. However, these vital structures are rarely injured when the clavicle breaks, even though the bone ends can shift when they are fractured.

Description

The clavicle is a long bone and most breaks occur in the middle of it. Occasionally, the bone will break where it attaches at the ribcage or shoulder blade.

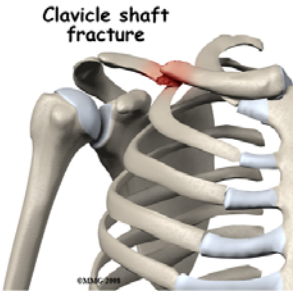
Cause

Clavicle fractures are often caused by a direct blow to the shoulder. This can happen during a fall onto the shoulder or a car collision. A fall onto an outstretched arm can also cause a clavicle fracture. In babies, these fractures can occur during the passage through the birth canal.

Symptoms

Clavicle fractures can be very painful and may make it hard to move your arm. Additional symptoms include:

- Sagging shoulder (down and forward)
- Inability to lift the arm because of pain
- A grinding sensation if an attempt is made to raise the arm
- A deformity or "bump" over the break
- Bruising, swelling, and/or tenderness over the collarbone



Nonsurgical Treatment

If the broken ends of the bones have not shifted out of place and line up correctly, you may not need surgery. Broken collarbones can heal without surgery.

Arm Support

A simple arm sling or figure-of-eight wrap is usually used for comfort immediately after the break. These are worn to support your arm and help keep it in position while it heals.

Medication

Pain medication, including acetaminophen, can help relieve pain as the fracture heals.

Physical Therapy

While you are wearing the sling, you will likely lose muscle strength in your shoulder. Once your bone begins to heal, the pain will decrease and your doctor may start gentle shoulder and elbow exercises. These exercises will help prevent stiffness and weakness. More strenuous exercises can gradually be started once the fracture is completely healed.

Doctor Follow-Up

You will need to see your doctor regularly until your fracture heals. He or she will examine you and take x-rays to make sure the bone is healing in good position. After the bone has healed, you will be able to gradually return to your normal activities.

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Complications

The fracture can move out of place before it heals. It is important to follow up with your doctor as scheduled to make sure the bone stays in position.

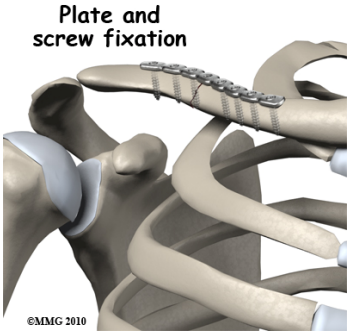
If the fracture fragments do move out of place and the bones heal in that position, it is called a "malunion." Treatment for this is determined by how far out of place the bones are and how much this affects your arm movement.

A large bump over the fracture site may develop as the fracture heals. This usually gets smaller over time, but a small bump may remain permanently.

Surgical Treatment

If your bones are out of place (displaced), your doctor may recommend surgery. Surgery can align the bones exactly and hold them in good position while they heal. This can improve shoulder strength when you have recovered.

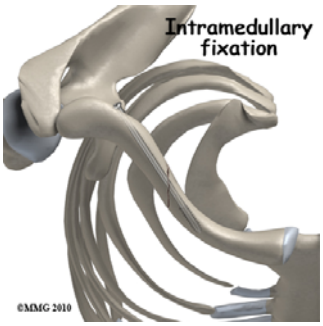
Plates and Screws



During this operation, the bone fragments are first repositioned into their normal alignment, and then held in place with special screws and/or by attaching metal plates to the outer surface of the bone. After surgery, you may notice a small patch of numb skin below the incision. This numbness will become less noticeable with time. Because there is not a lot of fat over the collarbone, you may be able to feel the plate through your skin.

Plates and screws are usually not removed after the bone has healed, unless they are causing discomfort. Problems with the hardware are not common, but sometimes, seatbelts and backpacks can irritate the collarbone area. If this happens, the hardware can be removed after the fracture has healed.

Pins



Pins are also used to hold the fracture in good position after the bone ends have been put back in place. The incisions for pin placement are usually smaller than those used for plates. Pins often irritate the skin where they have been inserted and are usually removed once the fracture has healed.

Rehabilitation

Specific exercises will help restore movement and strengthen your shoulder. Your doctor may provide you with a home therapy plan or suggest that you work with a physical therapist. Therapy programs typically start with gentle motion exercises. Your doctor will gradually add strengthening exercises to your program as your fracture heals.

Outcome

Whether your treatment involves surgery or not, it can take several months for your collarbone to heal. It may take longer in diabetics or people who smoke or chew tobacco. Most people return to regular activities within 3 months of their injury. Your doctor will tell you when your injury is stable enough to do so. Returning to regular activities or lifting with your arm before your doctor advises may cause your fracture fragments to move or your hardware to break. This may require you to start your treatment from the beginning.

Once your fracture has completely healed, you can safely return to sports activities.

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SURGERY TO REPAIR FRACTURED CLAVICLE

PREOPERATIVE INSTRUCTIONS

Schedule surgery with the secretary in the doctor's office.

Within one month before surgery

* Make an appointment for a **preoperative office** visit regarding surgery
* A history and physical examination will be done
* Receive instructions
* Complete blood count (CBC)
* Electrocardiogram (EKG) if over the age of 40

Within several days before surgery

* Wash the shoulder and area well
* Be careful of the skin to avoid sunburn, poison ivy, etc.

The day before surgery

* Check with the doctor's office for your time to report to the Surgical Day Care Unit the next day (617-726-7500)
* ***NOTHING TO EAT OR DRINK AFTER MIDNIGHT***. If surgery will be done in the afternoon, you can have **clear liquids only** up to **six hours** before surgery but no milk or food.

The day of surgery

- **nothing to eat or drink**

- For surgery at MGH main campus in Boston: Report directly to the **Surgical Day Care Unit** on the third floor of the **Wang Ambulatory Care Building at Massachusetts General Hospital** two hours prior to surgery**.**
- For surgery at the surgery center at MGH West in Waltham: Report directly to the **Ambulatory Surgery Center** on the **second floor of Mass General West.**

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SURGERY TO REPAIR FRACTURED CLAVICLE

Phase One: the first week after surgery

GOALS:

1. Control pain and swelling
2. Protect the clavicle fracture repair
3. Protect wound healing
4. Begin early shoulder motion

ACTIVITIES:

Immediately After Surgery

1. After surgery you will be taken to the recovery room room, where your family can meet you. You will have a **sling** on your operated arm. Rarely, an **abduction pillow** is needed to hold the arm up in the air away from the body.
2. You should get out of bed and move around as much as you can.
3. When lying in bed, elevate the head of your bed and put a small pillow under your arm to hold it away from your body.
4. Apply cold packs to the operated shoulder to reduce pain and swelling.
5. Move your fingers, hand and elbow to increase circulation.
6. The novocaine in your shoulder wears off in about 6 hours. Ask for pain medication as needed.
7. You will receive a prescription for pain medication for when you go home (it will make you constipated if you take it for a long time).

The Next Day After Surgery

1. The large dressing can be removed and a small bandage applied.
2. Remove the sling several times a day to gently move the arm in a pendulum motion: lean forward and passively swing the arm.
3. You can be discharged home from the hospital or surgery center as long as there is no problem.

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At Home

1. You can remove the bandages but leave the small pieces of tape (steristrips) in place.
2. You may shower and get the incision wet. To wash under the operated arm, bend over at the waist and let the arm passively come away from the body. It is safe to wash under the arm in this position. This is the same position as the pendulum exercise.
3. Apply cold to the shoulder for 20 minutes at a time as needed to reduce pain and swelling.
4. Remove the sling several times a day: move the elbow wrist and hand. Lean over and do pendulum exercises for 3 to 5 minutes every 1 to 2 hours.
5. **DO NOT** lift your arm at the shoulder using your muscles.
6. Because of the need for your comfort and the protection of the repaired clavicle fracture, a sling is usually necessary for 4 to 6 weeks, unless otherwise instructed by your surgeon.

.OFFICE VISIT:

Please arrange to see your surgeon in the office 7-10 days after surgery for suture removal and further instructions. If you have questions or concerns regarding your surgery or the rehabilitation protocol and exercises call **617-726-7500.**

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Rehabilitation after Surgery to Repair Fractured Clavicle

Phase One: 0 to 6 weeks after surgery

Goals:
1. Protect the surgical repair
2. Ensure wound healing
3. Prevent shoulder stiffness
4. Regain range of motion
5. Control pain and swelling

Activities:
1. Sling

Use your sling most of the time for the first 2 weeks. The doctor will give you additional instructions on the use of the sling at your post-operative office visit. Remove the sling 4 or 5 times a day to do pendulum exercises.

2. Use of the operated arm

Do not elevate surgical arm above 90 degrees in any plane for the first 3 weeks post-op.
Do not lift any objects over 1 or 2 pounds with the surgical arm for the first 6 weeks.
Avoid excessive reaching and external/internal rotation for the first 6 weeks.

3. Showering

You may shower or bath and wash the incision area. To wash under the operated arm, bend over at the waist and let the arm passively come away from the body. It is safe to wash under the arm in this position. This is the same position as the pendulum exercise.

Exercise Program
ICE
Days per Week: 7 as necessary 15- 20 minutes
Times per Day: 4-5

STRETCHING / PASSIVE MOTION
Days per Week: 7 Times per day: 4-5
Program:
Pendulum exercises
Supine External Rotation
Supine assisted arm elevation limit to 90 degrees weeks 1 to 3
120 degrees weeks 3 to 6
Isometric exercises: internal and external rotation at neutral
Elbow and forearm exercises
Ball squeeze exercise
Scapular retraction

Office Visit
Call 617-726-7500 to reach your doctor; **617-643-9999** to reach MGH Sports Physical Therapy.

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Rehabilitation after Surgery to Repair Fractured Clavicle

Phase two: 7 to 12 weeks after surgery

Goals:
1. Protect the surgical repair
2. Improve range of motion of the shoulder
3. Begin gentle strengthening

Activities
1. Sling

Your sling is no longer necessary unless your doctor instructs you to continue using it (use it for comfort only).

2. Use of the operated arm

You can now move your arm for most daily activities, but at first, you need to continue to be careful not to lift objects heavier than 1 or 2 pounds and avoid forceful pushing or pulling activities.

3. Bathing and showering

Continue to follow the instructions from phase one and the instructions above.

Exercise Program

STRETCHING / ACTIVE MOTION
Days per week: 7
Times per day: 1 to 3

Supine External Rotation
Standing External Rotation
Supine assisted arm elevation
Arm Elevation in scapular plane
Behind the back internal rotation
Horizontal adduction
Biceps curl
Hands behind-the-head stretch
ER @ 90º abduction stretch
Proprioception drills
Rhythmic stabilization
Scapulohumeral Rhythm exercises Initiate
Side lying IR @ 90º

STRENGTHENING / THERABAND
Internal and External rotation
Row
Forward punch (Serratus punch)

STRENGTHENING / DYNAMIC
Side lying ER
Prone row
Prone extension
Prone 'T's
Prone 'Y's
Standing scaption
Isotonic biceps curl

Push-ups into wall at week 8 (then push-up progression per MD)

Call 617-726-7500 to reach your doctor; **617-643-9999** to reach MGH Sports Physical Therapy.

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Rehabilitation after Surgery to Repair Fractured Clavicle

Phase Three: starting 13 to 18 weeks after surgery

Goals:
1. Protect the surgical repair
2. Regain full range of motion
3. Continue strengthening progression

Activities:
Use of the operated arm
You may now safely use the arm for normal daily activities involved with dressing, bathing and self-care. You may raise the arm away from the body; however, you should not raise the arm when carrying objects greater than one pound. Any forceful pushing or pulling activities could still disrupt the healing of your surgical repair. Continue to avoid lifting weighted objects overhead

Exercise Program:

STRETCHING / RANGE OF MOTION
Days per week: 7
Times per day: 1-2
Pendulum exercises
Standing External Rotation / Doorway
Wall slide Stretch
Hands-behind-head stretch
Standing Forward Flexion
Behind the back internal rotation
Horizontal Adduction Stretch
Side lying internal rotation (sleeper stretch)
External rotation at 90° Abduction stretch

STRENGTHENING / THERABAND
Days per week: 7
Times per day: 1
External Rotation
Internal Rotation
Standing Forward Punch
Dynamic hug
Seated Row
Biceps curl
Ws

STRENGTHENING / DYNAMIC
Days per week: 7 Times per day: 1

Side-lying External Rotation
Prone Horizontal Arm Raises 'T's
Prone row
Prone scaption 'Y's
Prone extension
Standing forward flexion "full-can" scaption
Add progressive resistance 1 to 5 lb
Rhythmic stabilization and proprioceptive training drills with physical therapist
Continue push up progression
Limited weight training can begin week 13

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Rehabilitation after Surgery to Repair Fractured Clavicle

Phase Four: starting 19 to 28 weeks after surgery

Goals:
1. Progression of functional activities
2. Maintain full range of motion
3. Continue progressive strengthening
4. Advance sports and recreational activity per surgeon

Exercise Program

STRETCHING / RANGE OF MOTION
Days per week: 5-7 Times per day: 1

Continue all exercises from phase 3

STRENGTHENING / THERABAND
Days per week: 3 Times per day: 1
Continue from phase 3

STRENGTHENING / DYNAMIC
Days per week: 3 Times per day: 1
Continue from phase 3
Closed Kinetic Chain Exercises

PLYOMETRIC PROGRAM
Usually for throwing and overhead athletes
Days per week and times per day per physical therapist

'Rebounder' throws with arm at side
Wall dribbles overhead
Rebounder throwing/weighted ball
Deceleration drills with weighted ball
Wall dribbles at 90°
Wall dribble circles

WEIGHT TRAINING
Progressive return to weight training based upon surgeon's advice

INTERVAL SPORT PROGRAMS
See individual programs for golf, tennis, swimming and throwing.
Progressive return to sports based upon surgeon's advice

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Rehabilitation Guidelines after Surgery to Repair Fractured Clavicle

Post-op phase	Sling	Range of Motion	Therapeutic exercises		Precautions
Phase 1 **0 to 6 weeks after surgery** Goals: *Allow healing of repaired tissue *Initiate early protected and restricted range of motion. *Minimize muscular atrophy. *Decrease pain/inflammation. * Ice shoulder 3-5 times (15 minutes each time) per day to control swelling and inflammation.	Per MD instructions. An arm sling/support is used for 6 weeks post-op whenever standing	**Weeks 1 to 3** *Flexion to 90 degrees as tolerated *ER @ 0º as tolerated, *IR and ER@ 90º to 45 *No IR behind back, *No horizontal adduction **Weeks 3 to 6** *Flexion to 120	*Pendulum exercises *Supine forward flexion with wand * shoulder abduction limit 90 *Supine ER at neutral *Scapular retraction	*Isometrics: ER, IR, FLX, EXT, ABD *Ball squeeze *Elbow and forearm exercises *Theraband exercises **Starting weeks 3 to 6** ER, IR (limit IR to neutral)	-DO NOT let weight of arm pull on fixation device x 6 weeks -DO NOT elevate surgical arm above 90 degrees in any plane for the first 3 weeks post-op. -DO NOT lift any objects over 1 to 2 pounds with the surgical arm for the first 6 weeks. -AVOID EXCESSIVE reaching and external/internal rotation for the first 6 weeks.
Phase 2 **7 to 12 weeks after surgery** Goals: *Gradually restore range of motion *Increase strength *Improve neuromuscular control *Enhance proprioception and kinesthesia	D/C	*In general, increase ROMs gradually as tolerated *Shoulder flexion and abduction to tolerance (full by week 12) *Horizontal adduction as tolerated *Progressive IR and ER as tolerated	*Gradually improve ROM all planes *Elevation in scapular plane *Wall slide *IR behind back to beltline only *Horizontal adduction active reach only *Hands behind-the-head stretch *ER @ 90º abduction stretch *Side lying IR @ 90º * Standing External Rotation	Theraband exercises:, Continue phase 1 Biceps curl Row Forward punch (Serratus punch) Dynamic exercises: PRE 1-5 lb as tolerated *Side lying ER *Prone row *Prone extension * Standing forward flexion to 90º *Prone 'T's *Standing scaption *Isotonic biceps curl *Prone 'Y's *Rhythmic stabilization *Proprioception drills *Scapulohumeral Rhythm exercises *Initiate push-ups into wall at week 8 (then push-up progression per MD)	Progress based on fracture healing Progressive PRE Avoid forceful pushing, pulling and lifting overhead

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Post-op Phase	Therapeutic Exercises		Notes	Precautions
Phase 3 13-16 weeks after surgery <u>Goals</u>: * Progress to full ROM *Improve: strength/power/endurance *Improve neuromuscular control *Improve dynamic stability *Improve scapular muscular strength	*Progress to full ROM *Horizontal adduction stretch *IR behind back full * External rotation at 90° Abduction stretch	*Continue theraband and dynamic exercises from phase 1 and 2 <u>Theraband</u>: add 'T's, diagonal up and down, External rotation at 90°, Internal rotation at 90° <u>Dynamic</u>: *Continue previous *Progressive resistance as tolerated *Weight training can begin at 12 weeks. *Machine resistance (limited ROM): *Biceps and Triceps *Front pull downs *Seated row *Seated bench press at week 16 *Other weight training per surgeon's permission	Gradual return to recreational activities without force on the arm	Continue to avoid forceful pushing pulling and lifting overhead
Phase 4 16-18 weeks after surgery onward <u>Goals</u>: Progressively increase activities to prepare patient for unrestricted functional return Progress to full sports based upon healing of clavicle fracture and MD approval	Full ROM	*May progress CKC program: *Ball on wall *Pushup on unstable surface at 16 weeks Plyometric exercises for throwers: *Rebounder throws arm at side *Wall dribbles overhead *Rebounder throws with weighted ball, *Decelerations, wall dribbles at 90º *Wall dribble circles	Interval sports programs can begin Strength athletes can gradually resume regular training as tolerated	Weight training precautions. .

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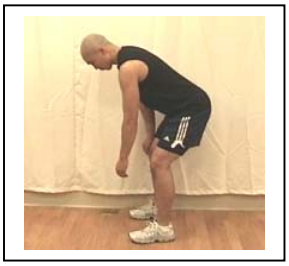
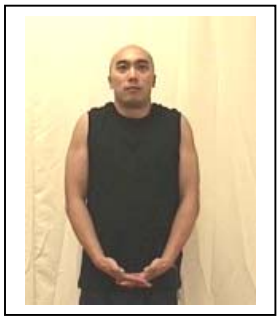
Shoulder Exercises for Clavicle Fracture Rehabilitation Protocol

The exercises illustrated and described in this document should be performed only after instruction by your physical therapist or doctor.

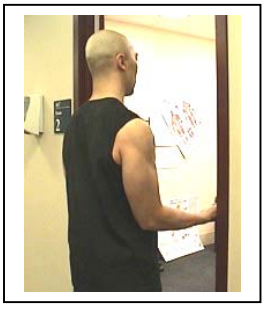


Pendulum exercise
Bend over at the waist and let the arm hang down. Using your body to initiate movement, swing the arm gently forward and backward and in a circular motion.

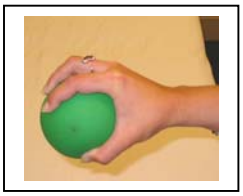


Shoulder shrug
Shrug shoulders upward as illustrated.

Shoulder blade pinches
Pinch shoulder blades backward and together, as illustrated.

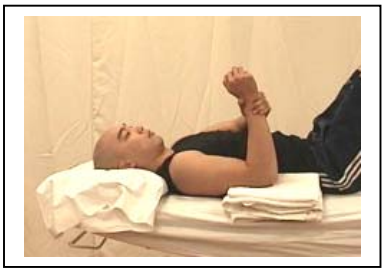


Isometric internal and external rotation
Stand facing a doorjamb or the corner of a wall.
Keep the elbow tight against your side and hold the forearm at a right angle to the arm. For internal rotation, place the palm against the wall with the thumb facing up. For external rotation, place the back of the hand against the wall with the thumb facing up.
Pull or push against the wall and hold for 5 seconds



Ball squeeze exercises
Holding a rubber ball or tennis ball, squeeze the ball and hold for 5 seconds

Supine passive arm elevation
Lie on your back. Hold the affected arm at the wrist with the opposite hand. Using the strength of the opposite arm, lift the affected arm upward, as if to bring the arm overhead, slowly lower the arm back to the bed.



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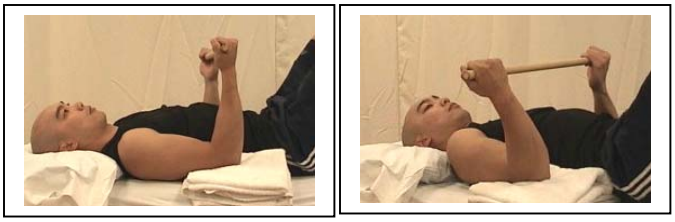
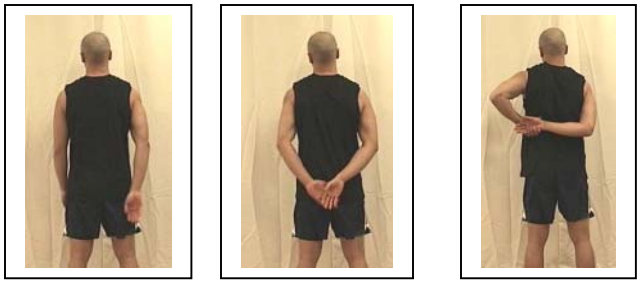
Supine external rotation

Lie on your back. Keep the elbow of the affected arm against your side with the elbow bent at 90 degrees. Using a cane or long stick in the opposite hand, push against the hand of the affected arm so that the affected arm rotates outward. Hold 10 seconds, relax and repeat.



Behind-the-back internal rotation

Sitting in a chair or standing, place the hand of the operated arm behind your back at the waistline. Use your opposite hand, as illustrated, to help the other hand higher toward the shoulder blade. Hold 10 seconds, relax and repeat.

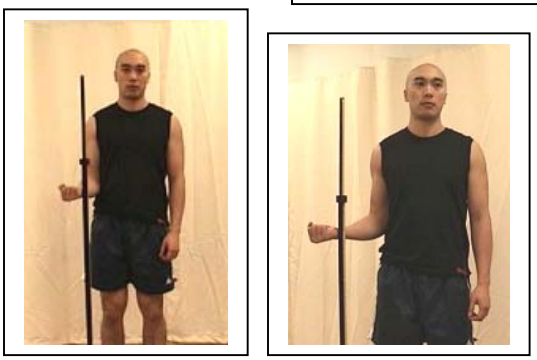


Hand-behind-the-head stretch

Lie on your back. Clasp your hands and place your hands behind your head with the elbows facing forward. Slowly lower the elbows to the side to stretch the shoulder outward. Hold for 10 seconds, and then return to the starting position.

Standing external rotation

Stand in a doorway facing the doorframe or near the edge of a wall. With your hand against the wall or doorframe, keep the affected arm firmly against your side, and the elbow at a right (90 degree) angle. By moving your feet, rotate your body away from the door or wall to produce outward rotation at the shoulder.



Supine cross-chest stretch

Lying on your back, hold the elbow of the operated arm with the opposite hand. Gently stretch the elbow toward the opposite shoulder. Hold for 10 seconds.

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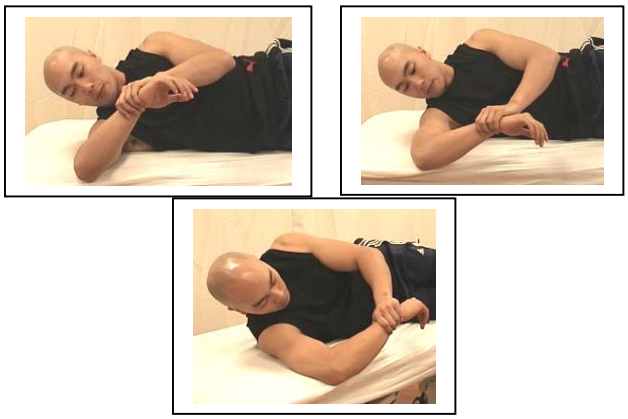
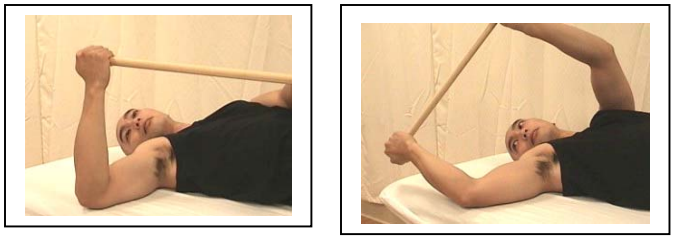
Sidelying internal rotation stretch

Lie on your side with the arm positioned so that the arm is at a right angle to the body and the elbow bent at a 90º angle. Keeping the elbow at a right angle, rotate the arm forward as if to touch the thumb to the table. Apply a gentle stretch with the opposite arm. Hold 10 to 15 seconds.



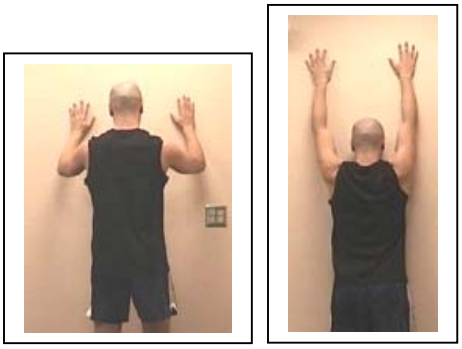
External rotation at 90º abduction stretch

Lie on your back. Support the upper arm, if needed, with towels or a small pillow. Keep arm at 90 degrees to the body and the elbow bent at 90 degrees. Using a stick and the opposite arm, stretch as if to bring the thumb to the corner of the table adjacent to your ear. Hold for 10 seconds, and then return to the starting position



Wall slide stretch

Stand facing a wall; place the hands of both arms on the wall. Slide the hands and arms upward. As you are able to stretch the hand and arm higher, you should move your body closer to the wall. Hold 10 seconds, lower the arm by pressing the hand into the wall and letting it slide slowly down.



Seated/Standing Forward Elevation (Overhead Elbow Lift)

During this phase, you can stand or sit in a chair. If it is easier, begin lying on your back until you achieve maximal motion, then use the standing or seated position. Assume an upright position with erect posture, looking straight ahead. Place your hands on either thigh with the operated thumb facing up and your elbow straight. In the beginning, this stretch is not performed solely with the operated arm, but uses the uninjured hand for assistance going up and coming down. As you become stronger, you can raise and lower your arm without assistance. The operated arm should be lifted as high as possible, or to your end-point of pain. Try to raise the arm by hinging at the shoulder as opposed to raising the arm with the shoulder blade.

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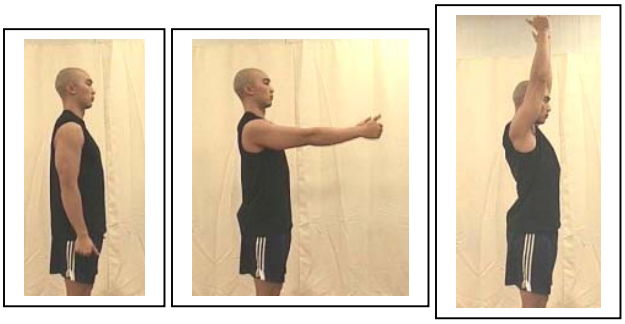
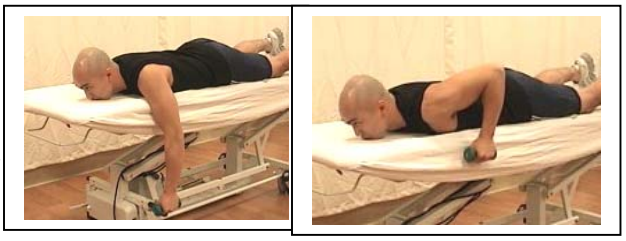
Standing forward flexion

Stand facing a mirror with the hands rotated so that the thumbs face forward. Raise the arm upward keeping the elbow straight. Try to raise the arm by hinging at the shoulder as opposed to raising the arm with the shoulder blade. Do 10 repetitions to 90 degrees. If you can do this without hiking the shoulder blade, do 10 repetitions fully overhead.



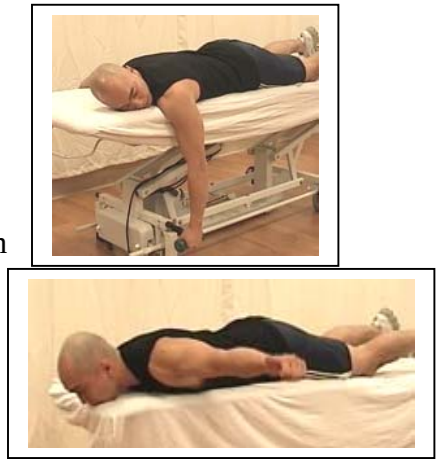
Prone rowing

The starting position for this exercise is to bend over at the waist so that the affected arm is hanging freely straight down. Alternatively, lie face down on your bed with the operated arm hanging freely off of the side. While keeping the shoulder blade 'set', raise the arm up toward the ceiling while bending at the elbow. The elbow should be drawn along the side of the body until the hands touch the lower ribs. Always return slowly to the start position.



Prone horizontal abduction ('T's)

The starting position for this exercise is to bend over at the waist so that the affected arm is hanging freely straight down. Alternatively, lie face down on your bed with the operated arm hanging freely off of the side. Rotate your hand so that the thumb faces forward. While keeping the shoulder blade 'set' and keeping the elbows straight, slowly raise your arm away from your body to shoulder height, through a pain-free range of motion (so that your hand now has the thumb facing forward, and aligned with your cheek). Hold that position for 1 to 2 seconds and slowly lower. Limit the height that you raise the arm to 90 degrees, or in other words, horizontal to the floor.



Prone horizontal abduction with external rotation

The starting position for this exercise is to bend over at the waist so that the affected arm is hanging freely straight down. Alternatively, lie face down on your bed with the operated arm hanging freely off of the side. Rotate your hand so that the thumb faces outward. While keeping the shoulder blade 'set' and keeping the elbows straight, slowly raise your arm away from your body to shoulder height, through a pain-free range of motion (so that your hand now has the thumb facing forward, and aligned with your cheek). Hold that position for 1 to 2 seconds and slowly lower. Limit the height that you raise the arm to 90 degrees, or in other words, horizontal to the floor.

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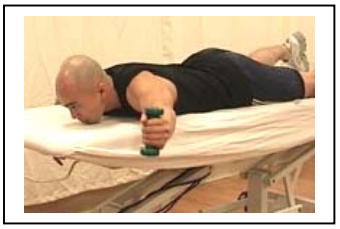
Prone scaption ('Y's)

The starting position for this exercise is to bend over at the waist so that the affected arm is hanging freely straight down.
Alternatively, lie face down on your bed with the operated arm hanging freely off of the side. Keep the shoulder blade 'set' and keep the elbows straight. Slowly raise the arm away from your body and slightly forward through a pain-free range of motion (so that your hand now has the thumb facing up, and is aligned with your forehead). Hold that position for 1 to 2 seconds and slowly lower. Limit the height that you raise the arm to 90 degrees, or in other words, horizontal to the floor.

Prone extension

The starting position for this exercise is to bend over at the waist so that the affected arm is hanging freely straight down. Alternatively, lie face down on your bed with the operated arm hanging freely off of the side. While keeping the shoulder blade 'set' and keeping the elbow straight, raise the arm backward toward your hip with the thumb pointing outward. Do not lift your hand past the level of your hip.

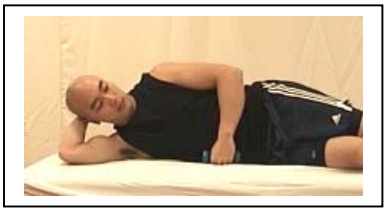

Prone external rotation at 90 º Abduction

Lie face down on a table with your arm hanging over the side of the table. Raise the arm to shoulder height at a 90º angle to the body. While holding the arm in this position, rotate the hand upward, until the hand is even with the elbow. Hold one second and slowly let the hand rotate to the starting position and repeat.



Sidelying external rotation

Lying on the non-operated side, bend your elbow to a 90-degree angle and keep the operated arm firmly against your side with your hand resting on your abdomen. By rotation at the shoulder, raise your hand upward, toward the ceiling through a comfortable range of motion. Hold this position for 1 to 2 seconds, and then slowly lower the hand.

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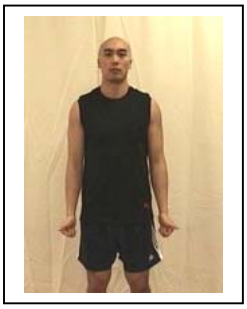
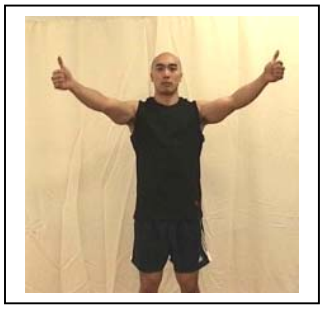
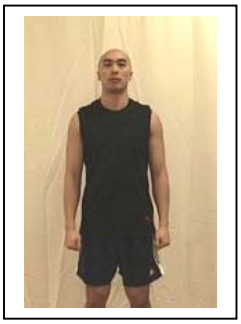
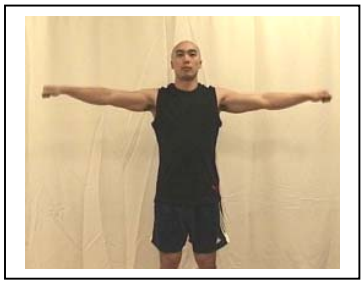
Standing forward flexion ('full-can') exercise

Stand facing a mirror with the hands rotated so that the thumbs face forward. While keeping the shoulder blade 'set' and keeping the elbows straight, raise the arms forward and upward to shoulder level with a slight outward angle (30°). Pause for one second and slowly lower and repeat.

Lateral Raises

Stand with the arm at your side with the elbow straight and the hands rotated so that the thumbs face forward. Raise the arm straight out to the side, palm down, until the hands reach shoulder level. Do not raise the hands higher than the shoulder. Pause and slowly lower the arm.

Theraband Strengthening

These resistance exercises should be done very slowly in both directions. We want to strengthen you throughout the full range of motion and it is very important that these exercises be done very slowly, not only when you complete the exercise (concentric), but also as you come back to the start position (eccentric). The slower the motion, the more maximal the contraction throughout a full range of motion.

External Rotation

Attach the theraband at waist level in a doorjamb or other. While standing sideways to the door and looking straight ahead, grasp one end of the band and pull the band all the way through until it is taut. Feet are shoulder width apart and the knees are slightly flexed. The elbow is placed next to the side with the hand as close to your chest as possible (think of this elbow as being a hinge on a gate). Taking the cord in the hand, move the hand away from the body as far as it feels comfortable. Return to the start position.


Internal Rotation

Attach the Theraband at waist level in a doorjamb or other. While standing sideways to the door and looking straight ahead, grasp one end of the handle and pull the cord all the way through until it is taut. Feet are shoulder width apart and the knees are slightly flexed. The elbow is placed next to the side and is flexed at 90 degrees (think of this elbow as being a hinge on a gate). Taking the cord in the hand, move the hand toward the chest as far as it feels comfortable. Return to the start position.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<u>Shoulder Shrug</u>

Stand on the theraband with your feet at should width apart and look straight ahead. Next, straighten up, keeping the knees slightly flexed, with your arms straight down at the sides (palms in). Slowly raise the shoulders in a shrug (toward the ears), then rotate the shoulders backward in a circular motion, and finally down to the original position. This movement is completed while keeping constant tension on the cord.

<u>Seated / Standing Row</u>

Attach the theraband in a doorjamb or other. Sit or stand facing the door. Use a wide flat—footed stance and keep your back straight. Begin with the arms slightly flexed, hands together at waist level in front of your body, thumbs pointing upward, and with the cord taut. You are producing a rowing motion. Pull the cord all the way toward the chest. While pulling the cord, the elbows should be drawn along the side of the body until the hands touch the lower ribs. Always return slowly to the start position.

<u>Standing Forward Punch</u>

Attach the theraband at waist level in the doorjamb. Facing away from the door, stand in a boxing position with one leg ahead of the other (stride position). Do not bend at the waist and remain in an upright position. If the right shoulder is the injured extremity, you will want to grasp the handle in the right hand and step out until the cord is taut. If you use the right hand, the left foot should be forward in the stride position. Begin with your right arm at waist level and bend the elbow at a 90 degree angle, with the elbow remaining near your side. Slowly punch forward while slightly raising the right arm in a forward, upward punching motion. The hand should reach approximately neck level with the right arm almost straight.

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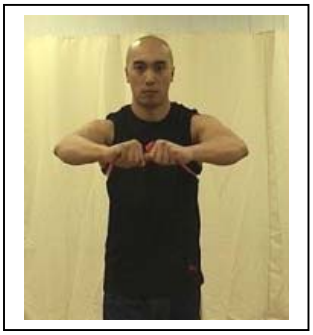
Biceps Curls

Place your feet on the cord, shoulder width apart, knees slightly bent. Keeping your elbows close to the sides of your body, slowly bend the arm at the elbow and curl towards the shoulder.

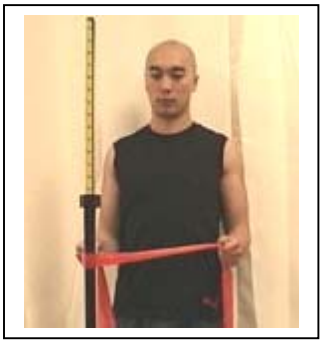

Dynamic Hug

With the tubing attach behind you at shoulder height, grip both ends of the tubing in your hands with the tubing on the outside of your shoulders. Pull the band forward and slightly downward in a 'hugging' motion, or as if you were wrapping both arm around a small tree. Pause and return slowly to the starting position.

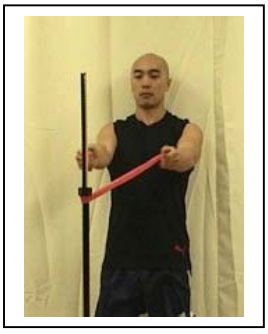
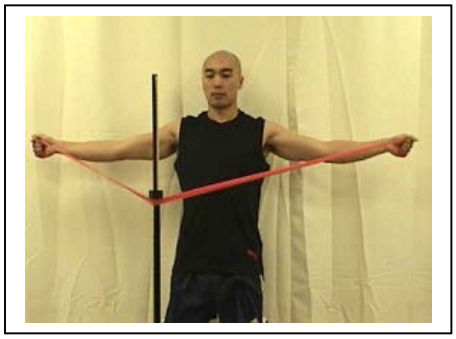
'W's

With the tubing attached in front of you, stand with the tubing in both hands with the elbows bent at 90º and fixed at your side. Pull the band outward, keeping the elbow at your side. The arms rotate outward making the shape of a 'W'.



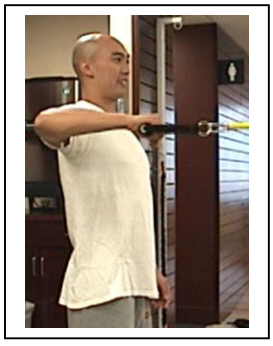

Standing 'T's.

Stand with the theraband attached in front of you. Stand with the arm flexed forward at shoulder height with the elbow straight. While keeping the elbow straight, pull the arm toward the rear until the arm is by your side.

Theraband external rotation at 90º.

Stand with the theraband attached in front of you. Keeping the arm elevated to 90 degrees and the elbow at a 90-degree angle, rotate the hand and arm slowly backward and then return slowly to the start position.

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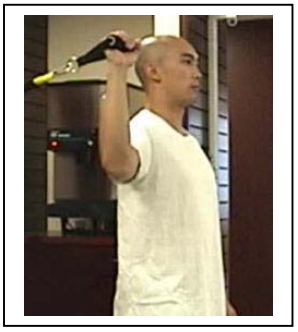
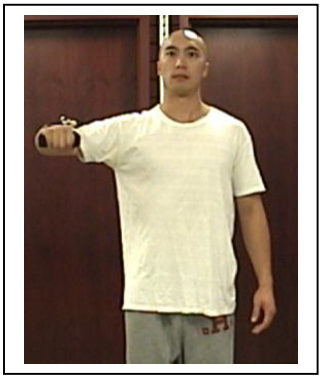
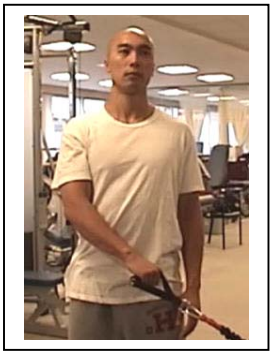
<u>Theraband internal rotation at 90º.</u>
Stand with the theraband attached behind you. Keeping the arm elevated to 90 degrees and the elbow at a 90-degree angle, rotate the hand and arm slowly forward and then return slowly to the start position.

<u>Theraband diagonal-up</u>
Stand with the theraband attached on your left side for your right hand. Start with your right hand on the left hip with the thumb facing the hip. Start by pulling the band so that your hand travels up and behind your head.




<u>Theraband diagonal-down</u>
Stand with the theraband attached behind you at shoulder level. Start with your arm in throwing position. Pull the band down and across your body so that your thumb faces the opposite hip.