

## **Biceps Tenodesis Rehabilitation**

### **PREOPERATIVE INSTRUCTIONS**

Within one month before surgery - as indicated

- Preoperative office visit for history and physical examination and instructions
- Complete blood count (CBC)
- Electrocardiogram (EKG) if over the age of 50

Within several days before surgery

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

The day before surgery

- Check with Dr. Gill's office for your time to report to the surgical unit the next day.
- ***HAVE 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
- Bring any sling, ice machine, or imaging study that you may have received prior to surgery.

## Rehabilitation after Biceps Tenodesis

### POSTOPERATIVE INSTRUCTIONS

You will wake up in the operating room. A sling and an ice pack will be in place. You will go to the recovery room and generally will be discharged after 1-2 hours. You can get out of bed when you wish. Apply ice to the shoulder to reduce pain and swelling. You may remove the sling whenever you wish and gently move the elbow, wrist and fingers. Follow Dr. Gill's instructions regarding moving your shoulder after surgery.

### GOALS:

1. Control pain and swelling
2. Protect the repair
3. Begin early shoulder motion

### ACTIVITIES WHEN YOU GO HOME:

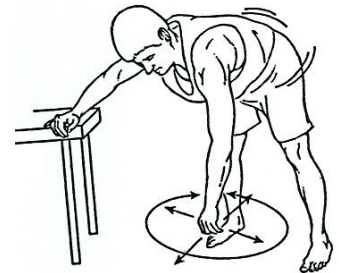
1. Apply ice to the shoulder as tolerated to reduce pain and swelling. You can change the dressing to a smaller one to allow the cold therapy to reach the shoulder.

2. Remove the sling on the first day after surgery.  
Move your elbow, fingers and hand several times a day.

3. Begin the pendulum exercise several times a day

#### **Pendulum exercise**

Bend over at the waist and let the arm hang down. Using your body to initiate movement, swing the arm gently in small circular motions. Repeat for 2 to 3 minutes at a time.



4. Remove the outer dressing on the second day after surgery and shower. Leave the little pieces of tape (steri-strips) in place. You can get the wound wet after 2 days in a shower, but do not soak in a tub. To wash under the operated arm, bend over at the waist and let the arm passively swing away from the body. It is safe to wash under the arm in this position.

5. Keep your elbow slightly in front of your body; **do not reach behind your body**. When putting on clothing, lean forward and pull the shirt up and over the operated arm first. Then put the other arm into the opposite sleeve. To remove the shirt, take the unoperated arm out of the sleeve first, and then slip the shirt off of the operated arm.

6. Call Dr. Gill's office for any concerns, including, but not limited to, severe pain, fevers, chills or redness.

**OFFICE VISIT:** Please arrange to return to Dr. Gill's office 10-14 days after surgery for examination and further instructions.

## Rehabilitation after Biceps Tenodesis

### Phase One: 0 to 4 weeks after surgery

#### Goals:

1. Protect the surgical repair
2. Ensure wound healing
3. Prevent shoulder stiffness
4. Regain range of motion

#### Activities:

##### 1. Sling

Use your sling most of the time for the first 3 weeks. Remove the sling 4 or 5 times a day to do pendulum exercises ( fig. 1).

##### 2. Use of the operated arm

You may use your hand on the operated arm in front of your body but ***DO NOT*** raise your arm or elbow away from your body. It is all right for you to flex your arm at the elbow. Use of a computer or writing is all right as long as it is not painful.

##### 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	1-2 sets	20- 30 reps
Supine External Rotation	1-2 sets	10-15 reps
Supine passive arm elevation	1-2 sets	5-10 reps
Behind the back internal rotation	1-2 sets	5-10 reps

## Exercises

Shoulder stretching is divided into two phases. **Phase 1, or passive range of motion**, is always performed with the uninjured arm assisting or helping the operated arm. **Phase 2, or active range of motion** with a terminal stretch, is performed by the operated arm after 3 to 4 weeks, with the uninjured arm assisting for a “terminal stretch”. In most instances, wean off passive range of motion by using the uninjured arm in isolated incidents to assist the operated arm. The other major difference between passive and active stretching is the “terminal stretch”. During active stretching and upon reaching your “endpoint” of pain or movement, push the operated arm with the uninjured hand another 5—10 degrees for additional movement. This final movement is labeled “terminal stretch”. Maximum motion for each person remains the goal and terminal stretching will assist in achieving that goal.

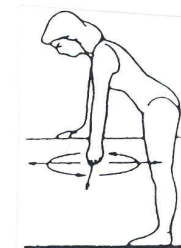
All stretching exercises should be done slowly to maximize muscle and soft connective tissue involvement. When stretching, your goal is to reach the maximum range of motion for you. There is a reason for multiple sets and repetitions. This reason stems from “warming up” the shoulder so it can actually stretch further in the last few repetitions that you will do. The first few repetitions prepare the stiffened or swollen shoulder for initial movement.

Since there is more than one repetition per set, allow the first one or two repetitions to be warm—up reps, with very little pain. Gradually work into more and more range of motion.

It is also important to allow pain to be your guide. Move the arm to an “endpoint” (that endpoint is dictated by the amount of pain). Your goal is to increase the endpoint as often as possible until you have reached the full range of motion. As far as pain, you want to avoid excruciating pain, but “discomfort” is tolerated as long as the pain does not remain for a prolonged period of time. A basic rule to follow when stretching is, if the pain does not linger, you did not stretch too far.

### 1. 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.



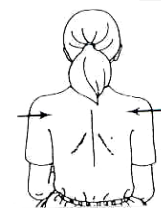
### 2. Shoulder shrug

Shrug shoulders upward as illustrated.



### 3. Shoulder blade pinches

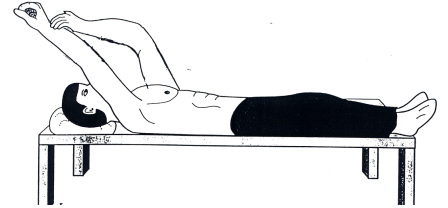
Pinch shoulder blades backward and together, as illustrated.





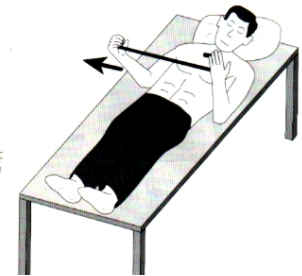
4. Supine passive arm elevation

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.



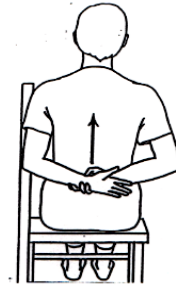
5. Supine external rotation

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.



6. 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.



**Office Visit**

Please arrange to see Dr. Gill approximately 4 weeks following your first post-operative visit (6 weeks after surgery).

## Rehabilitation after Biceps Tenodesis

### Phase two: the 5<sup>th</sup> and 6<sup>th</sup> 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 should continue to avoid lifting your arm away from your body. You can lift your arm forward in front of your body but **not** to the side. You may raise your arm to the side, if you use the good arm to assist the operated arm.

##### 3. Bathing and showering

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

#### Exercise Program

##### ICE

Days per week: 7

Times per day : 4-5      As necessary      15-20 minutes

##### STRETCHING / ACTIVE MOTION

Days per week: 7

Times per day : 3-4

#### Program:

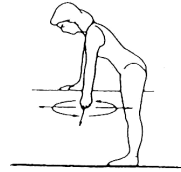
Pendulum exercises	1-2 sets	20-30 reps
Supine External Rotation	1 set	10-15 reps
Standing External Rotation	1 set	10-15 reps
Supine passive arm elevation	1 set	5-10 reps
Seated-Standing Arm Elevation	1 set	5-10 reps
Behind the back internal rotation	1-2 sets	5-10 reps



## Exercises

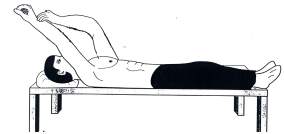
### 1. Pendulum exercise

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.



### 2. Supine passive arm elevation

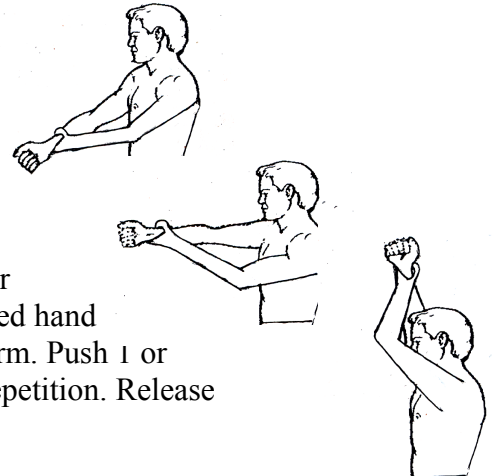
Continue this exercise from phase two, stretching the arm overhead. Hold for 10 seconds.



### 3. Supine / Seated 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 use 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 endpoint of pain. Upon reaching that endpoint, take the uninjured hand and actually push on the outstretched forearm of the operated arm. Push 1 or 2 inches to achieve a “terminal stretch”. Hold 10 seconds per repetition. Release and slowly return to the start position.



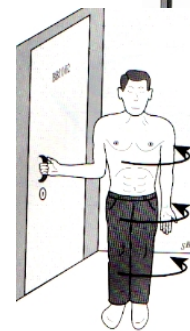
### 4. Supine external rotation

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.



### 5. Standing external rotation

Stand with the operated shoulder toward a door frame as illustrated. While keeping the operated 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 to produce outward rotation at the shoulder.





6. 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 or pull on a towel to help the other hand higher toward the opposite shoulder blade. Hold 10 seconds, relax and repeat.



**Office visit**

Please arrange an appointment to see Dr. Gill in 8 weeks (3-4 months from surgery).



## Rehabilitation after Arthroscopic Shoulder Labrum Repair

### Phase Three: starting 6 weeks after surgery onward

#### Goals:

1. Protect the surgical repair
2. Regain full range of motion
3. Continue gentle strengthening

#### 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 disrupt the healing of your surgical repair.

#### Exercise Program

##### **STRETCHING / ACTIVE MOTION**

Days per week: 7

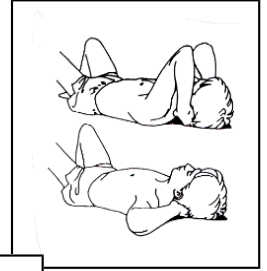
Times per day : 1-2

Pendulum exercises	1-2 sets	20-30 reps
Standing External Rotation / Doorway	1 set	5-10 reps
Wall Climb Stretch	1 set	5-10 reps
Supine external Rotation with Abduction	1 set	5-10 reps
Standing Forward Flexion	2 sets	10-20 reps
Behind the back internal rotation	1-2 sets	5-10 reps
Supine Cross Chest Stretch	1 set	5-10 reps
Side-lying External Rotation / 1 lb.	1 set	10-20 reps
Prone Horizontal Arm Raises / 1 lb.	1 set	10-20 reps
<b>STRENGTHENING / THERABAND</b>		
External Rotation	1-2 sets	15-20 reps
Internal Rotation	1-2 sets	15-20 reps
Standing Forward Punch	1-2 sets	15-20 reps
Shoulder Shrug	1-2 sets	15-20 reps
Seated Row	1-2 sets	15-20 reps
Biceps curl	1-2 sets	15-20 reps



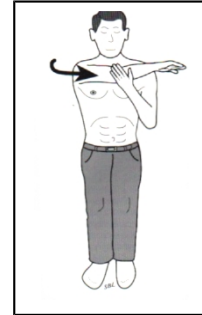
1. Supine external rotation with abduction

Lie on your back. Place your hands behind your head as shown in illustration 1a. Slowly lower the elbows to stretch the shoulder toward the position shown in illustration 1b. Hold for 10 seconds, then return to the starting position. When your elbows are able to comfortably reach the surface that you are lying on, then you can start the 'corner stretch'.



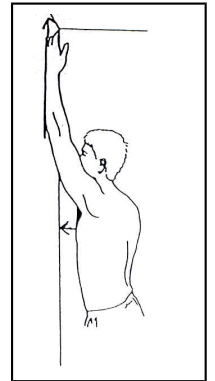
2. Supine cross-chest stretch

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.



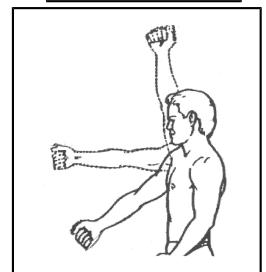
3. Wall climb

Stand facing a wall, place the fingers of the affected arm on the wall. Using the fingers as "feet", climb the hand and arm 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.



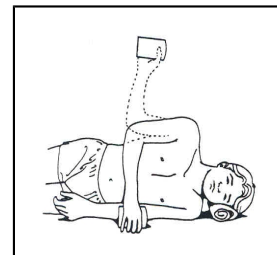
4. Standing forward flexion

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.



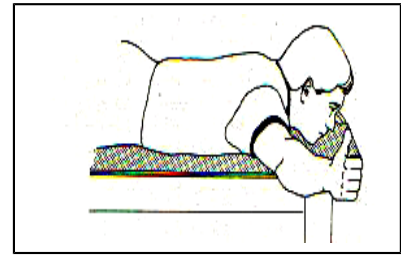
5. Side-lying external rotation

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, then slowly lower the hand.



6. Prone or bent-over horizontal arm raise

Lie face down on your bed with the operated arm hanging freely off of the side (or bend over at the waist as if doing pendulum exercises). Rotate your hand so that the thumb faces away from you. Slowly raise your arm away from your body through a pain-free range of motion. Hold that position for 1 to 2 seconds and slowly lower.

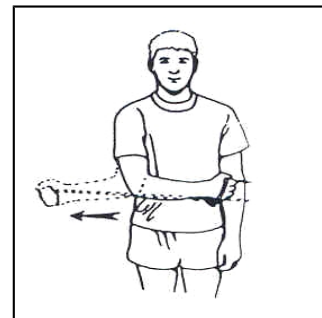


**Theraband Strengthening**

These resistance exercises should be done very slowly in both directions. Your goal is to achieve a maximum amount of strengthening while listening to your endpoint of pain. Obviously, we want to strengthen you throughout the full range of motion. It is very important that this exercise 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.

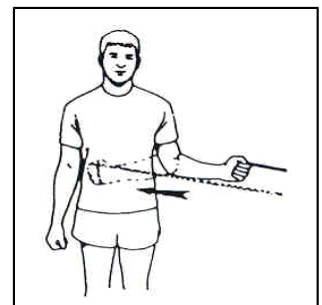
1. External Rotation

Attach the theraband at waist level in a door jamb 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 injured elbow is placed next to the side with the injured hand as close to your chest as possible (think of this elbow as being a hinge on a gate). Taking the cord in the injured hand, move the hand away from the body as far as it feels comfortable (at least 90 degrees is our goal), or to where the endpoint of pain limits you. Return to the start position; if you would like, during future repetitions go a few more degrees to work more of a range of motion.



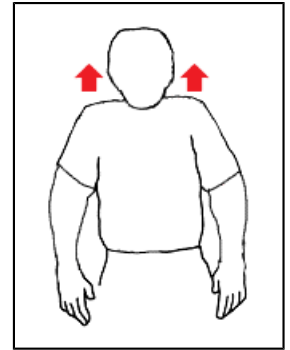
2. Internal Rotation

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 injured 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 injured hand, move the hand toward the chest as far as it feels comfortable, or to where the endpoint of pain limits you. Return to the start position



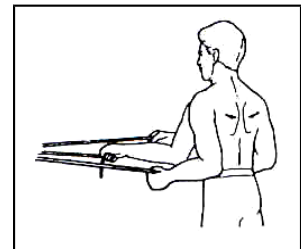
### 3. Shoulder Shrug

Stand on the theraband with your feet at shoulder 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.



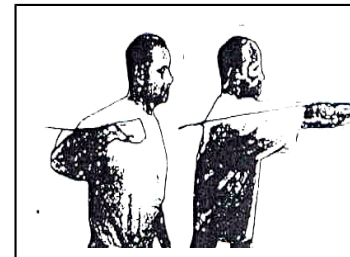
### 4. Seated / Standing Row

Attach the theraband to a door jam or other object. 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.



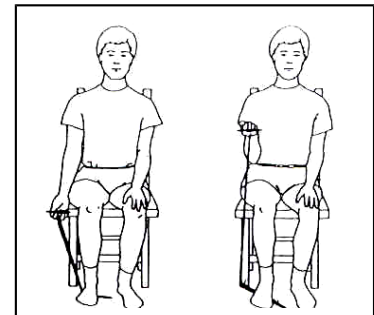
### 5. Standing Forward Punch

Attach the theraband at waist level in the door jamb. 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.



### 6. 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. Alternate arms while performing this exercise.



### **Office Visit**

Please arrange an appointment with Dr. Gill's office in 8 weeks (3-4 months post-surgery).