



Lower Trapezius Tendon Transfer Postoperative Protocol

The intent of this protocol is to provide a guideline of the postoperative rehabilitation course of a patient that has undergone tendon transfer procedure. It is no means intended to be a substitute for one's clinical decision making regarding the progression of a patient's post-operative course based on their physical exam/findings, individual progress, and/or the presence of postoperative complications.

Four Phases of care:

Weeks **0-8**: protection/healing

Weeks **8-16**: active motion, biofeedback/training transfer

Weeks **16-24+**: continued work on motion, transfer training, progressive strengthening

Weeks **24+**: Return to activities

Expectations:

- Improve pain and function 50-70%
- Strengthen 75-80% uninvolved arm
- Optimal recovery at > 1 year

Phase 1: 0-6 weeks (PROTECTION PHASE)

1. Full time in sling. No movement of the shoulder during this time.
2. Take note of shoulder position both how you are positioned in the brace and overall shoulder and body posture
3. Icing 20 minutes every hour to surgical site
4. Heat as needed for neck or any muscle spasms
5. Work on finger and wrist range of motion at least 3 times a day. Stretch the arm tissue by pulling the fingers backwards.
 - a. Hold the stretch 20-30 seconds using other hand to assist
 - i. Repeat 3 times.
 - b. Contract and spread your fingers
 - i. 30 reps x 3



6. Massage

- a. Massage your arm – it will make the muscles and tissue relax and create circulation. Only massage areas away from the surgical site never over or around this site. Avoid and TENs units or massage machines.



Two separate therapy protocols; first 6 weeks focusing on motion, second 6 weeks focusing on motion with progressive strengthening. Return to unrestricted activity at 6 months.



Phase 2: Weeks 6-16

AAROM, AROM, no strengthening, no stretching, treadmill walking and stationary bike for cardio.

*** 2-3/week sessions; creation of home program*

Goals:

- Improve pain and function
- Protection of repair
- Decrease pain/stiffness
- Biofeedback/ retraining transferred tendon
- Return to protected ADLs

Precautions:

- No excessive stretching or sudden movements, avoiding strengthening/resistance and passive motion

Routine:

ROM all directions, focusing on active ER with biofeedback

Shoulder abduction — wall walking

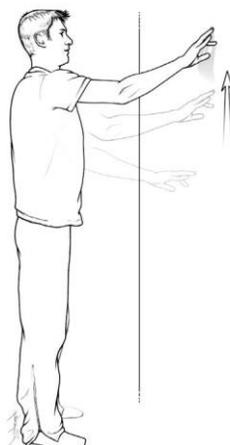
1. Stand with your affected side next to a wall. Keep your affected arm straight as you extend it outward sideways so that your fingertips touch the wall. Let your unaffected arm hang comfortably at your side.
2. Slowly “walk” your fingertips up the wall, stepping toward the wall as you reach higher and higher. Do not arch your back.
3. Stop when you feel a stretch or increased pain and hold the position for several seconds.
4. Slowly return to the starting position, walking your fingertips down the wall and stepping away from the wall as you lower your arm.





Shoulder flexion — wall walking

1. Stand facing a wall. Keep your affected arm straight while you extend it outward in front of you so that your fingertips touch the wall. Let your unaffected arm hang comfortably at your side.
2. Slowly “walk” your fingertips up the wall, stepping toward the wall as you reach higher and higher. Do not arch your back.
3. Stop when you feel a stretch or increased pain and hold the position for several seconds.
4. Slowly return to the starting position, walking your fingertips down the wall and stepping backward as you lower your affected arm.



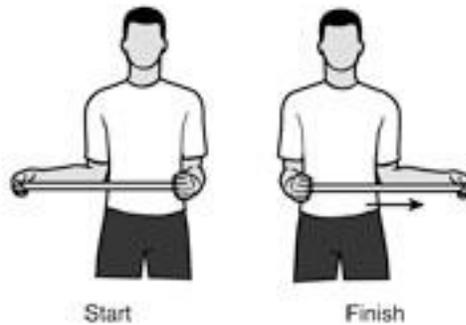
Shoulder external rotation

1. Actively External rotate the shoulder. Internal rotate back to start position. Repeat 12 times x 4.





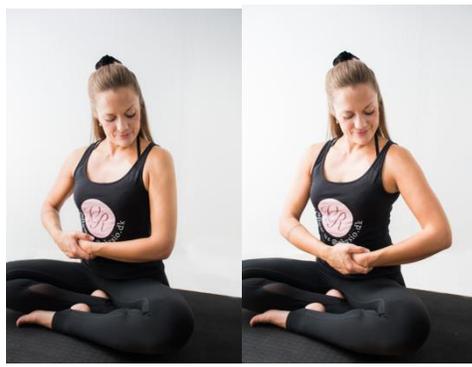
1. Active Assisted External rotation of the shoulder.
Repeat above with assisted wand



2. Abduction of the shoulder

Active assisted abduction of the shoulder joint 0-20 degrees, with a bended elbow.

- Repeat: 12 reps x 4.



3. Actively abduct with elbow bent to 90 degrees to 20-30 degrees then slowly lower back down.
 - Repeat 6 times x 4.
 - Repeat with elbow extended 6 times x 4.



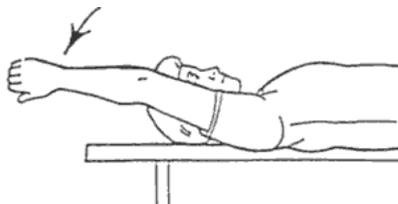
4. Forward Flexion

Side lying Active forward flexion

- Lie down on the non-operated side. Bend the knees for support. Support the head with the opposite hand. Shoulder retracted and depressed. Elbow flexed 90 degrees. Flex the shoulder 0-30 degrees.
- Repeat 12 times x 3.



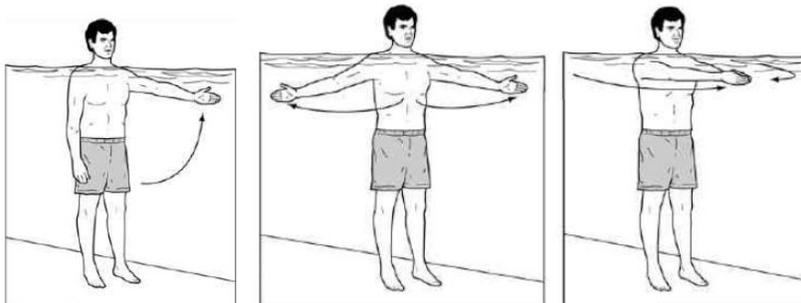
- Repeat 6 times x 3 lying on your back lifting your arm in front of your body.





Pool Therapy (IF AVAILABLE):

- Active Forward flexion, abduction, ER in water, no true swimming
 - All exercises 12 times x 3



Phase 3: Weeks 16-24

Criteria for progression: Minimal pain with AROM, appropriate recruitment of transferred tendon

Continue working on motion on land and aquatherapy (if available) with additional of gentle progressive strengthening, progression towards swimming.

Goals:

- Protection of repair
- Decrease pain/stiffness
- Biofeedback
- Return to ADLs
- Progressive strengthening

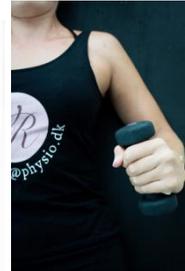
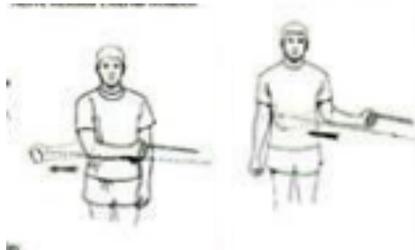
Precautions:

- No excessive stretching or sudden movements

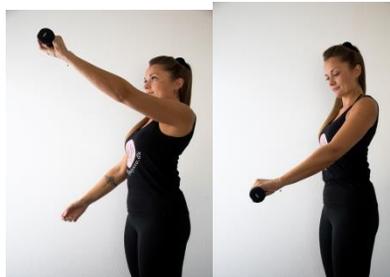
Routine:

Therabands ER/IR, free weights light weight higher repetitions

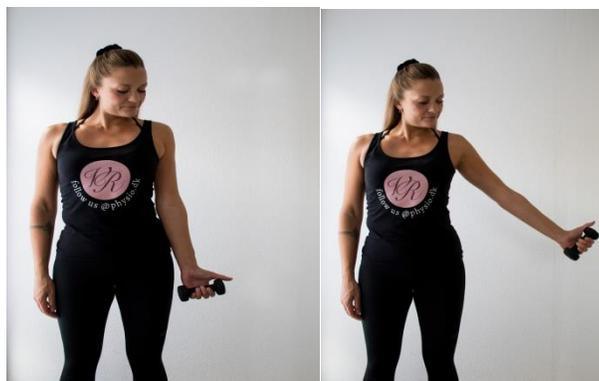
1. External rotation using 2 pound weight or tolerated or band. Weights can be increased as tolerated.
 - a. Lying on your back 12 times x 3
 - b. Standing 12 times x 3



2. Forward flexion using 2 pound weight or tolerated.
 - a. Flex the operated shoulder 120 degrees. Receive a weight from the non-operated arm. Slowly lower it down eccentric.
 - i. Repeat 10 times x 4.



3. Abduction
 - a. Abduct the arm 20-30 degrees. Eccentric slowly lower it back down.
 - i. Repeat 8-12 times.



Periscapular Stabilization and Strengthening:

Shoulder retraction

1. Pull your shoulder blades down and together behind. Hold 10 seconds. Return to starting position. Repeat 3-5 times.



Figure 1. Shoulder retraction

Addition of band:

1. Tie the middle of the exercise band around the door knob on the other side of the door. Close the door securely.



2. While seated or standing, hold the ends of the band with your arms extended in front of you.
3. Pull the exercise band back while bringing your shoulder blades together. Keep your elbows close to your side.
4. Hold 10 seconds. Return to starting position.
 - a. Repeat 3-5 times.

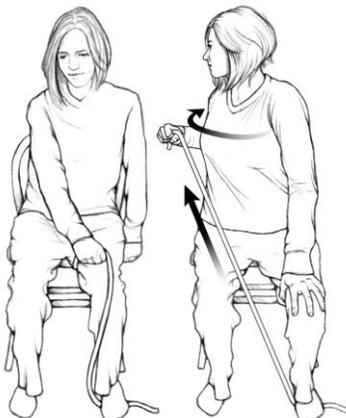


Figure 3. Lawnmower (with elastic band)

1. Starting position: Seated, straight back, feet comfortably apart
2. Action: Secure end of exercise band under one foot and hold other end in opposite hand. In single, sweeping motion — moving hand, arm and trunk together as one unit — pull band across front of body until elbow is behind back. Pinch shoulder blades together. Hold. Slowly return band to starting position.
 - a. Repeat instructions 3-5 times

Phase 4: Weeks 24+

Graft host junction will be assessed under ultrasound in Dr. Badman's office.

Patient will be allowed to continue to progress with strength focusing on parascapular strength and deltoid strength with gradual return to activities. Progression to racquet sports will be gradually allowed. Progressive and gradual strengthening will be encouraged for 12 months post tendon transfer.

Annual radiographs and follow-up visits will be encouraged.