



HAND & UPPER LIMB CLINIC

Latissimus Dorsi Transfer Rehab

Prehabilitation (Before Surgery)

- ROM exercises to increase shoulder mobility.
- Maximise shoulder strength of **deltoid** and scapular stabilisers.
- Focus on Lats. dorsi activation (elbow extension/adduction).

Immediately Post-Op. (Day 5-7)

- Sling/brace check; ensure supported position and not tensioned repair (abduction pad).
 - Wear at all times (other than hygiene and exercises) for 3 weeks. Use Wetsling in shower.

1 – 3 Weeks Post-Op.

- Wear sling/brace at all times (other than hygiene and exercises).
- Provide posture advice (no slouching), and shoulder retraction exercises.
- Hand, wrist, & elbow active ROM; low-velocity closed-chain flexion and abduction in **safe zone**.
 - E.g., table slides, Theraball, Swiffer.
- Scapular stability (especially retractions).
- **Level 1 Exercises** in **safe zone**

4 – 6 Weeks Post-Op.

- Week 4: start to reduce sling support. Remove external rotation wedge if used.
- Continue with closed-chain exercises (e.g., table top).
- Encourage scapular mobility facilitation/hold-relax.
- Continue passive ROM at shoulder joint. **Avoid adduction/internal rotation.**
- Gentle activities of daily living (ADL). **Avoid pushing from chair/bed.**
- Provide advice on scar tissue management, including massage to upper back, taping, and ultrasound treatments.
- **Level 2 Exercises**

6 – 12 Weeks Post-Op.

- Start open-chain-type exercises:
 - Wall-walking with eccentrics
 - Cane presses (also isometric extension with external rotation in standing position)
 - Anterior deltoid strengthening in semi-supine position
- Continue stretches to all planes of movement. **Avoid cross-body adduction and weight-bearing.**
- Discard sling.
- Use arm for Level 2 Activities of Daily Living (ADL).
 - E.g., washing dishes, meal preparation, folding laundry, and driving.
- **Level 3 Exercises**

3 – 6 Months Post-Op.

- Progress to Level 3 functional use, and limited overhead use.
- Resume sports (e.g., swimming, golf, biking, and hiking) as pain resolves and strength progresses.



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Goals

After rehabilitation and recovery up to one year post-op, a functional, pain-free shoulder with some ability to lift overhead and a centralized humeral head are expected.¹

Latissimus Dorsi Transfer for Massive Cuff Repairs²

The rotator cuff is a group of muscles and tendons that hold the shoulder joint in place and allow you to move your arm and shoulder. Problems occur when part of the rotator cuff becomes irritated or damaged. This can result in pain, weakness and reduced range of motion.

Sometimes one or more tendons become detached from the bone. In some cases, a surgeon can reattach the tendon to the bone using a thread-like material called a suture.

But sometimes the tendon is too badly damaged to be reattached. In that case, the surgeon may consider a "tendon transfer." This is a procedure in which a tendon from a different location is used to repair the rotator cuff.

The tendon most commonly transferred is the latissimus dorsi tendon in the back. For a latissimus dorsi transfer, the surgeon makes two incisions: one in the back and one in the front of the shoulder.

In the back, the surgeon detaches one end of a latissimus dorsi tendon and attaches a suture to that end. In the front, the surgeon creates a flap in the deltoid muscle, which covers the shoulder. He or she inserts a tool to grasp the end of the latissimus dorsi tendon. The surgeon brings the tendon under the deltoid to its new position.

Sutures are used to connect the transferred tendon to any remaining rotator cuff as well as bone. The surgeon tightens the sutures to pull the tendon against the bone and ties it securely in place. In some cases, anchors are inserted into the bone to help hold the sutures in place.

The surgeon closes the flap in the deltoid muscle. The incisions are then closed in the front and back.

The following link will bring you to a video explaining the surgery (press CTRL while clicking the underlined text to follow the link):

<https://www.mayoclinic.org/diseases-conditions/rotator-cuff-injury/multimedia/rotator-cuff-tendon-transfer-video/vid-20086844>

1. J Bone Joint Surg Am. 2006 Feb; 88(2):3428. Latissimus dorsi tendon transfer for irreparable posterosuperior rotator cuff tears. Factors affecting outcome. Iannotti JP, Hennigan S, Herzog R, Kella S, Kelley M, Leggin B, and Williams GR.
2. From the Mayo Clinic Report.