

Christopher M. Brusalis, MD
 Phone: (516)-743-3036
 Fax: (516)-743-3576
 Email: DrBrusalisOffice@hss.edu
 Website: www.BrusalisMD.com



Physical Therapy following Lower Trapezius Tendon Transfer

The following is a basic framework from which to work during rehabilitation following lower trapezius tendon transfer. Physical therapists may employ specific exercises at their discretion within these guidelines. We encourage patients and therapists to communicate with Dr. Brusalis and his staff with any questions.

Phase I: Healing (0-8 weeks)		
Goals	Precautions	Recommended Exercises
<ol style="list-style-type: none"> 1. Minimize pain and inflammation 2. Protect the integrity of the repair 3. Gradually restore appropriate pain free passive range of motion (PROM) 	<ul style="list-style-type: none"> • Abduction-External Rotation shoulder immobilizer should be worn all the time except for during exercise and washing. Keep shoulder externally rotated as much as possible when not in sling. • No passive shoulder internal rotation, adduction, and extension • No forced forward flexion PROM • No upper extremity weight bearing with the operative shoulder 	<p><u>Range of Motion</u></p> <ul style="list-style-type: none"> • Active range of motion (AROM) elbow, wrist, and hand as indicated • AROM cervical spine as indicated <p><u>Strengthening:</u></p> <ul style="list-style-type: none"> • Scapular retraction • Shoulder shrugs • Sub maximal pain free deltoid isometrics <p><u>Modalities:</u></p> <ul style="list-style-type: none"> • Frequent cryotherapy • Interferential or high volt electrical stimulation for pain control as indicated <p><u>Criteria for progression to Phase II:</u></p> <ul style="list-style-type: none"> • Minimal pain with PROM • Forward elevation PROM to at least 90° • ER PROM to 30°

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Phase II: Motion Recovery (Week 6 – Week 12)		
Goals	Precautions	Recommended Exercises
<ul style="list-style-type: none"> • Restore functional AROM • Facilitate latissimus dorsi to function as an external rotator and depressor of the shoulder • Restore proprioception • Encourage use of the operative upper extremity for light activities of daily living • Enhance strength to allow for active motions • Successful weaning from abduction-external rotation gunslinger orthosis 	<ul style="list-style-type: none"> • No passive shoulder internal rotation beyond neutral • adduction, or extension stretching • No forced forward flexion PROM • No shoulder strengthening exercises • No lifting or carrying with the operative upper extremity 	<p><u>Range of Motion</u></p> <ul style="list-style-type: none"> • Continue AROM elbow, wrist, and hand as indicated • Continue AROM cervical spine as indicated <p>Passive ROM- No forceful stretching</p> <ul style="list-style-type: none"> • Forward flexion as tolerated • Forward elevation in the scapular plane as tolerated • External rotation neutral to end ROM as tolerated • Extension to tolerance • Horizontal adduction <p>Active assisted range of motion (AAROM) and AROM <i>Begin in supine and sidelying then progress to antigravity positions as appropriate</i></p> <ul style="list-style-type: none"> • Forward Flexion (lawn chair progression) • Forward elevation • External Rotation • Internal Rotation • Prone Rowing AROM Exercises for periscapular musculature <p><u>Strengthening:</u></p> <ul style="list-style-type: none"> • Scapular retraction • Shoulder shrugs • Rotator Cuff Isometrics Submaximal • Internal Rotation • Wall or table push-up plus • Light open chain proprioceptive and rhythmic stabilization exercises as tolerated

		<p><u>Criteria for progression to Phase III:</u></p> <ul style="list-style-type: none">• Uncomplicated postoperative course• Minimal pain with exercise• Forward AROM elevation to, at least, 90° in upright position with minimal to no deltoid hiking• Good recruitment of latissimus muscle with AROM forward elevation• Functional AROM with ER
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Phase III: Initial Strengthening (Week 12 -16)		
Goals	Precautions	Recommended Exercises
<ul style="list-style-type: none"> Maintain and enhance optimal PROM/AROM Re-establish shoulder proprioception Regain muscle strength and shoulder stability 	<ul style="list-style-type: none"> No forced stretching all planes No heavy lifting or carrying with the operative upper extremity No sports activity No strengthening with heavy weights or weight equipment 	<p><u>Range of Motion</u></p> <ul style="list-style-type: none"> Continue above as indicated Internal rotation beyond neutral permitted Initiate gentle terminal stretching as indicated all planes Joint mobilizations as indicated <p><u>Strengthening:</u> <i>Begin in supine and sidelying, then progress to antigravity position as appropriate</i></p> <ul style="list-style-type: none"> Deltoid Periscapular musculature External Rotation (isometrics progressed to isotonic) Internal Rotation Biceps, Triceps, general UE conditioning Light closed chain activities <p><u>Proprioception</u></p> <ul style="list-style-type: none"> Rhythmic stabilization exercises Position awareness exercises <p><u>Criteria for progression to Phase III:</u></p> <ul style="list-style-type: none"> Patient able to demonstrate proper proprioceptive awareness Adequate muscle performance for ER/IR Good recruitment of latissimus with active external rotation, and forward elevation

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Phase IV: Advanced Strengthening and Return to Activity (Week 16+)		
Goals	Precautions	Recommended Exercises
<ul style="list-style-type: none"> Restoration of shoulder endurance, strength, and power Optimize neuromuscular control 	<ul style="list-style-type: none"> No forced stretching all planes No heavy lifting or carrying with the operative upper extremity No strengthening with heavy weights or weight equipment 	<p><u>Strengthening:</u></p> <ul style="list-style-type: none"> Progress Resistive Exercises as tolerated Initiate push-up plus progression Gentle weight training Hands in sight / no wide grip exercises Avoid cross body activities (avoid combined IR and adduction activities) Minimize overhead activities Light sport / recreation activity specific skills <p><u>Neuromuscular Control</u></p> <ul style="list-style-type: none"> Progress proprioception activities Advance closed chain exercises <p><u>Criteria for progression to unrestricted activities (4-6 months):</u></p> <ul style="list-style-type: none"> Plateaued with sufficient AROM demonstrating proper scapular humeral rhythm Strength > 80% of uninvolved sided Satisfactory clinical exam by physician