

Patellar/Quadriceps Tendon Reconstruction

GUIDELINE

REAHB SERVICES



Purpose:

This guideline is designed to return the individual to their full activities as quickly and safely as possible following a Patellar/Quadriceps Tendon Reconstruction. Modifications to this guideline may be necessary dependent on physician specific instruction or other procedures performed. This evidence-based Patellar/Quadriceps Tendon Reconstruction guideline is criterion-based; time frames and visits in each phase will vary depending on many factors. The therapist may modify the program appropriately depending on the individual's goals for activity following Patellar/Quadriceps Tendon Reconstruction.

This guideline is intended to provide the treating clinician with a frame of reference for rehabilitation. It is not intended to substitute clinical judgment regarding the patient's post-operative care based on exam/treatment findings, individual progress, and/or the presence of concomitant procedures or post-operative complications. If the clinician should have questions regarding post-operative progression, they should contact the referring physician.

Precautions:

- Monitor for patellofemoral irritation and arthrofibrotic knee
- Avoid aggressive knee flexion during first 6 weeks

PHASE	SUGGESTED INTERVENTIONS	MILESTONES FOR PROGRESSION
Phase I Weeks 0-3	WB Status: <ul style="list-style-type: none">• WBAT, brace locked in full extension• Sleep in locked brace Therapy: <ul style="list-style-type: none">• Begin supine exercises including:<ul style="list-style-type: none">— Ankle pumps— Isometric quad sets— Hamstring sets— Heel slides with passive knee extension (0-45°)— Hip abduction/adductions— At end of week 1, initiate gravity eliminated SLR flexion (assisted)• Gait training for stairs and ambulation as needed• Pain and edema control, as needed	Goals: <ul style="list-style-type: none">• Skin healing• Control pain and swelling• Knee ROM 0-45°
Phase II Weeks 3-6	WB Status: <ul style="list-style-type: none">• WBAT, brace locked in full extension for standing, walking, sleeping<ul style="list-style-type: none">— Brace worn at night until 6 weeks unless cleared by physician— Brace unlocked for sitting (only unlocked to available PROM)	Goals: <ul style="list-style-type: none">• Healing• Pain and edema control, modalities PRN• FWB by 6 weeks



	<p>Therapy:</p> <ul style="list-style-type: none"> • Begin extension stretching with prone hangs and heel props • NuStep, assistance from upper extremities for knee extension • Patellar mobilizations • Gait training • 4-way hip strengthening • Balance and proprioception: weight shifting, single leg stance • Initiate mini squats (0-45°) • Knee flexion PROM starting at 50° <ul style="list-style-type: none"> — Light overpressure only for PROM — Progressing 10°/week until 90° is achieved • Active knee extension 90 to 30° • Multi-angle isometrics – knee extension • Initiate pool exercise program if incision is fully healed • Calf raises 	<p>Criteria to Advance:</p> <ul style="list-style-type: none"> • Knee flexion ROM 0-90° • Good patellar mobility • SLR without extensor lag • Pain-free WBAT AT 0° extension
<p>Phase III Weeks 6-12</p>	<p>WB Status:</p> <ul style="list-style-type: none"> • WBAT, brace unlocked, begin with crutches and progress out as able • No weight bearing with flexion >90° until after 8 weeks • No maximal voluntary contraction of quadriceps (no MMT or handheld dynamometer testing) <p>Criteria to Discontinue Brace:</p> <ul style="list-style-type: none"> • Good quad control (20 SLR without lag) and cleared by surgeon <p>Therapy:</p> <ul style="list-style-type: none"> • Restore knee flexion ROM to 0-125° <ul style="list-style-type: none"> — Avoid aggressive quad stretching • Stationary bike • Forward step ups • Knee extension 0-90° • Mini squats to 70° knee flexion • Leg press with 2 legs • Wall squats • Front and lateral lunges • Hamstring curls (restricted ROM) • Core strengthening 	<p>Goals:</p> <ul style="list-style-type: none"> • Full ROM 0-125° • Normalize gait without assistive device • Able to ascend 8" step <p>Criteria to Advance:</p> <ul style="list-style-type: none"> • Normal Gait pattern • Pain control • Edema managed • Full knee flexion

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	<ul style="list-style-type: none"> • BAPS • Proprioception drills 	
Phase IV Weeks 12-16	WB Status: <ul style="list-style-type: none"> • Full • Patient should exhibit normalized gait Therapy: <ul style="list-style-type: none"> • Descending stairs, working up to 8" • Lateral step ups • Backward lunges • Walking program • Advance squat training and closed chain program • Elliptical Training • Agility Training 	Goals: <ul style="list-style-type: none"> • Return to normal ADLs • Able to descend 8" step Criteria to Advance: <ul style="list-style-type: none"> • Able to control descent of 8" step
Phase V Weeks 16-20	Therapy: <ul style="list-style-type: none"> • Plyometric program • Forward running • Knee extension machine • Agility and sport specific training • High level proprioception drills • Impact control exercises begin 2 feet to 2 feet, then 1 foot to other foot, then affected foot to affected foot 	Goals: <ul style="list-style-type: none"> • Restore strength and ROM • Pain-free running • Improve tensile strength properties of patellar/quad tendon Criteria to Advance: <ul style="list-style-type: none"> • 85% limb symmetry with hop test and isokinetic testing
Phase VI Weeks 20+	Therapy: <ul style="list-style-type: none"> • Twisting jumps • Backwards walking up to 20-30% incline • Lateral hops over cones, blocks, etc. • Single leg jumps up to 6" box • Figure 8 running • Zigzag cutting (45° angles) • Lateral shuffles with resistance • Single leg plyometrics • Sport-specific training including full speed running, cutting, and stopping • Return to play testing if returning to sport 	Goals: <ul style="list-style-type: none"> • Return to prior level of function Return to Sport: <ul style="list-style-type: none"> • Pass return to play testing <ul style="list-style-type: none"> — Physician Approval — Full ROM — No pain or swelling — Normal running — Adequate drop jump mechanics — Adequate lateral shuffle mechanics — Adequate cutting mechanics