Delaware Physical Therapy Clinic

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Rehabilitation Practice Guidelines for:

Quadriceps and Patellar Tendon Repair

Assumptions	Quadriceps or patellar tendon tension suture technique
Primary surgery:	Repair of quadriceps or patellar tendon
Expected # of visits:	24-43

Precautions and Bracing	
Precautions	▪ No MVIC with quadriceps tendon repair until 8-12 weeks ▪ No MVIC with patellar tendon repair until 6-8 weeks ▪ If more rapid gains in ROM occur, progress with strong considerations to the integrity of the repair.
Bracing	▪ An immobilizer should be used for approximately 3-4 weeks or until there is no quadriceps lag and at least 90 degrees of knee flexion. After that time, the most progressive bracing option would be a brace that allows for locking into full extension when necessary (drop lock for icy conditions, uneven terrain, etc.) but also allows for variable locking during motion to increase available ROM with ambulation as the patient gains ROM in the clinical setting. The use of this type of brace insures that in the event of a slip, the brace will prevent the patient from flexing the knee beyond the available range and any resulting damage.

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Quadriceps and Patellar Tendon Repair		
Timeline	**Treatment**	**Milestones**
Week 1-2 Wear immobilizer and use crutches 2-3x/week Total Visits: 2-6	▪ Ice and elevate for inflammation control ▪ Quad sets in full extension (Biofeedback PRN) ▪ SLR with assistance (encourage quad activation) ▪ Patellar mobilizations-all directions ▪ Gentle PROM 0-90° (wall slides) ▪ Begin NMES at 30° to tolerance	▪ Full patellar mobility ▪ Good quad set but may still need assistance with SLR ▪ PROM: 0-90° ▪ Full WB with immobilizer
Weeks 3-4 2-3x/week Total Visits: 6-9	▪ Inflammation control as needed ▪ PROM 0-110° ▪ Add bike for ROM - (gentle stretch; no resistance) ▪ Pre-gait training: standing TKE with good control ▪ Add 1/4 wall sits ▪ NMES at 30° to tolerance	▪ PROM: 0-110°
Week 5-6 2-3x/week Total Visits: 10-15	▪ Continue ROM efforts ▪ Increase to ½ squats as ROM inc. ▪ Begin Stairmaster-good quad control ▪ Add high speed isokinetics con/con ≥ 180°/sec ▪ Progress NMES angle to 45° ▪ Begin balance activities	▪ Full ROM ▪ SLR without lag ▪ Ambulate with brace 0-70°
Weeks 7-12 2-3 visits/week Total Visits 20-35	▪ Progress TE's (squats, step-ups, leg press, Stairmaster, pool, etc) ▪ MVIC test @ 12 weeks ▪ Continue NMES until 80% of uninvolved at same angle ▪ Progress balance activities	▪ Independent with home exercises. ▪ Ambulation without brace. ▪ Return to work (if OK by surgeon)
Weeks 13-16 1-2 times/week Total Visits: 24-43	▪ May begin running when 90% ROM and 80% strength have been achieved ▪ May begin plyometrics starting with medial/lateral before vertical if ROM is full and > 90% quad strength ▪ Burst test OK at 16 weeks	▪ Return to work (if OK by surgeon)
Weeks 19-28 PT as needed for sports specific activities.	▪ Progression of sport/work specific rehabilitation	▪ Progression of sport/work specific rehabilitation