Premier
ORTHOPAEDIC & SPORTS MEDICINE

Dr. Scott Ritterman, MD
Diagnosis: _____
DOI/DOS:_____
PT/OT to treat according to protocol

Quadriceps/Patellar Tendon and Patella Fracture Rehab

After surgical repair the leg should be kept straight in the hinged knee brace, locked in extension. You may weight bear as tolerated with the assist of crutches or a walker, with the brace locked in extension. During the first 4 weeks work on ankle and toe range of motion. At the 4 week visit range of motion will be initiated and advanced weekly under the supervision of a physical therapist. Due to the variability of the fracture stability and tendon repair, check for treatment specifications and precautions ordered by your surgeon. If you therapist has questions, please call the office.

Goal: Increase range of motion (ROM) without disrupting the repair.

Phase I: 4-6 Weeks

- PROM and gentle AROM 0-40 degrees with hip flexed. Advance 10 degrees weekly
- **WBAT in the brace with the brace locked in full extension**
- **No Active Knee Extension for 6 weeks**
- Submaximal isometrics – adductors, gluteals, abductors, hamstrings
- **Initiate quad sets**
- Active / Active-assisted ROM ankle
- Initiate patellar mobilization
- Stretching: hamstrings, gastroc-soleus, iliotibial band (NWB)
- Begin seated hamstring curls 0-40 degrees (active flexion, passive extension), increase weekly
- Electrical stimulation and/or biofeedback for quadriceps and hamstrings
- Modalities to minimize effusion
- Begin SLR in brace locked at 0 degrees without weight at 4 weeks after surgery

Phase II: 6-8 Weeks:

- **Begin PWB at 6-8 weeks with brace (0-60 degrees depending on quad control)**
- **WBAT by 8 weeks with brace 0-90 degrees**
- Begin AROM without weight for short and long arc quads
- ROM 0-90 degrees with hip flexed and extended
- Begin aggressive patellar mobilizations and scar tissue massage
- Initiate weight shifting with isometrics.
- Consider aquatic therapy at this time
- Add seated heel raises. Progress to standing position as weight bearing status and quad control improves
- Modalities for continued control of effusion and edema

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Phase III: 8-10 Weeks:

- **Wean from brace at 10 weeks as quad control improves**
- **Begin active ROM**
- Begin submaximal knee extension isometrics (60-90 degrees)
- Begin static single-leg balance on floor. Progress to dynamic single-leg balance activities (e.g. upper or lower extremity reaching, 4-way theraband, etc.) as lower extremity muscle control allows.
- Begin with bike for ROM. May begin exercise program as effusion and ROM allows.
- Begin retroambulation
- Add leg press
- Initiate isometric squats and progress to dynamic squats emphasizing lower ranges (e.g. 60-90 degrees) and proper technique
- Begin closed kinetic chain terminal knee extension with theraband resistance

Phase IV: 10-12 Weeks:

- Emphasize concepts of frequency, duration, and intensity of training
- **Equal passive and active range of motion bilaterally by 12 weeks**
- Consider orthotics, taping, bracing as appropriate to facilitate training and proper biomechanics
- Begin lateral step-ups/downs beginning at 2" and progressing height only if proper technique is maintained (no hip substitution)
- Initiate knee extension isometrics (30-90 degrees) as tolerated
- Progress endurance training on bike with emphasis on low resistance, high RPMs to minimize patellofemoral compression
- Progress static and dynamic single-leg balance activities to unsteady surfaces (e.g. pillow, half-foam roll, BAPS board, etc.) as lower extremity muscle control allows

Phase V: 12+ Weeks:

- **Equal strength bilaterally by 16-18 weeks**
- Progress to independent home exercise program
- Emphasize importance of proper lower extremity biomechanics
- Return to sports and/or work to be determined by the physician
- Progress knee extension isotonics. May progress to 0-90 degree arc as tolerated
- Progress to lunges (e.g. anterior, lateral, etc) as tolerated
- Begin sport- and/or work-specific activities per physician
- Begin return to running program (e.g. treadmill, road, etc.) as appropriate
- Begin slide board
- Initiate plyometrics as appropriate

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