

Patellar Tendon Repair/Quad Tendon Repair/Patellar Fracture ORIF

Phase 1 – Maximum Protection

Weeks 0 to 6

- Brace locked in full extension for 6 weeks for all weight bearing
- Partial weight bearing (50%) with use of bilateral axillary crutches progressing to weight bearing as tolerated
 - Partial weight bearing (25-50%) for weeks 0-2
 - Progress to WBAT for weeks 2-6
- Initiate isometric quadriceps muscle activation
- Initiate and progress range of motion as below:
 - Patellar Tendon Repair/Quad Tendon Repair
 - 0-2 weeks: 0-30 degrees
 - 2-4 weeks: 0-60 degrees
 - 4-6 weeks: 0-90 degrees
 - Patellar Fracture ORIF
 - 0-2 weeks: No range of motion
 - 2-4 weeks: 0-30 degrees
 - 4-6 weeks: 0-60 degrees

Goals:

- Reduce pain and inflammation
- Protect the surgical repair
- Maintain full knee extension range of motion
- Maintain strength and motion of non-operative joints
- Gradually progress knee range of motion
- Quadriceps activation

Exercise Progression:

- Passive/active knee range of motion per protocol
- Quad sets, hamstring sets, glute sets
- Multi-plane straight leg raises at 2 weeks (no extensor lag)
- Ankle and foot range of motion
- Patellofemoral mobilizations
- Gait training
- Elevation and cryotherapy to assist with swelling reduction

Phase 2 – Progressive Stretching and Early Strengthening

Weeks 6 to 8

- Brace unlocked for 2 weeks, transition out of brace at 8 weeks
- Full weight bearing
- Progress range of motion
 - Patellar Tendon Repair/Quad Tendon Repair
 - 6-8 weeks: progress to full
 - Patellar Fracture ORIF
 - 6-8 weeks: 0-90 degrees
 - 8+ weeks: progress to full
- Initiate closed chain strengthening in double limb progressing to single limb
- Initiate balance and proprioception exercises

Goals:

- Reduce pain and inflammation
- Protect the surgical repair
- Full knee extension
- Progress knee flexion range of motion
- Maintain strength of non-operative joints
- Normalizing gait pattern

Exercise Progression:

- Initiate bike at 6 weeks
- Patellofemoral mobilizations
- Maintain squat depth at 90 degrees or above
- Step up progression
- Gait training
- Elevation and cryotherapy to assist with swelling reduction

Phase 3 – Progressive Strengthening

Weeks 8 to 16

- Discontinue brace
- Progress to full range of motion
- Advance strengthening exercises
- Balance and proprioceptive exercises

Goals:

- Reduce pain and inflammation
- Protect the surgical repair
- Full knee range of motion

- Normal gait pattern

Exercise Progression:

- Gait training
- Gym strengthening progression
- Initiate elliptical at 8 weeks
- Lunge progression at 12 weeks (retro, walk, and split)
- Able to progress >90 degrees with loaded flexion at 12 weeks

Phase 4 – Plyometric Training and Running Progression

Weeks 16 to 20

- Administer preliminary functional test at 16 weeks for physician to review
- Initiate straight line jogging at 16 weeks if proper biomechanics are demonstrated and symmetry on function test
- Advance strengthening program
- Initiate plyometric training progressing from double leg to single leg activities

Goals:

- No swelling
- Full range of motion
- Normal gait pattern
- Symmetrical strength and power

Exercise Progression:

- Proprioception drills
- Basic ladder series
- Linear jogging progression
- Basic plyometric box progression
- Gym strengthening progression

Weeks 14 to 20

- Advance training in preparation for functional testing
- Progress plyometric training from double leg to single leg activities

Phase 5 – Return to Sport

Weeks 20-24

- Progress plyometric training to multi-plane, change of direction, and deceleration
- Advance strengthening program
- Administer return to sport function test prior to 6 month follow-up appointment for physician to review

Goals:

- No swelling
- Full range of motion
- Normal gait pattern
- Symmetrical strength and power

Exercise Progression:

- Advanced ladder series
- Change of direction with running and jumping
- Sport specific field/court drills
- Gym strengthening progression

Criteria for return to play:

- Follow-up examination with the physician
- Pass return to sport function test at >90% (involved vs uninvolved limb)
- Display symmetry and confidence in high-speed cutting, multi-plane plyometric drills, sprinting, and decelerating

Anticipated return to sport:

- 5-6 months for contact and non-contact athletes