Colorado Springs Orthopaedic Group

Well Beyond.

Craig A. Yager, M.D.
Postoperative Therapy Protocol

Patellar/Quadricep Tendon Repair

Functional Goals

Weeks 0-2: Control swelling and pain, prevent complications from prolonged immobilization.
Weeks 2-6: Begin and progress motion.
Weeks 6-12: Discontinue brace, regain full motion and begin strength.
Weeks 12-24: Begin running and jumping, sport specific training, return to contact sports (e.g. football, soccer, basketball) at 6 months.

Weeks 0-2

Weightbearing as tolerated with the brace locked in extension.
Hinged knee brace locked in extension and worn at all times (ambulating, sleeping, standing, etc.).
No active extension.
Gentle early motion while seated.
No passive knee flexion beyond 60 degrees, unless otherwise specified by Dr. Yager.
Ice 20 minutes per hour for the first 2-3 days, continue as needed afterwards.

Exercise	Reps/Sets	Days per Week	Goal
Ankle Prop	3 sets of 3-5 minutes	7	Full Extension
Ankle Pumps	20 reps per hour	7	Maintain Circulation

Weeks 2-6

Weightbearing as tolerated with brace locked in extension
Range of motion goals: full extension by week 2 and flexion to 90º by week 6
Continue exercises from weeks 0-2 increasing to 3 sets of 15 reps
Add the following exercises:

Exercise	Reps/Sets	Goal	Additional Information
Standing Toe Raise	3 sets of 15 reps	Balance	Limit wall assistance
Prone Hamstring Curls	3 sets of 15 reps	Increase Flexion	Work towards 90º
Hip Abduction	1 set of 15 reps	Strengthen Abductors	Hold 1 second at 45º
Glute Bridge	3 sets of 15 reps	Strengthen Gluteal Musculature	*With leg extended on a chair
Supine Heel Slides	2 sets of 10 reps	Increase Flexion	90º After Six Weeks
Seated Heel Slides	2 sets of 10 reps	7	90º After Six Weeks

Weeks 6-12

Unlock brace for ambulation (0-60 degrees) provided patient demonstrates sufficient quad control.
Discontinue brace after 8 weeks, unless otherwise specified by Dr. Yager.
Continue to progress range of motion to full flexion
Continue all previous exercises and add hamstring, prone quadriceps, and calf stretches twice daily holding each stretch for 30 seconds. Add the following exercises

Exercise	Reps/Sets	Goal	Additional Information
Stationary Bicycle	Begin partial rotations and gradually progress	Range of Motion	Low resistance, increase slowly over 6 weeks
Seated Leg Press	3 sets of 15 reps	Strengthen Quadriceps	Do not exceed body weight, no flexion past 90º

Weeks 12-24

Continue all previous exercises but decrease to 2 sets of 15 reps
Begin advanced muscular strengthening, cardiovascular conditioning, sport-specific training

- Strength training: 3 days per week
  - Continue exercises from weeks 6-12 adding light weight as strength improves
  - Progress to single-leg wall squat and single-leg squat to chair as strength allows (start with pillow)
  - Add step-up/step-down to build strength, balance, proprioception
- Cardiovascular/sport-specific training: 3 days per week once cleared by therapy
  - Stationary bicycle, elliptical, or arc trainer 30 minutes per day, increase resistance as tolerated
  - Straight line running: start for 5 minutes and increase to 30 minutes over 4 week period
  - Speed and agility training: begin only when straight line running for 30 minutes is well tolerated without pain or swelling. Work directly with trainers or rehab profressional to personalize program for your sport or activity of interest
    - Straight-line sprints: half speed for 100 yards for 10 reps
    - Advance to full speed for 100 yards for 10 reps
    - Advance to cones
    - Advance to forward and backward running
    - Advance to figure of eight running
    - Advance to carioca running
    - Advance to shuttle run

Weeks 24 and Beyond

Full release for unrestricted pivoting sports when motion and strength have returned without swelling during sport-specific rehablitation
Subjective criteria for return to play

- No sense of instability

Objective criteria for return to play

- Full active range of motion with negative Lachman and pivot shift tests
- Neuromuscular testing:
  - Quadriceps atrophy <2 cm
  - Quadriceps strength >85% contralateral side
  - Hamstring strength 100% contralateral side
- Single-leg press >90% contralateral side
- Single-leg squat >60º
- Functional tests: vertical jump test, single-leg hop distance, timed 20 ft single-leg hop >85% contralateral side.

Watch carefully for redness, excessive swelling, excessive bleeding, discharge, fever or pain not relieved by medication. Call immediately (719) 632-7669 if any of these are noticed.