



THE STONE CLINIC
ORTHOPAEDIC SURGERY, SPORTS MEDICINE AND
REHABILITATION
QUAD TENDON REPAIR WITH ALLOGRAFT
Post-operative Physical Therapy Protocol

General considerations:

- The surgical leg will be weight bearing as tolerated using crutches post-operatively.
- Range of motion will be blocked at 0 degrees in a brace for 4 weeks.
- No range of motion until 2 weeks, at 2 to 4 weeks 0 to 20 degrees. At 4 to 6 weeks 0 to 50 degrees.
- Important not to push for flexion to quickly to protect the repair.
- Avoid bandaged area and portals for 4 weeks, “no touch zone” 2 inches from portals.
- Focus on proper quadriceps activation, especially VMO recruitment and patellofemoral mechanics should be the emphasis in the early stages of recovery.
- Continue fitness through upper extremity, trunk, and cardiovascular exercise.

Week 1:

-M.D., office visit day 2 for dressing change, review of medications and instruction on a home program.

Exercise: -Ankle pumps, quad sets, leg raises in multiple planes (except hip flexion).

-Extension stretching to hamstrings, calves, and lateral musculature to maintain extension range of motion.

-Well-leg stationary cycling and Upper Body Ergometer. Upper body weight machines and trunk exercises.

-Gait training with crutches, pain and edema control, and muscle stimulation to improve quadriceps recruitment.

Manual: Soft tissue mobilization to surrounding musculature; effleurage for edema.

Goals:

Decrease pain and edema.

Gait weight bearing as tolerated with brace locked in 0 degrees extension .

No Range of Motion.

Weeks 2-4:

Nurse visit at 14 days post-operative for suture removal.

Exercise: -Continue to progress weight bearing and functional mobility as able.

- Active open chain hip extensions, adductions, abductions progressing to resistive band exercises as appropriate (proximal to the knee).

-Standing calf raises. Straight legged bridging on ball with brace on.

-Well legged cycling, upper body work outs.

Manual: -Soft tissue mobilization surrounding structures, patellofemoral joint, and suprapatellar pouch with appropriate intensity to allow maturation and healing.

Goals:

Decrease pain and edema.

Gait weight bearing as tolerated with brace locked in 0 degrees extension .

At 2 weeks okay to start 0 to 20 degree range of motion



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Weeks 4-6:

M.D. visit at 1 month post-op. Wean out of brace, use brace unlocked if approved by MD.

Manual: -Continue soft tissue mobilization. Initiate gentle patellar glides and portal scar tissue mobilization when appropriate.

Exercise: -Ankle and hip resisted PNF patterns.

- Single leg balance with perturbations (Around the worlds, single balance with upper extremity movements).
- Prone on ball with added hip motions.
- Continue well legged cycling and upper body work outs.

Goals:

Range of motion 0 to 50 degrees.

Weeks 6-8:

Exercise-Begin functional exercises such as partial squats, bent leg bridges, small range slider lunges, mini step ups.

- Proprioceptive training. Continue to increase intensity and resistance of other exercises.
- Two-legged bicycling for range of motion and without resistance and without forcing range of motion.
- Emphasis on gait training with proper movement patterns.

Manual -Soft tissue mobilization through hip, knee, and lumbar region as necessary.

- PNF patterns with resistance above the knee for hip and pelvic patterns.
- Patellar decompression with taping techniques as needed.

Goals:

Focus on gait mechanics. Range of motion 0 to 100 degrees.
Initiate stationary bicycle no resistance/pain.

Weeks 8-12:

- Initiate gentle passive flexion stretching to increase range of motion by 10 weeks.
- Add lateral exercises (i.e. lateral stepping, lateral step-ups, etc.).
- Continue all exercises with emphasis on closed-chain, functional and proprioceptive program. Increase unilateral closed chain activities. Increase resistance of cycling.

Goals:

Passive/Active range of motion full, equal to opposite leg.
Gait no limp, good mechanics. Full range squat no pain. Stair management no pain.

Weeks 12-16:

MD appointment at 12 weeks. Complete Sports test 1.

- Goals are to increase strength, power, and cardiovascular conditioning.
- Sport-specific exercises and training program. Eccentric focused strengthening program.



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-begin gym strengthening including leg press. Increase proprioceptive drills.
-Begin pre-running program (see handout for specific instructions) as able to demonstrate good strength and mechanics.

4-6 months:

-Goals are to develop maximal strength, power, and advance to sporting activities.
-Resisted closed-chain rehabilitation through multiple ranges.
-Running program, balance drills and agility program.
-Initiate plyometric training as able to demonstrate adequate strength and proper mechanics.