



THE STONE CLINIC

ORTHOPAEDIC SURGERY, SPORTS MEDICINE AND REHABILITATION

ANTERIOR CRUCIATE LIGAMENT REPAIR

Post-Operative Physical Therapy Protocol

General Considerations:

- Passive and active range of motion between 30 - 70 degrees for 4 weeks. Brace will set to this range of motion. **Avoid any extension beyond 30 degrees for 2 weeks post-op.* OK to stretch into flexion per patient comfort 2x/day immediately post-op. *At 2 weeks post-op*, come out of the brace twice a day for extension (straightening) and flexion (bending) range of motion stretching to full range as tolerated. Hold each stretch for 1 minute. Do 2 sets of 1 minute each time (therefore 4 sets of extension per day and 4 sets of flexion per day). Remove brace for stretching.
- Crutches to assist weight bearing progressing to full as tolerated with brace.
- Patient to wear knee brace while sleeping for 4 weeks post-op.
- Soft tissue mobilizations to the incisions to decrease fibrosis and scarring; portals must be completely closed and authorization must be obtained from Dr. Stone (s/p 4 weeks)
- Exercises should focus on early muscular recruitment.
- Begin physical therapy as soon as able for soft tissue mobilization, anti-inflammatory modalities, and general conditioning.
- Patients are given a functional assessment/sport test at 3 months, 6 months, 1 year.

Week 1:

- Nurse visit day 2 to change dressing and review home program.
- Icing and elevation as per icing protocol (please see handout for full details).

Manual: -Soft tissue treatments, gentle mobilization to posterior musculature and patella. No portal mobilizations at this time.

Exercise: - Leg raises (30 degrees of knee bend with brace on) (lying, seated, and standing), quadriceps/adduction/gluteal sets, passive and active range of motion exercises within guidelines, well-leg stationary cycling.
-Gait training to normalize walking pattern.
-Balance and proprioception exercises.

Goals:

Decrease pain.
Weight bearing as tolerated with brace.
Passive range of motion 30-70 degrees x 4 weeks.

Weeks 2 - 4:

- Nurse visit at Day 14 for stitch removal.

Manual: - Continue with effleurage, soft tissue treatments, patellar glides, and passive range of motion.

Exercise: -Incorporate progressive and gentle functional exercises (squats/knee bends, modified lunges, step-ups).
-Continue with pain control, range of motion, gait training, balance/proprioception and soft tissue treatments.
-Begin pool workouts after the incisions are healed and with the use of the brace.
-Begin two-legged aerobic exercises as range of motion allows (VersaClimber, stair machine, upper body ergometer, NordicTrac).

Goals:

Minimal edema, decrease pain.
Weight bearing as tolerated with brace.



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Range of motion 30-70 degrees x 4 weeks.

Weeks 4 - 6:

- M.D. visit at 4 weeks, will discontinue use of post-op brace at that time
- May wean off brace with full range of motion if significant weakness or apprehension is present.

Manual: -Push for full range of motion with emphasis on extension. Continue soft tissue mobilization, joint mobilization as needed. Initiate scar mobilization once incisions closed.

Exercise: -Increase intensity of all exercises with focus on closed-chain, functional progression.
-Stationary and road cycling as tolerated.

Goals:

Range of motion 0-110 degrees.
Gait no brace, good mechanics.
Initiate scar mobilization at 4 weeks.

Weeks 6 - 8:

Manual: - Continue soft tissue mobilization, joint mobilizations, and scar mobilizations as needed to gain full range of motion.

Exercise: -Continue to increase the intensity of exercises (i.e. stretch cord resistance, adding weight, increasing resistance of aerobic machines).
-Add lateral training exercises.
-Begin to incorporate sport or activity specific training.

Goals:

Range of motion 0-130 degrees.

Weeks 8 - 12:

- Progression of program of increasing intensity to sport specific tasks and activities of daily living.
- Continue to challenge balance; progress to increased dynamic tasks, BOSU ball, wobble board.
- Progress single leg activities.

Goals:

Full range of motion.
Able to descend stairs, double leg squat hold for >1 minute.
Bike >30 minutes with moderate resistance, Elliptical with interval training, Flutter-style for swimming (no flippers, no breast-stroke kick).
Initiate sport specific training.

Weeks 12+:

- Incorporate bilateral jumping exercises once able to demonstrate adequate strength- start on trampoline or Pilates jump board. Watch for compensatory patterns with take-offs or landings.
- Complete Sports test 1 at 3 months.
- Continue to increase strength, endurance, balance, and sport specific training drills.

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- Patients are not scheduled for another M.D. appointment until 3 - 4 months post-op. At this time, range of motion should be at or near 100 % and any restrictions or concerns should be communicated to our office.

Goals:

Swimming (no fins until > 12 weeks), outdoor cycling.

Slow Return to sports > 6 months if approved by MD and completion of Sports Test.

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