

PHYSICAL THERAPY PROTOCOLS

MENISCUS REPAIR REHABILITATION

Our protocol for rehabilitation following meniscal repair is divided into four phases: maximum protection, moderate protection, advanced phase and return to activity phase. These time periods are based primarily on the healing time of peripheral tissues and location of the tear.

I. POST-SURGICAL PHASE (WEEKS 0-2)

Patient is seen 2 days post-operative to remove surgical dressing and pain catheter.

Brace Use: Brace locked at 0 degrees except during exercise sessions

Weight bearing: Non-weight bearing for first two weeks post-op. Then patient may begin weight bearing as tolerated with crutches and brace locked at 0 degrees from 2 weeks to 4 weeks.

EXERCISES

- Ankle pumps
- Quadriceps setting
- Gluteal setting
- Straight leg raise in all 4 planes
- Heel slides: ROM, 0-90 first 4 weeks
- Passive knee extension – during icing – no towel roll under knee
- Patellar mobilization
- Prone hamstring curls: 10 repetitions, 4x/day
- Prone hangs for knee extensions
- Multi-angle isometrics: 0-60

MODALITIES

- Cryotherapy: Ice pack to surgical knee 20 minutes/hour for first 3 days, then 3-4x/day.
- Biofeedback: To encourage quadriceps contraction during quadriceps exercises
- Muscle stimulation: Use as needed based on voluntary quadriceps control

II. MAXIMUM PROTECTION PHASE (WEEKS 2-6)

REHABILITATION GOALS

- Maintain full passive extension (straightening)
- Decrease knee swelling
- Knee flexion to 120 degrees
- Restore voluntary quadriceps contraction (voluntary SLR w/o lag)
- Ambulation without crutches on floor (no antalgic, quadriceps avoidance gait)

Brace Use: Brace locked at 0 degrees for ambulation

Weight bearing: Progress to 1 crutch and then to full weight bearing without crutches. Criteria for FWB without crutches is active flexion to 100 degrees, no extensor lag with SLR, single leg stand x 30 sec., and no pain with weight bearing. Gait training to avoid development of abnormal gait patterns.

EXERCISES WEEK 2

- Patellar mobilization
- Quadriceps setting with SLR in all 4 directions
- Prone hamstring curls (0-90 degrees)
- Active knee extension (90-45 degrees)
- Single leg stands
- Continue exercise from Phase I

MODALITIES

- Cryotherapy: Ice pack after exercise for 15 minutes, PRN based on effusion/pain
- Biofeedback: To encourage quadriceps contraction during quadriceps exercise
- Muscle stimulation: Use as needed based on voluntary quad control

III. MINIMAL PROTECTION PHASE (WEEKS 6-10)

REHABILITATION GOALS

- Symmetric mid-patellar and supra-patellar girth measures
- Knee flexion to full range of motion
- Symmetric quad recruitment per surface EMG
- Symmetric static proprioception
- Ambulation without crutches and without limp on floor and stairs

Brace Use: Brace discharge typically at MD 6-week appointment

EXERCISES: WEEKS 6-10

- Stationary cycling for ROM
- Resisted OKC knee extension 90-45 degrees, initially progress to full ROM
- Partial squats
- Step-up progression (begin with 2" step)
- Leg press
- Calf raises
- Hamstring curls
- Single leg stand: Progress from level surface to ½ roll with UE movement

CARDIO

- UBE, then progress to elliptical trainer, stairmaster
- Pool: Walking, deep water jogging, swimming at Week 6

MODALITIES

- Cryotherapy: Ice pack after exercise for 15 minutes, PRN based on effusion/pain
- Muscle stimulation: Use as needed during ground based exercise

IV. ADVANCED STRENGTHENING PHASE: (WEEKS 11-16)

REHABILITATION GOALS

- Isokinetic scores within 15 % for concentric knee extension and flexion
- Symptom free jogging with normal gait pattern for up to 1 mile
- Initiate functional progression program
- Return to desired activity level

EXERCISES

- Resisted cycling
- Partial squats
- Knee extensions
- Step-ups with sport-cord
- Leg press
- Hamstring curls
- Box drills with elastic resistance
- Lunges with step
- Rebounder exercise with single leg stand
- Plyometrics
- Desired cardio workout

MODALITIES

- Cryotherapy: Ice pack to surgical knee 15 minutes after exercise