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Meniscus Repair Physical Therapy Protocol

This rehabilitation protocol was developed for patients who have isolated meniscal repairs. The protocol is divided into phases. Each phase is adaptable based on the individual patients and special circumstances.

The **overall goals** of the repair and rehabilitation are to:

- Control pain, swelling, and hemarthrosis
- Regain normal knee range of motion
- Regain a normal gait pattern and neuromuscular stability for ambulation
- Regain normal lower extremity strength
- Regain normal proprioception, balance, and coordination for daily activities
- Achieve the level of function based on the orthopedic and patient goals

The physical therapy should be initiated within 1-2 days post-op. It is extremely important for the supervised rehabilitation to be supplemented by a home fitness program where the patient performs the given exercises at home or at a gym facility. **Important post-op signs** to monitor:

- Swelling of the knee or surrounding soft tissue
- Abnormal pain response, hypersensitive
- Abnormal gait pattern, with or without assistive device
- Limited range of motion
- Weakness in the lower extremity musculature (quadriceps, hamstring)
- Insufficient lower extremity flexibility

Return to activity requires both time and clinic evaluation. To safely and most efficiently return to normal or high level functional activity, the patient requires adequate strength, flexibility, and endurance. Isokinetic testing and functional evaluation are both methods of evaluating a patient's readiness to return to activity. Return to intense activities such as impact loading, jogging, deep knee flexion, or pivoting and shifting early post-operatively may increase the overall chance of a repeat meniscal tear and symptoms of pain, swelling, or instability

should be closely monitored by the patient.

Phase 1-Weeks 1-2

ROM 0-90°

Passive, 0-90°

Patellar mob.

Ankle pumps

Gastoc/soleus stretch

Hamstring/ITB stretch

Prone hangs to facilitate extension

STRENGTH

Quad sets with E-stim/biofeedback

SLR

Hip flexion-seated

Multi-angle isometrics (0-60°)

WEIGHT BEARING

Toe touch weight bearing with crutches

MODALITIES

E-stim/biofeedback as needed

Ice 15-20 minutes with 0° knee ext

BRACE

Remove brace to perform ROM activities

Brace locked at 0° ext when up to protect repair

GOALS OF PHASE:

- Control pain, inflammation, and effusion
- Adequate quad/VMO contraction
- Independent in HEP
- TDWB

Phase 2-Weeks 2-4

ROM 0-120 °

Passive, 0-120 °

Patellar mob.

Gastoc/soleus stretch

Hamstring/quad/ITB stretch

Prone hang as needed

Heel/wall slides to reach goal

STRENGTH

Quad sets with biofeedback

SLR with ankle weight
Multi-angle isometrics (0-60 °)
Knee extension (90-30 °)
Heel raises/Toe raises
Leg Press (110-40 °)

BALANCE TRAINING

Weight shift (side/side, fwd/bkwd)
Single leg balance
Cup walk/Hesitation walk

WEIGHT BEARING

PWB to FWB with crutches as tolerated

BICYCLE

May initiate bike when 110 ° flex is reached
DO NOT use bike to increase flexion

MODALITIES

Biofeedback as needed
Ice 15-20 minutes

BRACE

Worn from discharge to wk 4
Opened to 90 ° at wk 2
Opened to full ROM at wk 3-4

GOALS OF PHASE:

- ROM 0-120 °
- Adequate quad/VMO contraction
- Control pain, inflammation, and effusion
- PWB to FWB with quad control

Phase 3-Weeks 4-12

ROM 0-135°
Passive, 0-135° (full)
Gastroc/soleus stretch
Hamstring/quad/ITB stretch
Prone hang to reach goal as needed
Patellar mobs.

STRENGTH

Bicycle
SLR in 4 planes with ankle weight/tubing
Knee extension (90-5°)
Hamstring curl (5-90°)

Leg Press-single legged eccentric
Smith Press-double legged
Isokinetic training at high speeds (180-360°/sec)
Multi-hip machine in 4 planes
Lateral/Forward step-up/down
Heel raise/Toe raise

BALANCE TRAINING

Single leg balance with plyotoss
Sports cord agility work
Wobble board work
½ Foam roller work

WEIGHT BEARING

FWB by wk 4
BRACE Discharge
As needed by wk 4

MODALITIES

Ice 15-20 minutes as needed

GOALS OF PHASE:

- ROM 0-135 °
- Full weight bearing
- Control pain, inflammation, effusion
- Increase lower extremity strength and endurance
- Enhance proprioception, balance, and coordination
- Complete readiness for sport specific activity

Phase 4-Weeks 12-36

ROM

Continue all stretching activities

STRENGTH

Continue all exercises from previous phases.

RUNNING PROGRAM

Water walking
Swimming (kicking)
Backward run

CUTTING PROGRAM

Lateral shuffle
Carioca, figure 8's

FUNCTIONAL TRAINING

Initiate light plyometric program

box hops, level, double-leg

Sport specific drills

MODALITIES

Ice 15-20 minutes as needed

GOALS OF PHASE:

- Enhance neuromuscular control
- Progress skill training
- Perform selected sports specific activity-unrestricted sporting activity
- Achieve maximal strength and endurance

Advanced weight training and sports specific drills are advised to maintain a higher level of competition. Isokinetic testing at 6 and 12 months may be recommended to guarantee maintenance of strength and endurance.

NO SQUATS OR LUNGES SAT ANY TIME!