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Knee Arthroscopy Physical Therapy Protocol

This rehabilitation protocol is designed for patients who have undergone knee arthroscopy or arthroscopic lateral release.

The **overall goals** of the surgical procedure 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 orthopaedic 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 clinical 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 immediately following a knee scope may increase the risk of an overuse injury or the possibility of compounding prior articular cartilage damages. Symptoms such as pain, swelling, or instability should be closely monitored by the patient.

Phase 1: Week 1-2

ROM 0-90 °

Passive, 0-90 °

Start stationary bike immediately, ensure seat is at the appropriate height, start with light resistance

Patellar mob.

Ankle pumps

Gastroc/soleus stretch

Prone hang if needed to reach goal

Heel/Wall slides if needed to reach goal

STRENGTH

Quad sets

Isometric hip adduction

SLR

Hip flexion

Heel raises/Toe raises

WEIGHT BEARING

WBAT

Crutches post-op only if needed

BALANCE TRAINING

Weight shift (side/side, fwd/bkwd)

Single leg balance

MODALITIES

E-stim/biofeedback as needed

Ice 15-20 minutes

GOALS OF PHASE:

- ROM 0-90 °
- Adequate quad/VMO contraction
- Control pain, inflammation, and effusion
- WBAT

Phase 2: Week 2-6

ROM 0-120°

Passive, 0-120°

Patellar mob.

Ankle pumps

Gastroc/soleus/hamstring stretch

Prone hang if needed to reach goal

Heel/Wall slides if needed to reach goal

Continue stationary bike, ensure seat is at the appropriate height, advance resistance

STRENGTH

Quad sets with biofeedback

SLR

Knee extension (90-5°)

Heel raises/Toe raises

Leg Press-single leg eccentric

Lateral/Forward step-up/down

WEIGHT BEARING

FWB with quad control

BALANCE TRAINING

Single leg balance

Sports cord balance/agility work

Wobble board work

½ Foam roller work

MODALITIES

Ice 15-20 minutes

GOALS OF PHASE:

- ROM 0-120°
- Adequate quad/VMO control
- Control pain, inflammation, and effusion
- Full weight bearing
- Increase lower extremity strength and endurance
- Enhance proprioception, balance, and coordination
- Complete readiness for sport specific activity.

Phase 3: Week 6-12

ROM 0-135°

Passive, 0-135°

HS/Gastroc/Soleus stretch

ITB/Quad stretch

Patella mob.

STRENGTH

SLR in 4 planes with ankle wt/tubing

Heel raise/Toe raise

Leg Press-single leg eccentric

Knee extension (90-5°) with resistance

Lateral/Forward step-up/downs

Hamstring curls with resistance (5-90 °)

BALANCE TRAINING

Two-legged balance board with plyotoss
½ Foam roller work
Wobble board work
Sports cord single-leg agility/balance

AEROBIC CONDITIONING

Bicycle with maximum resistance
Elliptical/StairMaster
Walking program
Swimming (kicking)

RUNNING PROGRAM

Initiate running on minitramp, progress to treadmill when tolerable
Increase walking program
Backward running

MODALITIES

Ice 15-20 minutes as needed

GOALS OF PHASE:

- ROM 0-135 °
- Full weight bearing with quad control
- Increase strength and endurance
- Control pain and swelling.

Phase 4: Week 12-24

ROM

Continue all stretching from previous phases

STRENGTH

Continue all strengthening activities from previous phases increasing weight and repetitions

BALANCE TRAINING

Continue all single-leg activities increasing difficulty

RUNNING/CONDITIONING PROGRAM

Bicycle with resistance for endurance
Elliptical/StairMaster for endurance
Increase running program
Increase walking program
Swimming for endurance

Backward running

CUTTING/AGILITY PROGRAM

Lateral shuffle

Figure 8's

FUNCTIONAL TRAINING

Initiate plyometric training

Sport specific drills

MODALITIES

Ice 15-20 minutes as needed

GOALS OF PHASE:

- Increase and maximize function
- Maximize strength and endurance
- Return to previous activity level
- Return to sport specific functional level

NO SQUATS OR LUNGES AT ANY POINT!