

Knee Arthroscopy/Lateral Release

Rehabilitation Protocol

Dr. Mark Adickes

Roger Clemens Institute
for Sports Medicine
& Human Performance

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Introduction:

- This rehabilitation protocol is designed for patients who have undergone knee arthroscopy or arthroscopic lateral release. The intensity allowed and the time frame required for the rehabilitation process is dependent upon the surgical procedure and the clinical assessment of Dr. Adickes.

Goals of rehabilitation are to:

- Control pain, swelling, and hemarthrosis
- Regain normal knee range of motion
- Regain a normal gait pattern and neuromuscular stability
- Regain normal lower extremity strength
- Regain normal proprioception, balance, and coordination

The physical therapy is to begin post-op day #3-5. It is extremely important for the supervised rehabilitation to be supplemented by a home fitness program.

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

Return to activity:

- It requires both time and regular clinic evaluation to safely and efficiently return to functional activity.
- Adequate strength, flexibility, and endurance are all necessary to return to high level function, all of which are addressed in this program.
- Isokinetic testing and functional evaluation are required to assess a patient's readiness to return to sport.
- Return to intense activities following a knee scope may increase the risk of an overuse injury or the possibility of compounding prior articular cartilage damages and symptoms such as pain, swelling, or instability should be closely monitored by the patient.

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Phase 1: Week 1-2

Range of Motion:

- Passive, 0-90°
- Patellar mobs
- Ankle pumps
- Gastroc/soleus stretch
- Prone hang if needed to reach goal
- Heel/Wall slides if needed to reach goal

Strength:

- Quad sets with E-stim/biofeedback
- Isometric hip adduction
- SLR in 4 planes
- Hip flexion
- Total gym (0-45°)
- Heel raises/Toe raises

Weight Bearing:

- PWB to WBAT according to Dr. Adickes
- Crutches post-op if needed

Balance Training:

- Weight shift (side/side, fwd/bkwd)
- Single leg balance

Modalities:

- E-stim/biofeedback as needed
- Ice 15-20 minutes

Goals for Phase 1:

- ROM 0-90°
- Adequate quad/VMO contraction
- Independent in HEP
- Control pain, inflammation, and effusion
- PWB to WBAT as noted by Dr. Adickes

Phase 2: Week 2-6

Range of Motion:

- Passive, 0-120°
- Patellar mobs
- Ankle pumps
- Gastroc/soleus/hamstring stretch
- Prone hang if needed to reach goal
- Heel/Wall slides if needed to reach goal

Strength:

- Multi-angle isometrics (0-60°)
- Quad sets with biofeedback
- SLR in a 4 planes
- Knee extension (90-10°)
- Heel raises/Toe raises
- Mini-squats (0-30°)
- Leg Press-single leg eccentric
- Multi-hip machine in 4 planes
- Reverse lunges-knee not to migrate over toe
- Lateral/Forward step-up/down

Bicycle:

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

Weight Bearing:

- FWB with quad control

Balance Training:

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

Modalities:

- Ice 15-20 minutes

Goals for Phase 2:

- 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

Range of Motion:

- Passive, 0-135°
- HS/Gastroc/Soleus stretch
- ITB/Quad stretch
- Patella mobs

Strength:

- SLR in 4 planes with ankle wt/tubing
- Heel raise/Toe raise
- Leg Press-single leg eccentric
- Knee extension (90-10°) with resistance
- Lateral/Forward step-up/downs
- Reverse lunges-knee not to migrate over toe
- Hamstring curls with resistance (0-90°)
- Multi-hip machine in 4 planes
- Mini-squats with resistance (0-45°)
- Stool crawl
- Straight leg deadlift

Balance Training:

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

Aerobic Conditioning:

- Bicycle with resistance
- EFX/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 for Phase 3:

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

Phase 4: Week 12-24

Range of Motion:

- 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
- EFX/StairMaster for endurance
- Increase running program
- Increase walking program
- Swimming for endurance
- Backward running

Cutting/ Agility Program:

- Lateral shuffle
- Carioca
- Figure 8's

Functional Training:

- Initiate plyometric training
- Sport specific drills

Modalities:

- Ice 15-20 minutes as needed

Goals for Phase 4:

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