

## **Knee Arthroscopy/Lateral Release Rehabilitation** **Dr. Robert Klitzman**

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. Klitzman. The protocol is divided into phases. Each phase is adaptable based on the individual patient and special circumstances.

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 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 3 to five days post-op. It is extremely important for the supervised rehabilitation program 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 include:

- 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 evaluations are both methods of evaluating a patient's readiness to return to activity. 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 2: Week 2-6**  
**Knee Scope**  
**Dr. Robert Klitzman**

<b>WEEK</b>	<b>EXERCISE</b>	<b>GOAL</b>
2-6	<p><b>ROM</b></p> <p>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 your goal</p> <p><b>STRENGTH</b></p> <p>Multi-angle isometrics (0-60°) Quad sets with biofeedback SLR in 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</p> <p><b>BICYCLES</b></p> <p>May initiate bike when 110° flexion is reached DO NOT use bike to increase flexion</p> <p><b>WEIGHT BEARING</b></p> <p>FWB with quad control</p> <p><b>BALANCE TRAINING</b></p> <p>Single leg balance with plyotoss Sports cord balance/agility work Wobble board work ½ Foam roller work</p> <p><b>MODALITIES</b></p> <p>Ice 15-20 minutes</p>	0-120°

**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 sports specific activity

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**Phase 3: Week 6-12**  
**Knee Scope**  
**Dr. Robert Klitzman**

<b>WEEK</b>	<b>EXERCISE</b>	<b>GOAL</b>
6-12	<p><b>ROM</b></p> <p>Passive, 0-135° HS/Gastroc/Soleus stretch ITB/Quad stretch Patella mobs</p> <p><b>STRENGTH</b></p> <p>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</p> <p><b>BALANCE TRAINING</b></p> <p>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</p> <p><b>AEROBIC CONDITIONING</b></p> <p>Bicycle with resistance EFX/Stairmaster Walking program Swimming (kicking)</p> <p><b>RUNNING PROGRAM</b></p> <p>Initiate running on minitramp, progress to treadmill when tolerable Increase walking program Backward running</p> <p><b>MODALITIES</b></p> <p>Ice 15-20 minutes</p>	0-135°

**GOALS OF PHASE:**

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

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**Phase 4: Week 12-24**  
**Knee Scope**  
**Dr. Robert Klitzman**

**WEEK**

**EXERCISE**

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  
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 OF PHASE:**

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