

Knee Arthroscopy/Lateral Release Rehabilitation **Dr. David R. Guelich**

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. Guelich. 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 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 3 to 5 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 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.

Dr. David R. Guelich
Phase 1: Week 1-2
Knee Scope

WEEK	EXERCISE	GOAL
1-2	<p>ROM</p> <p>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</p> <p>STRENGTH</p> <p>Quad sets with E-stim/biofeedback Isometric hip adduction SLR in 4 planes Hip flexion Total gym (0-45°) Heel raises/Toe raises</p> <p>WEIGHT BEARING</p> <p>PWB to WBAT according to Dr. Guelich Crutches post-op if needed</p> <p>BALANCE TRAINING</p> <p>Weight shift (side/side, fwd/bkwd) Single leg balance</p> <p>MODALITIES</p> <p>E-stim/biofeedback as needed Ice 15-20 minutes</p>	0-90°
		PWB-WBAT

GOALS OF PHASE:

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

**Phase 2: Week 2-6
Knee Scope**

WEEK	EXERCISE	GOAL
2-6	<p>ROM</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 goal</p> <p>STRENGTH</p> <p>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</p> <p>BICYCLE</p> <p>May initiate bike when 110° flexion is reached DO NOT use bike to increase flexion</p> <p>WEIGHT BEARING</p> <p>FWB with quad control</p> <p>BALANCE TRAINING</p> <p>Single leg balance with plyotoss Sports cord balance/agility work Wobble board work ½ Foam roller work</p> <p>MODALITIES</p> <p>Ice 15-20 minutes</p>	0-120°
		FWB

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
Knee Scope

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

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
Knee Scope**

WEEK
12-24

EXERCISE

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