

# 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 1-2

#### **EXERCISE**

GOAL

0-90°

ROM 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-WBAT** PWB to WBAT according to Dr. Guelich 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 OF PHASE:**

- ROM 0-90°
- Adequate guad/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

<b>WEEK</b> 2-6	<b>EXERCISE</b> ROM	<b>GOAL</b> 0-120°	
2-0	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	0-120	
	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 Lateral/Forward step-up/down BICYCLE May initiate bike when 110° flexion is rea 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 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

Knee Scope			
WEEK	EXERCISE	<b>GOAL</b>	
6-12	ROM	0-135°	
	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		
	1/2 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 t	0	
	treadmill when tolerable		
	Increase walking program		
	Backward running		
	MODALITIES		
	Ice 15-20 minutes as needed		
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### **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	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		
COALS OF PHASE			

# **GOALS OF PHASE:**

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