



Medial Collateral Ligament Reconstruction Rehabilitation Protocol*

This rehabilitation protocol was developed for patients who have had medial collateral ligament (MCL) major graft reconstructions. These patients frequently have a chronic condition and have failed conservative treatment. Any major reconstruction to the medial side of the knee carries a high risk of joint contracture. A high risk also exists for the development of saphenous neuritis symptoms since this major nerve has multiple branches around the site of the procedure. Quadriceps and hamstring control are critical to avoid valgus thrust loading and abnormal external tibial rotation during gait early postoperatively.

The protocol is divided into 7 phases according to postoperative weeks (for instance, Phase I = Postoperative Weeks 1-2). Each phase has several categories including:

- *General observation* of the patient's condition (weight bearing, pain, hemarthrosis, muscle control)
- *Evaluation* of specific variables with *goals* identified for each
- Treatment and exercise program, according to *frequency* and *duration*
- *Rehabilitation goals* which must be achieved to enter into the next phase

The **overall goals** of the reconstruction and rehabilitation are to:

- Control joint pain, swelling, hemarthrosis (minimal or none)
- Regain normal knee flexion and extension
- Regain a normal gait pattern and neuromuscular stability for ambulation
- Regain normal quadriceps, hamstring lower extremity muscle strength
- Regain normal proprioception, balance, and coordination for desired activities
- Achieve optimal functional outcome based on orthopaedic and patient goals

The supervised rehabilitation program is supplemented with a *home self-management program* which the patient performs on a daily basis. The therapist must evaluate the patient thoroughly to implement the enclosed protocol and should see the patient in the clinic for therapeutic procedures and modality treatments which are required for rehabilitation. The majority of this protocol can be accomplished at home provided patient cooperation and follow through are present. The approximate number of rehabilitation visits required for each phase are provided. Additional supervision may be required if a complication develops.

Important postoperative signs to monitor include:

- Swelling of the knee joint or soft tissues
- Abnormal pain response
- Abnormal gait pattern with or without assistive device
- Insufficient flexion or extension motions, limited patellar mobility
- Weakness (strength/control) of the lower extremity, especially the quads/hamstrings
- Insufficient lower extremity flexibility
- Abnormal medial joint opening early postoperatively

The patient is placed into one of four **sports activity** and **occupational activity categories** based on the following scales. It is expected that patients who follow this protocol desire to return to sports activity levels I or II, or very heavy/heavy occupations.

1. Cincinnati Knee Rating System Sports Activity Scale

(check one)

- Level I - jumping, hard pivoting, cutting sports (basketball, volleyball, football, gymnastics, soccer)
- Level II - running, twisting, turning (tennis, racquetball, handball, ice/field hockey, skiing, wrestling)
- Level III - light recreational sports (bicycling, swimming - no running, twisting, jumping)
- Level IV - no sports, activities of daily living only

2. Cincinnati Knee Rating System Occupational Rating Scale

Factor 1 sitting	Factor 2 standing/ walking	Factor 3 walking on uneven ground	Factor 4 squatting	Factor 5 climbing	Factor 6 lifting/ carrying	Factor 7 pounds carried
0 <input type="checkbox"/> 8-10 hrs/day	0 <input type="checkbox"/> 0 hrs/day	0 <input type="checkbox"/> 0 hrs/day	0 <input type="checkbox"/> 0 times/day	0 <input type="checkbox"/> 0 times/day	0 <input type="checkbox"/> 0 times/day	0 <input type="checkbox"/> 0-5 lbs
1 <input type="checkbox"/> 6-7 hrs/day	2 <input type="checkbox"/> 1 hrs/day	2 <input type="checkbox"/> 1 hrs/day	1 <input type="checkbox"/> 1-5 times/day	2 <input type="checkbox"/> 1 flight 2 times/day	1 <input type="checkbox"/> 1-5 times/day	1 <input type="checkbox"/> 6-10 lbs
2 <input type="checkbox"/> 4-5 hrs/day	4 <input type="checkbox"/> 2-3 hrs/day	4 <input type="checkbox"/> 2-3 hrs/day	2 <input type="checkbox"/> 6-10 times/day	4 <input type="checkbox"/> 3 flights 2 times/day	2 <input type="checkbox"/> 6-10 times/day	2 <input type="checkbox"/> 11-20 lbs
3 <input type="checkbox"/> 2-3 hrs/day	6 <input type="checkbox"/> 4-5 hrs/day	6 <input type="checkbox"/> 4-5 hrs/day	3 <input type="checkbox"/> 11-15 times/day	6 <input type="checkbox"/> 10 flights/ ladders	3 <input type="checkbox"/> 11-15 times/day	3 <input type="checkbox"/> 21-25 lbs
4 <input type="checkbox"/> 1 hrs/day	8 <input type="checkbox"/> 6-7 hrs/day	8 <input type="checkbox"/> 6-7 hrs/day	4 <input type="checkbox"/> 16-20 times/day	8 <input type="checkbox"/> ladders with weight 2-3 days/week	4 <input type="checkbox"/> 16-20 times/day	4 <input type="checkbox"/> 26-30 lbs
5 <input type="checkbox"/> 0 hrs/day	10 <input type="checkbox"/> 8-10 hrs/day	10 <input type="checkbox"/> 8-10 hrs/day	5 <input type="checkbox"/> > 20 times/day	8 <input type="checkbox"/> ladders daily with weight	5 <input type="checkbox"/> > 20 times/day	5 <input type="checkbox"/> > 20 lbs

_____ points x 2 = _____ total points

Occupation Rating

Total Points

- Disabled 0
- Very light 1-20
- Light 21-40
- Moderate 41-60
- Heavy 61-80
- Very heavy > 80

Physical Therapy Visit Timeline*

Phase	Weeks Postoperative	Minimum # Visits	Maximum # Visits
1	1-2	2	4
2	3-4	2	4
3	5-6	1	2
4	7-8	1	2
5	9-12	1	2
6	13-26	2	3
7	27-52	2	4
Total		11	21

*Physician Notification

The physician will be notified if the patient (1) fails to meet the expected goals for each phase of the protocol, (2) has a persistent joint effusion, (3) develops a chronic pain syndrome, (4) develops abnormal medial joint opening, (5) complains of giving-way, (6) has difficulty with ambulation, or (7) has a limitation of knee motion or patellar mobility.

These problems could result in a modification of this protocol and necessitate further visits to the physical therapist.

Discharge Criteria (If goals for sports and occupation place patient into different categories, use category with highest functional demand criteria. For symptoms, use Symptom Rating Form found on next page.)

*Sports Activity Level I or Heavy/Very Heavy Occupational Rating**

No pain, swelling, giving-way with level 10 on Symptom Rating Form

KT-2000 < 3 mm (I-N, 134 N, total A/P)

Biodex strength testing: quadriceps & hamstrings strength \geq 85% of opposite limb

Function testing: 2 hop tests, limb symmetry \geq 85%

*Sports Activity Level II or Moderate Occupational Rating**

No pain, swelling, giving-way with level 8 on Symptom Rating Form

KT-2000 < 3 mm (I-N, 134 N, total A/P)

Biodex strength testing: quadriceps & hamstrings strength \geq 80% of opposite limb

Function testing: 2 hop tests, limb symmetry \geq 85%

Sports Activity Level III or Light Occupational Rating

No pain, swelling, giving-way with level 6 on Symptom Rating Form

KT-2000 3-5 mm (I-N, 134 N, total A/P)

Biodex strength testing: quadriceps & hamstrings strength \geq 70% of opposite limb

Function testing: 2 hop tests, limb symmetry \geq 75%

Sports Activity Level IV (ADL) or Very light Occupational Rating

No pain, swelling, giving-way with level 4 on Symptom Rating Form

KT-2000 3-5 mm (I-N, 134 N, total A/P)

Biodex strength testing: quadriceps & hamstrings strength < 70% of opposite limb

Function testing: 2 hop tests, limb symmetry < 75%

*patients desiring to return to sports or strenuous work activities may require 4-6 more physical therapy visits during postoperative weeks 25-52 for advanced neuromuscular, strength, and activity-specific training to prevent reinjury.

Cincinnati Knee Rating System Symptom Rating Form

Scale	Description
10	Normal knee, able to do strenuous work/sports with jumping, hard pivoting
8	Able to do moderate work/sports with running, turning and twisting; symptoms with strenuous work/sports
6	Able to do light work/sports with no running, twisting or jumping; symptoms with moderate work/sports
4	Able to do activities of daily living alone; symptoms with light work/sports
2	Moderate symptoms (frequent, limiting) with activities of daily living
0	Severe symptoms (constant, not relieved) with activities of daily living

1. PAIN (circle one)

10 — 8 — 6 — 4 — 2 — 0

2. SWELLING (circle one)

10 — 8 — 6 — 4 — 2 — 0

3. PARTIAL GIVING-WAY (circle one) (partial knee collapse, no fall to the ground)

10 — 8 — 6 — 4 — 2 — 0

4. FULL GIVING-WAY (circle one) (knee collapse occurs with actual falling to the ground)

10 — 8 — 6 — 4 — 2 — 0

Return to Activities Warning

Return to strenuous activities after major knee ligament surgery carries the definite risk of a repeat injury or the potential of compounding the original injury. These risks cannot always be scientifically assessed. Patients are warned to return to athletic activities carefully and to avoid any activity in which symptoms of pain, swelling, or a feeling of instability are present.

References

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- Haimes JL, Wroble RR, Grood ES, Noyes FR: Role of the medial structures in the intact and anterior cruciate ligament-deficient knee. Limits of motion in the human knee. *Am J Sports Med* 22: 402-409, 1994.



**Cincinnati SportsMedicine and Orthopaedic Center
Rehabilitation Protocol Summary for
Medial Collateral Ligament Reconstruction**

	Postoperative Weeks					Postop Months			
	1-2	3-4	5-6	7-8	9-12	4	5	6	7-12
Brace: Bledsoe 0° locked Custom medial unloader	X	X	X	X	X	X	X	X	X
Range of motion minimum goals: 0°-90° 0°-110° 0°-120° 0°-130°	X	X	X	X					
Weight bearing: None Toe touch - 1/4 body weight 1/4 to 1/2 body weight Full	X	X	X	X					
Patella mobilization	X	X	X	X	X				
Modalities: Electrical muscle stimulation (EMS) Pain/edema management (cryotherapy)	X	X	X	X	X	X	X	X	X
Stretching: Hamstring, gastroc-soleus, iliotibial band, quadriceps	X	X	X	X	X	X	X	X	X
Strengthening: Quad isometrics, straight leg raises Active knee extension Closed-chain: gait retraining, toe raises, wall sits, mini-squats Knee flexion hamstring curls (90°) Knee extension quads (90°-30°) Hip abduction-adduction, multi-hip Leg press (70°-10°)	X	X	X	X	X				
Balance/proprioceptive training: Weight-shifting, mini-trampoline, BAPS, KAT, plyometrics					X	X	X	X	X
Conditioning: UBE Bike (stationary) Aquatic program Swimming (kicking) Walking Stair climbing machine Ski machine		X	X	X					
Running: straight									X
Cutting: lateral carioca, figure 8's									X
Full sports									X

BAPS = Biomechanical Ankle Platform System (Camp, Jackson, MI), KAT = Kinesthetic Awareness Trainer (Breg, Inc., Vista, CA), UBE = upper body ergometer.

Cincinnati SportsMedicine and Orthopaedic Center Rehab Protocol: MCL

Phase 1. Weeks 1-2 (Visits: 2-4)

General Observation	<ul style="list-style-type: none"> ■ Non weight bearing, maximum protection ■ Brace locked at 0° (motion exercises 3-4 times/day) ■ Avoid valgus loads, abnormal external tibial rotation 	
Evaluation	<ul style="list-style-type: none"> ■ Pain ■ Hemarthrosis ■ Patellar mobility ■ ROM minimum ■ Quadriceps contraction & patella migration ■ Soft tissue contracture 	<p align="center">Goals</p> <p>Controlled Mild Good 0°-90° Good None</p>
<p>Frequency 3-4 x/day 10 minutes</p> <p>3 x/day 15 minutes</p> <p>As required</p>	<p>Range of motion ROM (passive, 0°-90°) Patella mobilization Ankle pumps (plantar flexion with resistance band) Hamstring, gastroc-soleus stretches</p> <p>Strengthening Straight leg raises (flexion) Active quadriceps isometrics Knee extension (active-assisted, 90°-30°, per quad control)</p> <p>Modalities Electrical muscle stimulation Cryotherapy</p>	<p align="center">Duration</p> <p>5 reps x 30 secs</p> <p>3 sets x 10 reps 1 set x 10 reps 3 sets x 10 reps</p> <p>20 minutes 20 minutes</p>
Goals	<ul style="list-style-type: none"> ■ ROM 0°-90° ■ Adequate quadriceps contraction ■ Control inflammation, effusion 	

Cincinnati SportsMedicine and Orthopaedic Center Rehab Protocol: MCL
Phase 2. Weeks 3-4 (Visits: 2-4)

General Observation	<ul style="list-style-type: none"> ■ Non weight bearing, maximum protection ■ Brace locked at 0° (motion exercises 3-4 times/day) ■ Avoid valgus loads, abnormal external tibial rotation 	
Evaluation	<ul style="list-style-type: none"> ■ Pain ■ Effusion ■ Patellar mobility ■ ROM minimum ■ Quadriceps contraction & patella migration ■ Soft tissue contracture 	<p align="center">Goals</p> <p>Controlled Mild Good 0°-90° Good None</p>
<p>Frequency 3-4 x/day 10 minutes</p> <p>2-3 x/day 20 minutes</p> <p>2 x/day 10 minutes</p> <p>As required</p>	<p>Range of motion ROM (passive, 0°-90°) Patella mobilization Ankle pumps (plantar flexion with resistance band) Hamstring, gastroc-soleus stretches</p> <p>Strengthening Straight leg raises (flexion) Isometric training: multi-angle (0°, 60°) Knee extension (active-assisted, 90°-30°, per quad control)</p> <p>Aerobic conditioning UBE</p> <p>Modalities Electrical muscle stimulation Cryotherapy</p>	<p align="center">Duration</p> <p>5 reps x 30 secs</p> <p>3 sets x 10 reps 1 set x 10 reps 3 sets x 10 reps</p> <p>20 minutes 20 minutes</p>
Goals	<ul style="list-style-type: none"> ■ ROM 0°-90° ■ Control inflammation, effusion ■ Muscle control 	

Cincinnati SportsMedicine and Orthopaedic Center Rehab Protocol: MCL
Phase 3. Weeks 5-6 (Visits: 1-2)

General Observation	<ul style="list-style-type: none"> ■ Partial (25%) weight bearing when: - Pain controlled without narcotics - Hemarthrosis controlled - ROM 0°-100° - Muscle control throughout ROM 	<ul style="list-style-type: none"> ■ Custom lateral unloader brace ■ Avoid valgus loads
Evaluation	<ul style="list-style-type: none"> ■ Pain ■ Effusion ■ Patellar mobility ■ ROM ■ Muscle control ■ Inflammatory response 	<p align="center">Goals</p> <p>Mild/No RSD Minimal Good 0°-110° 3/5 None</p>
<p>Frequency</p> <p>3 x/day 10 minutes</p> <p>2 x/day 20 minutes</p> <p>2 x/day 10 minutes</p> <p>As required</p>	<p>Range of motion</p> <p>ROM (passive, 0°-110°) Patella mobilization Hamstring, gastroc-soleus stretches</p> <p>Strengthening</p> <p>Straight leg raises (ankle weight, not to exceed 10% of body weight) Isometric training: multi-angle (90°, 60°, 30°) Closed-chain - Mini-squats Knee extension (active, 90°-30°)</p> <p>Aerobic conditioning (patellofemoral precautions) UBE</p> <p>Gait retraining (risk for stretching reconstruction with resumption of weight bearing) Muscle control quads & hams Walk with toe-in gait, avoid toe-out valgus position Observe gait for any tendency for valgus thrust or external tibial rotation Smooth stance phase flexion pattern</p> <p>Modalities</p> <p>Electrical muscle stimulation Cryotherapy</p>	<p align="center">Duration</p> <p>5 reps x 30 secs</p> <p>3 sets x 10 reps 2 sets x 10 reps</p> <p>3 sets x 20 reps 3 sets x 10 reps</p> <p>20 minutes 20 minutes</p>
Goals	<ul style="list-style-type: none"> ■ ROM 0°-110° ■ Control inflammation, effusion ■ Muscle control ■ Early recognition complications (motion, RSD, patellofemoral) ■ 25% weight bearing 	

Cincinnati SportsMedicine and Orthopaedic Center Rehab Protocol: MCL
Phase 4. Weeks 7-8 (Visits: 1-2)

General Observation	<ul style="list-style-type: none"> ■ Partial (25-50%) weight bearing when: - Pain controlled - Hemarthrosis controlled - ROM 0°-120° - Voluntary quad contraction achieved 	<ul style="list-style-type: none"> ■ Custom lateral unloader brace
Evaluation	<ul style="list-style-type: none"> ■ Pain ■ Effusion ■ Patellar mobility ■ ROM ■ Muscle control ■ Inflammatory response 	<p align="center">Goals</p> <p>Mild/No RSD Minimal Good 0°-120° 4/5 None</p>
<p>Frequency</p> <p>2 x/day 10 minutes</p> <p>2 x/day 20 minutes</p> <p>3 x/day 5 minutes</p> <p>1-2 x/day 15 minutes</p> <p>As required</p>	<p>Range of motion ROM (0°-120°) Hamstring, gastroc-soleus stretches Patella mobilization</p> <p>Strengthening Straight leg raises (flexion, extension, abduction, adduction) Straight leg raises, rubber tubing Knee extension (active, 90°-30°) Closed-chain - Wall sits - Mini-squats (rubber tubing, 0°-30°)</p> <p>Balance training Cup walking</p> <p>Aerobic conditioning UBE</p> <p>Gait retraining Progress program Continue to observe for valgus thrust, external tibial rotation</p> <p>Modalities Electrical muscle stimulation Cryotherapy</p>	<p align="center">Duration</p> <p>5 reps x 30 secs</p> <p>3 sets x 10 reps 3 sets x 30 reps 3 sets x 10 reps</p> <p>to fatigue x 3 3 sets x 20 reps</p> <p>20 minutes 20 minutes</p>
Goals	<ul style="list-style-type: none"> ■ 50% weight bearing ■ Muscle control ■ Control inflammation, effusion ■ ROM 0°-120° 	

Cincinnati SportsMedicine and Orthopaedic Center Rehab Protocol: MCL
Phase 5. Weeks 9-12 (Visits: 1-2)

General Observation	<ul style="list-style-type: none"> ■ Full weight bearing when: <ul style="list-style-type: none"> - Pain, effusion controlled - Muscle control throughout ROM ■ ROM 0°-130° ■ Custom lateral unloader brace 	
Evaluation	<ul style="list-style-type: none"> ■ Pain ■ Manual muscle test Hamstrings, quadriceps, hip abductors/adductors/flexors/extensors ■ Swelling ■ Patellar mobility ■ Crepitus ■ Gait 	<p align="center">Goals</p> <p>Minimal/No RSD 4/5</p> <p>Minimal Good None/slight Symmetrical</p>
<p>Frequency</p> <p>2 x/day 10 minutes</p> <p>2 x/day 20 minutes</p> <p>3 x/day 5 minutes</p> <p>1 x/day 15-20 minutes</p> <p>As required</p>	<p>Range of motion Hamstring, gastroc-soleus, quad, ITB stretches Patellar mobilization</p> <p>Strengthening Straight leg raises Straight leg raises, rubber tubing Hamstring curls (week 12, active, 0°-90°) Knee extension with resistance (90°-30°) Leg press (70°-10°) Closed-chain <ul style="list-style-type: none"> - Wall sits - Mini-squats (rubber tubing, 0°-40°) - Lateral step-ups (2-4" block) Multi-hip machine (flexion, extension, abduction, adduction)</p> <p>Balance training Cup walking</p> <p>Aerobic conditioning (patellofemoral precautions) Water walking Swimming (straight leg kicking) Stationary bicycling Stair machine (low resistance, low stroke)</p> <p>Modalities Cryotherapy</p>	<p align="center">Duration</p> <p>5 reps x 30 secs</p> <p>3 sets x 10 reps 3 sets x 30 reps 3 sets x 10 reps 3 sets x 10 reps 3 sets x 10 reps</p> <p>to fatigue x 3 3 sets x 20 reps 3 sets x 10 reps 3 sets x 10 reps</p> <p>20 minutes</p>
Goals	<ul style="list-style-type: none"> ■ Increase strength and endurance ■ ROM 0°-130° ■ Normal gait without valgus, external tibial rotation 	

Cincinnati SportsMedicine and Orthopaedic Center Rehab Protocol: MCL
Phase 6. Weeks 13-26 (Visits: 2-3)

General Observation	<ul style="list-style-type: none"> ■ No effusion, painless ROM, joint stability ■ Performs activities of daily living, can walk 20 minutes without pain ■ ROM 0°-130° 	<ul style="list-style-type: none"> ■ Custom lateral unloader brace
Evaluation	<ul style="list-style-type: none"> ■ Pain ■ Manual muscle test ■ Swelling ■ Patellar mobility ■ Crepitus ■ Gait 	<p align="center">Goals</p> <ul style="list-style-type: none"> Minimal/No RSD 4/5 Minimal Good None/slight Symmetrical
<p>Frequency</p> <p>2 x/day 10 minutes</p> <p>2 x/day 20 minutes</p> <p>1-3 x/day 5 minutes</p> <p>3 x/week 20 minutes</p> <p>As required</p>	<p>Range of motion Hamstring, gastroc-soleus, quad, ITB stretches</p> <p>Strengthening Straight leg raises, rubber tubing (high speed) Hamstring curls (active, 0°-90°) Knee extension with resistance (90°-30°) Leg press (70°-10°) Multi-hip machine (flexion, extension, abduction, adduction) Closed-chain: Mini-squats (rubber tubing, 0°-40°)</p> <p>Balance training Balance board/2 legged Single leg stance</p> <p>Aerobic conditioning (patellofemoral precautions) Stationary bicycling Water walking Swimming (kicking) Walking Stair machine (low resistance, low stroke) Ski machine (short stride, level, low resistance)</p> <p>Modalities Cryotherapy</p>	<p align="center">Duration</p> <p>5 reps x 30 secs</p> <p>3 sets x 30 reps 3 sets x 10 reps 3 sets x 10 reps 3 sets x 10 reps 3 sets x 10 reps 3 sets x 20 reps</p> <p>20 minutes</p>
Goals	<ul style="list-style-type: none"> ■ Increase strength and endurance 	

Cincinnati SportsMedicine and Orthopaedic Center Rehab Protocol: MCL

Phase 7. Weeks 27-52 (Visits: 2-3)

General Observation	<ul style="list-style-type: none"> ■ No effusion, painless ROM, joint stability ■ Performs ADL, can walk 20 minutes without pain 	<ul style="list-style-type: none"> ■ Custom lateral unloader brace 	
Evaluation	<ul style="list-style-type: none"> ■ Isometric test (% diff quads & hams) ■ Swelling ■ Patellar mobility ■ Crepitus 		<p align="center">Goals</p> <p>10-15 None Good None/slight</p>
<p>Frequency</p> <p>2 x/day 10 minutes</p> <p>1 x/day 20-30 minutes</p> <p>1-3 x/day 5 minutes</p> <p>3 x/week 20-30 minutes</p> <p>3 x/week 15-20 minutes</p> <p>3 x/week</p> <p>3 x/week</p> <p>As required</p>	<p>Range of motion Hamstring, gastroc-soleus, quad, ITB stretches</p> <p>Strengthening Straight leg raises, rubber tubing (high speed) Hamstring curls (0°-90°) Knee extension with resistance (90°-30°) Leg press (70°-10°) Multi-hip machine (flexion, extension, abduction, adduction) Closed-chain: Mini-squats (rubber tubing, 0°-40°)</p> <p>Balance training Balance board/2 legged Single leg stance</p> <p>Aerobic conditioning (patellofemoral precautions) Stationary bicycling Water walking Swimming (kicking) Walking Stair machine (low resistance, low stroke) Ski machine (short stride, level, low resistance)</p> <p>Running program (9 mos. minimum, straight, 30% deficit isometric test) Jog Walk Backward run</p> <p>Cutting program (12 mos. minimum, 20% deficit isometric test) – lateral, carioca, figure 8's</p> <p>Functional training (12 mos. minimum) Plyometric training: box hops, level, double-leg Sport specific drills (10-15% deficit isometric test)</p> <p>Modalities Cryotherapy</p>		<p align="center">Duration</p> <p>5 reps x 30 secs</p> <p>3 sets x 30 reps 3 sets x 10 reps 3 sets x 10 reps 3 sets x 10 reps 3 sets x 10 reps 3 sets x 20 reps</p> <p>1/4 mile 1/8 mile 20 yards 20 yards 15 secs, 4-6 sets 20 minutes</p>
Goals	<ul style="list-style-type: none"> ■ Increase function ■ Return to previous activity level 		<ul style="list-style-type: none"> ■ Maintain strength,