



# Physical Therapy Protocol

## ACL Reconstruction

### Patient Checklist

#### Weightbearing:

- WBAT post op day 1
- Discontinue crutches when they have a normal gait pattern

#### Bledsoe brace:

- Unlock after pt has quad control

#### General Guidelines:

- Ice & elevation 3x a day for 15 minutes with leg elevated
- Low load long duration knee extension stretching during icing until full knee extension
- No isolated hamstring flexion for 12 weeks with hamstring graft

#### Questions?

Orthopaedics:  
(603) 650-5133

Rehabilitation Medicine:  
(603) 650-3600

#### Phase I: 0-2 Weeks

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 12 | 16 | 20 | 24 |
|--|---|---|---|---|---|---|---|---|---|----|----|----|----|----|
| Knee extension stretching  | ● | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| Progressive knee flexion ROM/stretching  | ● | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| Patellar mobs/soft tissue  | ● | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| Isometric quads/hamstrings   | ● | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| Ankle pumps  | ● | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| Stretch major muscle groups  | ● | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| SLR 4 ways   | ● | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| Bridges  | ● | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| Terminal knee extension  | ● | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| Hamstring curls (defer isolated hamstring contraction for 12 weeks with hamstring graft) | ● | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| Stationary bike  | ● | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| EMS muscle re-education  | ● | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |

#### Phase II: 2-6 Weeks

|   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 12 | 16 | 20 | 24 |
|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|
| Continue ROM exercises (as needed)            | ● | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| Isometric quads at varying degrees of flexion |   | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| CKC double leg exercises                      |   | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| Proprioceptive training                       |   | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| Calf raises                                   |   | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| Bilateral leg press                           |   | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| Core conditioning program                     |   | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| Progress gym based strengthening              |   | ● | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| CKC single leg progression                    |   |   | ● | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| Step ups/downs                                |   |   |   | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| Lateral step up and downs                     |   |   |   |   | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| Single leg squats                             |   |   |   |   |   | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |

#### Phase III: 6-12 Weeks

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 12 | 16 | 20 | 24 |
|--|---|---|---|---|---|---|---|---|---|----|----|----|----|----|
| Continue strengthening through increased load    |   |   |   |   |   | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| Lunges   |   |   |   |   | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| Resisted knee extension 90-45°                   |   |   |   | ● | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| Perturbation training                            |   |   |   |   | ● | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| Hopping progression from bilateral to unilateral |   |   |   |   |   | ● | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |
| Jump rope  |   |   |   |   |   |   | ● | ● | ● | ●  | ●  | ●  | ●  | ●  |

#### Phase IV: Return to Sports >12 Weeks

|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 12 | 16 | 20 | 24 |
|--|---|---|---|---|---|---|---|---|---|----|----|----|----|----|
| Resisted knee extension through full range                   |   |   |   |   |   |   |   |   |   |    | ●  | ●  | ●  | ●  |
| Bilateral plyometrics  |   |   |   |   |   |   |   |   |   |    | ●  | ●  | ●  | ●  |
| Running progression  |   |   |   |   |   |   |   |   |   |    | ●  | ●  | ●  | ●  |
| Sport test exercises   |   |   |   |   |   |   |   |   |   |    | ●  | ●  | ●  | ●  |
| Advance plyometrics (hop test/sprinting)                     |   |   |   |   |   |   |   |   |   |    |    | ●  | ●  | ●  |
| Multi-plane agility/running patterns (beginning @ 50% speed) |   |   |   |   |   |   |   |   |   |    |    | ●  | ●  | ●  |
| Sport specific drills  |   |   |   |   |   |   |   |   |   |    |    | ●  | ●  | ●  |

# Physical Therapy Protocol

## ACL Reconstruction

### Phase I: 0-2 Weeks

**Goals:**

- Crutch Use: WBAT- progress from crutches when able with normal gait to straight leg raise without leg
- Brace Use/Ambulation: Unlock brace when able to perform straight leg raise without lag
- Minimize Pain and Effusion - Compression wrap, elevation, ice
- Maintain Full Knee Extension and progress knee flexion
- Restore Quad Activation

**Exercises:**

- Knee PROM with goal of full extension to contralateral knee
- Progressive quad strengthening
- Proprioceptive training

### Phase II: 2-6 Weeks

**Goals:**

- Crutch use: Wean, discontinue crutches when able
- Minimize Effusion and Pain
- Promote Knee Flexion:
  - a) 90° by end of week 2
  - b) >130° by end of week 6

**Exercises:**

- Stationary Bike for ROM
- Progress strengthening both CKC & OKC
- Progress proprioceptive training

### Phase III: 6-12 Weeks

**Goals:**

- Full ROM
- Enhance Strength during ADLs
- Enhance Proprioception/Balance
- Improve Local Muscular Endurance
- Initiate Cardiovascular training

**Exercises:**

- Progress to gym based strengthening

### Phase IV: Return to Sports >12 Weeks

**Goals:**

- No pain with ADLs
- Gradual Return to unrestricted sports at 24 weeks if following criteria are met:
  - ✓ Return to sport test

**Exercises:**

- Initiate running program
- Begin bilateral low level plyometrics and progress as able
- Begin agility drills and sport specific activities as able
- Pass return to sport test ( at 24 weeks post op)
- Acceptable scores on subjective measures (ACL-RSI, TSK-11)

**Questions?**

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