**Altru Advanced Orthopedics ACL Non-Operative Protocol**

The intent of this protocol is to provide the therapist with a guideline for the rehab of a patient who has had an ACL tear and is being treated non-operatively. It is not intended to be a substitute for appropriate clinical decision making regarding the progression of a patient’s rehab. The actual therapy plan of care must be based on the physical exam and findings, individual progress, any complications, and/or co-morbidities. If a therapist needs assistance or has questions regarding the progression of a patient they should consult the referring provider.

**Contraindications/Precautions for Treatment:**
- Avoid activities that cause locking of the knee
- Avoid open chain exercises that may cause excessive anterior translation of the tibia on the femur (limit arc of motion from 100° of knee flexion to 30° of knee flexion)
- Avoid continued or worsening pain with progression of PT treatments

**PHASE I: Week 0-3**

**PRECAUTIONS:**
- Emphasize static stability control initially

**GOALS:**
- Reduce edema
- Reduce pain and inflammation
- Improve ROM
- Reestablish quad muscle firing
- Initiate static control exercises standing
- Gait Training

**IMMOBILIZATION:**
- ACL brace worn with all functional activities

**WEIGHT BEARING:**
- Weight bearing as tolerated/WBAT

**THERAPEUTIC EXERCISE:**

1. **ROM**
   - Progress knee flex/ext ROM, overpressure as tolerated
   - Heel slides, supine wall slides, prone hang
   - Stretches: quad, ham, calf, ITB, hip flexor, hip rotators

2. **Strengthening:**
• Knee flexion: prone and standing
• SLR: flex, ext, abd, add
• Theraband hip strengthening
• Standing heel raises
• Core strengthening
• Stationary bike
  • Starting at low resistance
  • Progress time and resistance as tolerated

3. Balance/Proprioception:
• Standing weight shifts
• Single leg stance

MANUAL THERAPY:
• Patellar mobs
• Soft tissue mobilization

MODALITIES:
• Cryotherapy
• E-stim for quad tone facilitation (VMO) and hamstring co-contraction

**PHASE II: Weeks 4-6**

**GOALS:**
• Improve knee ROM to full flexion and extension
• Improve strength
• Improve static and dynamic control standing

**IMMOBILIZATION:**
• Continue hinged brace with ADLs

**WEIGHT BEARING:**
• Full weight bearing/FWB

**THERAPEUTIC EXERCISE:**

1. **ROM**
   • Stationary bike
   • Therapist intervention to increase knee ROM as needed

2. **Strengthening**
   • Continue Phase I exercises
     • Progress with weight as control improves
- Advance core strengthening exercises
- Wall squat: ½ depth
- Leg press ≤ 90° knee flex
- Lateral and forward step-ups: 2-8 inches
- Step overs
- Leg curl: limited range 10-90° flex initially
- Leg extension: full ROM, no weight initially
- Terminal knee extension

3. Balance/Proprioception
   - BAPs, Air-ex, ½ foam roll, BOSU, wobble board
   - Perturbation training
   - Progress functional control, dynamic balance, and agility activities as able

4. Running progression:

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<td>Trace or less effusion, 80% or &gt; strength, understand soreness rules (below)</td>
<td>1.</td>
<td>2.</td>
<td>3.</td>
<td>4.</td>
<td>5.</td>
<td>No more than 4 times/week and only every other day.</td>
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<td>Do not progress more than 2 levels in 7 days.</td>
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**Soreness Rules**

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<th>Criterion</th>
<th>Action</th>
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<tr>
<td>1. Soreness during warm-up that continues</td>
<td>2 days off, drop down 1 step</td>
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<td>2. Soreness during warm-up that goes away</td>
<td>Stay at step that led to soreness</td>
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<td>3. Soreness during warm-up that goes away but redevelops during session</td>
<td>2 days off, drop down 1 step</td>
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<td>4. Soreness the day after lifting (Not muscle soreness)</td>
<td>1 day off, do not advance program to the next step</td>
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<td>5. No soreness</td>
<td>Advance 1 step per week or as instructed by healthcare professional</td>
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**PHASE III: WEEKS 7-12**

GOALS:
• Full knee flex/extension strength vs uninvolved side
• Good control with static and dynamic weight bearing activities
• Good dynamic balance/proprioception with routine ADLs
• Knee Outcome Survey Score ≥80%

THERAPEUTIC EXERCISE:

1. ROM
   • Continue with previous exercises as needed
   • Continue warm-up and stretching routine
2. Strengthening
   • Continue Phase II exercises as needed
   • Advance core and hip strengthening exercises
3. Advance Proprioception and dynamic balance activities
   • Single leg stance short knee bend
   • Single leg stance squat/reach with uninvolved LE
   • SLS ball toss/Rebounder
   • Incorporate lateral and diagonal motions
   • Incorporate various surfaces to increase difficulty
   • Incorporate trunk motions to enhance core stability
   • Incorporate plyometric training and agility activities

RETURN TO SPORT CRITERIA:

• Complete return to sport assessment
• Knee Outcome Survey sports (≥80%)
• Cybex Isokinetic testing
• Functional Hop Testing (limb symmetry of >90%)

CRITERIA FOR D/C FROM THERAPY:

• All patient and therapist goals met
• Pt able to return to all ADLS, and full work/sport activities
• Pt is independent with a HEP