High Tibial Osteotomy and Anterior Cruciate Ligament Reconstruction Rehabilitation Program

Name: ___________________________________________ Date: ________________________

Diagnosis: _________________________________________ Date of Surgery: ________________

- **Phase I – Immediate Postoperative Phase (Day 1-5)**
  - **Goals:**
    - Diminish swelling/inflammation (control hemarthrosis)
    - Diminish postoperative pain
    - Initiate voluntary quadriceps control
    - Independent ambulation
  - **Brace:**
    - Brace for ambulation only (POD 1 to Week 6)
  - **Weight-bearing**
    - Non-weightbearing x 6 weeks
  - **Swelling/Inflammation Control**
    - Cryotherapy
    - Compression bandages
    - Elevation & ankle pumps
  - **Range of Motion**
    - Full passive knee extension
    - Flexion to 45° (day 1-4)
    - Flexion to 60° (day 5)
    - PROM and gentle AAROM only
  - **Flexibility**
    - Hamstring and calf stretches
    - PROM/AAROM within ROM limitations

- **Phase II – Acute Phase (Week 2-8)**
  - **Goals:**
    - Control swelling and pain
    - Promote healing of realignment tibial tuberosity
    - Quadriceps strengthening
  - **Brace**
    - Continue brace for ambulation only
    - Discontinue brace (week 8)
  - **Weight-bearing**
    - Unlock brace for ambulation week 4
    - Non-weight bearing x 6 weeks
    - Partial weight-bearing 6-8 weeks
    - Discontinue Crutches at Week 8
  - **Swelling/inflammation**
    - Continue use of cryotherapy
    - Compression bandage
    - Elevation
  - **Range of motion**
    - PROM/AAROM exercises
• ROM 0-75° (week 1-3)
• ROM 0-90° (week 4)

• Muscle Retraining
  o Electrical muscle stimulation to quads
  o Quad setting isometrics
  o Straight leg raises (flexion)
  o Hip adduction/abduction
  o Hip extension
  o GENTLE submaximal isometric knee extension
  o Week 4
    ▪ Light leg press
    ▪ Vertical squats (no weight)

• Flexibility
  o Continue hamstring, calf stretches

Phase III – Subacute Phase “Motion” Phase (Week 9-11)

• Goals
  o Gradual improvement in ROM
  o Improve muscular strength and endurance
  o Control forces on extension mechanism

• Weight-bearing
  o One crutch (week 4-6)
  o Discontinue crutch (week 6)

• Range of motion
  o PROM 0-115°
  o PROM 0-125°
  o PROM 0-125/135°

• Exercises
  o Continue electrical muscle stimulation to quadriceps
  o Quadriceps setting isometric
  o Hip adduction, abduction, and extension
  o Vertical squats
  o Leg press
  o Knee extension light (0-60°)
  o Bicycle (week 6-8)
  o Pool program [walking, strengthening (when able)]

• Flexibility
  o Continue all stretching exercises for LE

Phase IV – Strengthening Phase (weeks 12-16)

• Criteria to Progress to Phase IV
  o ROM at least 0-115 degrees
  o Absence of swelling/inflammation
  o Voluntary control of quads

• Goals
  o Gradual improvement of muscular strength
  o Functional activities/drills

• Exercises
  o ½ vertical squats (0-60°)
  o Wall squats (0-60°)
  o Leg press
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- Forward lunges
- Lateral lunges
- Lateral step-ups
- Knee extension (60-0°)
- Hip adduction/abduction
- Bicycle
- Stairmaster

Phase V – Return to Activity Phase
- Criteria to enter Phase V
  - Full non-painful ROM
  - Appropriate strength level (80% or greater of contralateral leg)
  - Satisfactory clinical exam
- Goals
  - Functional return to specific drills
- Exercises
  - Functional drills
  - Strengthening exercises
  - Flexibility exercises

Comments:

Frequency: _____ times per week    Duration: ______ weeks

Signature: ___________________________    Date: _____________________