Najib Ussef, MD
Orthopedic Surgery

Non-Operative Rehabilitation Program for PCL-Deficient Knee

Name: _____ **Date:** _____

Diagnosis: _____ **Date of Surgery:** _____

☐ **PHASE 1 -PROTECTION PHASE (Day 1- Week 4)**
- **Day 1-5**
  - Brace ROM: 0-70°
  - Weight-bearing: two crutches as tolerated
  - Muscle Stimulation: muscle stimulation to quads
  - Exercises
    - Quad sets
    - Straight leg raises (all 4 planes)
    - Knee extension (60° to 0°)
    - Multi-angle isometrics at 60°, 40°, 20° (for quads)
    - Mini squats (0-50°)
    - Leg press (45-90°)
- **Day 5-7**
  - Brace ROM: 0-90°
  - Weight-bearing: progress as tolerated
  - Exercises
    - Continue all strengthening exercises
    - Initiate wall squats
    - Initiate proprioception training
- **Weeks 2-3**
  - Brace ROM: 0-115°
  - Weight-bearing: one crutch then without at week 3
  - Exercises
    - Progress exercises (listed above), using weight progression
    - Bicycle for ROM stimulus (week 2-4)
    - Pool program
    - Leg press (30-90°)
    - Vertical squats (0-60°)
    - Lateral step-ups
    - Single leg squats

☐ **PHASE II -MODERATE PROTECTION PHASE (Week 3-6)**
- **Week 3**
  - Brace: discontinue
  - ROM: to tolerance (0-125°)
  - Exercises
    - Continue all above exercises (progress weight)
    - Bicycle
    - Stairmaster
    - Rowin
    - Knee extension (90-0°)
    - Mini squats (45-60°) (0-60°)
    - Wall squats (0-75°)
    - Step-ups

- - Hamstring curls (light resistance) (0-45°)
    - Hip abduction/adduction
    - Toe-calf raises
    - Proprioception training (biodex stability system)
- **Week 4-6**
  - Brace: fit for functional brace
  - Exercises
    - Continue all above exercises
    - Pool running
    - Agility drills

☐ **PHASE III -MINIMAL PROTECTION PHASE**
- **Exercises**
  - Continue all strengthening exercises
  - Initiate running program
  - Gradual return to sport activities
- **Criteria to Return to Sport Activities**
  - Isokinetic quadriceps torque to body weight ration
  - Isokinetic test 85% > of contralateral side
  - No change in laxity
  - No pain/tenderness/swelling
  - Satisfactory clinical exam

Comments:

Frequency: _____ times per week   Duration: _____ weeks

Signature: _____   Date: _____