

SPECTRUM MEDICAL

Surgical Date: _____

Rehab Start Date: _____

Delayed ACL Protocol

Delayed ACL Rehabilitation Protocol

PHASE 1: WEEKS 1-2

GENERAL OBSERVATIONS: Toe Touch Weight Bearing to 25% body weight when: Pain Controlled, Hemarthrosis Controlled, Voluntary Quadriceps Contraction Achieved, 0° Extension

EVALUATION:

- Pain
- Hemarthrosis
- Patellar Mobility
- ROM Minimum (10°- 80°)
- Quadriceps Contraction & Patella Migration
- Soft Tissue Contracture

RANGE OF MOTION:

- ROM Passive
 - Meniscus Repair (0°- 90°)
 - Patellar Realignment (0°-75°)
 - Posterolateral Procedure (0°- 90°) [Unless exam shows hyperlastic tissue type (hold 15°- 75° 2 weeks postop)]
- Patella Mobilization
- Ankle Pumps (Plantar flexion with resistance band)
- Hamstring, gastroc-soleus Stretches

STRENGTHENING:

- Active Quadriceps Isometrics (Based on ROM limits)
- Knee Extension (Active-Assisted 90°-0°)
- Straight Leg Raise (Flexion)

CONDITIONING: UBC

MODALITIES: Electrical Stimulation, Biofeedback, Cryotherapy

GOALS:

- ROM (See above depending on procedure)
- Adequate Quadriceps Contraction
- Control Inflammation, Effusion

PHASE 2: WEEKS 3-4

GENERAL OBSERVATIONS: 50% Weight Bearing when: Pain Controlled, Hemarthrosis Controlled, Voluntary Quadriceps Contraction Achieved

EVALUATION:

- Pain
- Effusion
- Patellar Mobility
- ROM Minimum
- Quadriceps Contraction & Patella Migration
- Soft Tissue Contracture
- Joint Arthrometer (3 weeks, 20 lbs) (<3mm)

RANGE OF MOTION:

- ROM (Passive 0°-90°)
- Patella Mobilization
- Ankle Pumps (Plantar flexion with resistance band)
- Hamstring, gastroc-soleus Stretches

STRENGTHENING:

- Isometric Training: Multi-angle (0°, 60°) / Active Quadriceps (full extension)
- Toe / Heel Raises
- Knee Extension (No Resistance 90°-45°) / Knee Flexion (0°- 90° Active)
- Straight Leg Raise (Flexion, Extension, Adduction)
- Leg Press (70°- 10°)
- Closed-Chain (Wall Sits, Wall Sits w/ EMS, Mini-Squats (0°-45°))
- Multi-hip Machine (flexion, extension, abduction, adduction)

AEROBIC CONDITIONING: UBC, Water Walking

MODALITIES: Electrical Stimulation, Biofeedback, Cryotherapy

GOALS:

- ROM 0° - 110°
- Adequate Quadriceps Contraction
- Control Inflammation, Effusion
- 50% Weight Bearing

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PHASE 3: WEEKS 5-6

GENERAL OBSERVATIONS: Full Weight Bearing when: Pain Control without Narcotics, Effusion Controlled, ROM 0°-100°, Dynamic Control Varus/Valgus, Muscle Control throughout ROM

EVALUATION:

- Pain (Mild)
- Effusion (Minimal)
- Patellar Mobility
- ROM (0°-120°)
- Muscle Control (3/5)
- Inflammatory Response (None)

RANGE OF MOTION:

- ROM (Passive 0°-120°)
- Patella Mobilization
- Ankle Pumps (Plantar flexion with resistance band)
- Hamstring, gastroc-soleus Stretches

STRENGTHENING:

- Straight Leg Raises (Ankle Weight not to exceed 10% of Body Weight)
- Isometric Training: Multi-angle (90°, 60°, 30°)
- Knee Extension (90°-45° with Resistance) / Hamstring Curls (0°-90°)
- Toe / Heel Raises
- Closed-Chain (Wall Sits, Lunge, Mini-Squats (0°-30°))
- Multi-hip Machine (flexion, extension, abduction, adduction)
- Leg Press (70°-10°)

BALANCE TRAINING:

- Weight Shift side/side and forward/back
- Balance Board / 2 Legged
- Cup Walking with Crutches
- Single Leg Stance stable Platform

AEROBIC CONDITIONING: (Patellofemoral Precautions)

- UBC
- Stationary Bicycling
- Water Walking

MODALITIES: Electrical Stimulation, Cryotherapy

GOALS:

- ROM 0° - 125°
- Muscle Control
- Control Inflammation, Effusion
- Full Weight Bearing
- Early Recognition Complications (Motion Loss, RSD, Patellofemoral)

PHASE 4 WEEKS 7-8

GENERAL OBSERVATIONS Full Weight Bearing when: Pain Control without Narcotics, Effusion Controlled, ROM 0°-120°, Dynamic Control Varus/Valgus, Muscle Control throughout ROM

EVALUATION:

- Pain (None)
- Effusion (Minimal)
- Patellar Mobility
- ROM (0°-135°)
- Muscle Control (4/5)
- Gait (Symmetrical)
- Inflammatory Response
- Joint Arthrometer (8 weeks, <3mm)

RANGE OF MOTION:

- Hamstring, gastroc-soleus Stretches

STRENGTHENING:

- Straight Leg Raises (Ankle Weight not to exceed 10% of Body Weight)
- Straight Leg Raises (Rubber Tubing)
- Isometric Training: Multi-angle (90°, 60°, 30°)
- Knee Extension (90°-45° with Resistance) / Hamstring Curls (0°-90°)
- Toe / Heel Raises
- Closed-Chain (Wall Sits, Lunge, Mini-Squats with rubber tubing (0°-30°))
- Multi-hip Machine (flexion, extension, abduction, adduction)
- Leg Press (70°-10°)

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BALANCE TRAINING:

- Balance Board / 2 Legged
- Lateral Step ups 2"-4"

AEROBIC CONDITIONING: (Patellofemoral Precautions)

- Stationary Bicycling
- Water Walking
- Elliptical Machine (Low Resistance)
- Stair Machine (Low Resistance, Low Stroke)
- Ski Machine (Short Stride, Level, Low Resistance)

MODALITIES: Cryotherapy

GOALS:

- ROM 0° - 135°
- Muscle Control
- Control Inflammation, Effusion
- Full Weight Bearing, Normal Gait
- Early Recognition Complications (Motion Loss, RSD, Patellofemoral)

PHASE 5 WEEKS 9-12

GENERAL OBSERVATIONS: Full Weight Bearing, No Effusion, painless ROM, Joint Stability, Performs Activities of Daily Living (ADL), Can Walk 20 minutes without Pain, ROM 0°-135°

EVALUATION:

- Manual Muscle Test (HS, Quads, and Hip Add, ABD, Flex, Ext) - (4/5)
- Patellar Mobility
- Crepitus
- Swelling
- Joint Arthrometer (12 weeks) None

RANGE OF MOTION: Hamstring, gastroc-soleus, quad, ITB Stretches

STRENGTHENING:

- Straight Leg Raises (Rubber Tubing)
- Knee Extension with resistance (Active 90°-45°) / Hamstring Curls (0°-90°)
- Closed-Chain (, Wall Sits, Lunge, Mini-Squats (0°-40°)
- Multi-hip Machine (flexion, extension, abduction, adduction)
- Leg Press (70°-10°)

BALANCE TRAINING:

- Balance Board / 2 Legged
- Single Leg Stance – Unstable Platform
- Perturbation Training

AEROBIC CONDITIONING: (Patellofemoral Precautions)

- Stationary Bicycling
- Water Walking
- Swimming (Straight Leg Kicking)
- Walking
- Stair Machine (Low Resistance, Low Stroke)
- Ski Machine (Short Stride, Level, Low Resistance)
- Elliptical Machine (Low Resistance)

MODALITIES: Cryotherapy

GOALS: Increase strength and endurance

PHASE 6 WEEKS 13-26

GENERAL OBSERVATIONS: No Effusion, painless ROM, Joint Stability, Performs Activities of Daily Living (ADL), Can Walk 20 minutes without Pain, ROM 0°-135°

EVALUATION:

- Isometric Testing (%difference of quads & hams) (30)
- Swelling
- Patellar Mobility
- Crepitus
- Joint Arthrometer (< 3mm)

RANGE OF MOTION: Hamstring, gastroc-soleus, quad, ITB Stretches

STRENGTHENING:

- Straight Leg Raises (Rubber Tubing @ High Speed)
- Knee Extension with resistance (Active 90°- 45°) / Hamstring Curls (0°-90°)
- Closed-Chain (Wall Sits, Lateral Step Ups 2"-4", Mini-Squats (0°-40°)
- Multi-hip Machine (flexion, extension, abduction, adduction)
- Leg Press (70°-10°)

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BALANCE TRAINING:

- Balance Board / 2 Legged
- Single Leg Stance – Unstable Platform
- Plyoback – Ball Toss
- Perturbation Training

AEROBIC CONDITIONING: (Patellofemoral Precautions)

- Stationary Bicycling
- Water Walking
- Swimming (Kicking)
- Walking
- Stair Machine (Low Resistance, Low Stroke)
- Ski Machine (Short Stride, Level, Low Resistance)

RUNNING PROGRAM: (6 months, straight, 30% deficit isometric test)

- Jog (1/4 Mile) - Walk (1/8 Mile) - Backward Run (20yards)

MODALITIES: Cryotherapy

GOALS: Increase Strength and Endurance, Maintain Strength and Endurance

PHASE 7 WEEKS 27-52

GENERAL OBSERVATIONS: Same as Phase 6

EVALUATION:

- Isometric Testing (%difference of quads & hams)(10-15)
- Swelling
- Patellar Mobility
- Crepitus
- Joint Arthrometer (< 3mm)

RANGE OF MOTION: Hamstring, gastroc-soleus, quad, ITB Stretches

STRENGTHENING:

- Straight Leg Raises (Rubber Tubing @ High Speed)
- Knee Extension with resistance (Active 90°- 45°) / Hamstring Curls (0°-90°)
- Multi-hip Machine (flexion, extension, abduction, adduction)
- Leg Press (70°-10°)

BALANCE TRAINING:

- Balance Board / 2 Legged
- Single Leg Balance
- Perturbation Training

AEROBIC CONDITIONING: (Patellofemoral Precautions)

- Stationary Bicycling
- Water Walking
- Swimming (Kicking)
- Walking
- Stair Machine (Low Resistance, Low Stroke)
- Ski Machine (Short Stride, Level, Low Resistance)

RUNNING PROGRAM: (6 months, straight, 30% deficit isometric test)

- Jog (Interval – 20, 40, 60, 100 yards)
- Walk (1/8 Mile)
- Backward Run (20yards)

CUTTING PROGRAM: (20% deficit isokinetic test)

- Lateral – Carioca - Figure 8's

FUNCTIONAL TRAINING:

- Plyometric Training (20% deficit isokinetic test): box hops, level, double-leg
- Sport Specific Drills (10%-15% deficit isokinetic testing)

MODALITIES: Cryotherapy

GOALS: Increase Strength and Endurance, Maintain Strength and Endurance