

# SPECTRUM MEDICAL

Surgical Date: \_\_\_\_\_

Rehab Start Date: \_\_\_\_\_

Accelerated ACL Protocol

## Accelerated ACL Rehabilitation Protocol

### PHASE 1: WEEKS 1-2

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

**EVALUATION:**

- Pain
- Hemarthrosis
- Patellar Mobility
- ROM Minimum (0°- 110°)
- Quadriceps Contraction & Patella Migration
- Soft Tissue Contracture

**RANGE OF MOTION:**

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

**STRENGTHENING:**

- Straight Leg Raises (flexion, abduction, extension, adduction)
- Active Quadriceps Isometrics (Full Extension)
- Knee Extension (90°-30° with Resistance) / Hamstring Curls (0°-90°)
- Closed-Chain (Mini-Squats (0°-45°, ½ Weight Bearing)
- Multi-hip Machine (flexion, extension, abduction, adduction)
- Leg Press (70°-10°)

**BALANCE TRAINING:**

- Weight Shift side/side and forward/back

**CONDITIONING:** UBC

**MODALITIES:** Electrical Stimulation, Biofeedback, Cryotherapy

**GOALS:**

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

### PHASE 2: WEEKS 3-4

**GENERAL OBSERVATIONS:** Full Weight Bearing when with 1 crutch: Pain Controlled, Hemarthrosis Controlled, Voluntary Quadriceps Contraction Achieved

**EVALUATION:**

- Pain
- Effusion
- Patellar Mobility
- ROM Minimum (0°-120°)
- Muscle Control (3/5)
- Inflammatory Response
- Joint Arthrometer (28 Days) (<3mm)

**RANGE OF MOTION:**

- ROM (Passive 0°-120°)
- 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°-30°) / Hamstring Curls (0°- 90° Active)
- Straight Leg Raise (Flexion, Extension, Adduction)
- Leg Press (70°- 10°)
- Closed-Chain (Wall Sits, Mini-Squats (0°-45°))
- Multi-hip Machine (flexion, extension, abduction, adduction)

**AEROBIC CONDITIONING:** UBC, Water Walking, Stationary Bike (patellofemoral precautions)

**BALANCE TRAINING:**

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

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Accelerated ACL Protocol

**MODALITIES:** Electrical Stimulation, Cryotherapy

**GOALS:**

- ROM 0° - 125°
- Muscle Control
- Arthrometer within 3 mm
- Control Inflammation, Effusion
- 100% Weight Bearing

## PHASE 3: WEEKS 5-6

**GENERAL OBSERVATIONS:** Independent ambulation when: Pain Control, Effusion Control, ROM 0°-100°, Muscle Control throughout ROM

**EVALUATION:**

- Pain (Mild)
- Effusion (Minimal)
- Patellar Mobility
- ROM (0°-135°)
- Muscle Control (4/5)
- Inflammatory Response (None)
- Gait Symmetrical

**RANGE OF MOTION:**

- ROM (Passive 0°-350°)
- Patella Mobilization
- 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°- 30° with Resistance) / Hamstring Curls (0°-90°)
- Toe / Heel Raises
- Closed-Chain (Wall Sits, Mini-Squats (0°-30°))
- Multi-hip Machine (flexion, extension, abduction, adduction)
- Leg Press (70°-10°)

**BALANCE TRAINING:**

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

**AEROBIC CONDITIONING:** (Patellofemoral Precautions)

- UBC
- 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 Endurance
- Control Inflammation, Effusion
- Full Weight Bearing, Normal Gait
- Early Recognition Complications (Motion Loss, RSD, Patellofemoral)

## PHASE 4 WEEKS 7-8

**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 (8 weeks) None

**RANGE OF MOTION:**

- Hamstring, gastroc-soleus Stretches

**STRENGTHENING:**

- Straight Leg Raises (Rubber Tubing)

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Surgical Date: \_\_\_\_\_

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Accelerated ACL Protocol

- 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
- Resistance Band Walking
- Single Leg Stance
- Plyoback – Ball Toss
- 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 5 WEEKS 9-12

**GENERAL OBSERVATIONS:** Same as Phase 4

## **EVALUATION:**

- Manual Muscle Test (HS, Quads, and Hip Add, ABD, Flex, Ext) - (4/5)
- Isometric Test (12 wks, mean avg torque % deficit quads and hams)
- Patellar Mobility
- Crepitus
- Swelling
- Joint Arthrometer (12 weeks) None

**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°)

## **BALANCE TRAINING:**

- Balance Board / 2 Legged
- Resistance Band Walking
- Single Leg Stance
- Plyoback – Ball Toss
- 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, tested monthly) (20%-25%)
- Swelling
- Patellar Mobility
- Crepitus
- Joint Arthrometer (< 3mm)
- Single Leg Function Tests (Hop Distance, Timed Hop, % inv/uninv)

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Surgical Date: \_\_\_\_\_

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Accelerated ACL Protocol

**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°)

**BALANCE TRAINING:**

- Balance Board / 2 Legged → Single Leg
- Single Leg Stance → Unstable Platform

**AEROBIC CONDITIONING:** (Patellofemoral Precautions)

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

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

- Jog (Progression of speed ½, ¾, full) (1/4 Mile) - 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

<b>PHASE 7 WEEKS 27-52</b>
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**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
- Single Leg Balance → Unstable Platform w/ secondary activity

**AEROBIC CONDITIONING:** (Patellofemoral Precautions)

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