

**Aaron J. Casp, MD**  
*Sports Medicine, Hip, Knee, and Shoulder Surgery*  
 1201 11<sup>th</sup> Ave S  
 Birmingham, AL 35205  
 Ph: (205) 930-8339

## ACL Repair Rehabilitation Protocol

Phase/ Goals	Immobilization	ROM	Therapeutic Exercises
<p><b>Phase 1 (0-2 weeks)</b></p> <p>Goals:</p> <ul style="list-style-type: none"> <li>● Edema and pain control</li> <li>● Normal gait mechanics</li> <li>● PROM: 0 → 90°</li> <li>● Eliminate effusion</li> </ul>	<p>50% WB with crutches</p> <p>Hinged brace locked in extension for ambulation</p> <p>May unlock 0-90 for sitting</p> <p>Pillow under heel to maintain full extension</p>	<ul style="list-style-type: none"> <li>● Avoid open chain extension</li> <li>● Begin PROM 0 – 90 deg immediately</li> <li>● Patellar mobilization all directions</li> </ul> <p>Modalities:</p> <ul style="list-style-type: none"> <li>● NMES if unable to perform SLR without lag</li> <li>● Cryocuff/Game Ready Compression/ Ice</li> </ul>	<ul style="list-style-type: none"> <li>● Flexion: heel slides to 90</li> <li>● Extension: heel prop, prone hang</li> <li>● Long sitting HS stretch</li> <li>● Quad sets, glut sets</li> <li>● SLR x4 with assist until no lag</li> <li>● Standing TKEs</li> <li>● Ankle pumps</li> <li>● Calf raises on leg press</li> <li>● Gait training on flat TM</li> </ul>
<p><b>Phase 2 (2-6 weeks)</b></p> <p>Goals:</p> <ul style="list-style-type: none"> <li>● No effusion</li> <li>● Increase ROM</li> <li>● Normalize gait</li> </ul>	<p><u>2-4 weeks</u>: 50% in brace unlocked 0-90</p> <p><u>4-6 weeks</u>: full WB brace fully unlocked</p>	<ul style="list-style-type: none"> <li>● Begin full A/ PROM as tolerated with therapy</li> </ul> <p>Modalities:</p> <ul style="list-style-type: none"> <li>● Scar STM when incision healed</li> <li>● Patellar mobs all directions</li> <li>● Gentle prone quad stretch/knee flex</li> <li>● Manual assist extension/passive stretch</li> <li>● HS STM for extension assist</li> </ul>	<ul style="list-style-type: none"> <li>● Low resistance bike for ROM</li> <li>● Heel slides/wall slides/seated assist flexion</li> <li>● Lateral band stepping after 4 weeks</li> <li>● LE stretching: HS, quads, ITB, piriformis (pain free)</li> <li>● Quad sets/glut sets, clams/mini-hydrants/glut pushes</li> <li>● Calf raises on leg press</li> <li>● Single leg press</li> <li>● Standing TKEs</li> <li>● Gait training- when gait WNL, progress to reverse incline</li> <li>● SLS- begin flat surface, progress to uneven</li> <li>● Wobble board/Dyna-disc/Bosu balance</li> </ul>

**Aaron J. Casp, MD**

*Sports Medicine, Hip, Knee, and Shoulder Surgery*

*1201 11<sup>th</sup> Ave S*

*Birmingham, AL 35205*

*Ph: (205) 930-8339*

<p><b>Phase 3 (6-12 weeks)</b></p> <p>Goals:</p> <ul style="list-style-type: none"><li>● Full ROM</li><li>● Normalize ADLs</li><li>● Begin strength</li></ul>	<p>Wean fully out of brace by week 6</p> <p>Full ROM</p>	<ul style="list-style-type: none"><li>● Full A/PROM</li></ul> <p>Manual:</p> <ul style="list-style-type: none"><li>● Joint mobs PRN for full flex and ext ROM</li><li>● Patellar mobs/ Scar STM with extractor</li></ul> <p>Modalities:</p> <ul style="list-style-type: none"><li>● Ice/stim PRN</li></ul>	<ul style="list-style-type: none"><li>● Bike, elliptical, stair master with low resistance</li><li>● Step ups/lateral step over's- progress to faster pace</li><li>● Minimal lunges</li><li>● Lateral walks with sport cord</li><li>● SLS dynamic surfaces</li><li>● No cutting or pivoting</li><li>● Hamstring curls</li><li>● Mini squats</li><li>● Planks</li><li>● Continue glute/quad/core</li></ul>
<p><b>Phase 4 (3-9 months)</b></p> <p>Goals:</p> <ul style="list-style-type: none"><li>● Jogging without pain/swelling</li><li>● SL jump w/o difficulty</li></ul>	<p>Fit for ACL brace if returning to sport</p>	<ul style="list-style-type: none"><li>● Full A/PROM</li></ul>	<ul style="list-style-type: none"><li>● Continue everything in phase 3</li><li>● Walk/jog progression</li><li>● Advanced closed chain exercises</li><li>● Jogging patterns at 50-75% speed</li><li>● 4 months: begin jumping, progress running</li><li>● 5 months: advance to sprint, backward running, incorporate cutting/change of direction, plyo program</li><li>● Muscular power – squads, split jumps, sled drags</li></ul>
<p><b>Phase 5 (9+ months)</b></p> <p>Goals:</p> <ul style="list-style-type: none"><li>● Sport-specific training without pain or swelling</li><li>● Functional Knee Test</li></ul>		<ul style="list-style-type: none"><li>● Continue Full A/PROM</li><li>● Modalities PRN</li></ul>	<ul style="list-style-type: none"><li>● Figure 8 running patterns/running progression</li><li>● Ladder/footwork drills</li><li>● Gym-program activities</li><li>● Sport-related strengthening Gym-program activities</li><li>● Full return to activities</li></ul>