

Center for Athletic Medicine  
*Dr. Preston Wolin*  
Anterior Cruciate Ligament (ACL) Reconstruction

~Please call 773.248.4150 with any and all questions~

The following guidelines are to outline the rehabilitation program for the physical therapist and athletic trainer. The protocol is designed to expeditiously and safely return the athlete/injured worker to sports/work.

Please note that isokinetics for testing and exercises are not utilized during the patient's rehabilitation. Derotation braces are not utilized post-operatively or for return to sports. If the patient requests a brace, a patellar knee sleeve with hinges may be utilized for return to sports/work. A knee immobilizer is used as a quadriceps assistive device only with combined ACL reconstruction and meniscal repair. If a meniscal repair is performed, the knee immobilizer is to be worn for the first 4 weeks for ambulation only (may be removed for therapy, sleeping, bathing, etc.) For isolated ACL reconstruction, a knee immobilizer is not issued with the exception of the winter season, if the patient is routinely around large crowds, or as otherwise specified.

\*\*\*\*\* If a patient is not progressing, please call the office for recommendations! \*\*\*\*\*

**POST-OP DAYS 1-2:**

- Continuous Passive Motion (CPM) machine daily for up to 3 weeks
- The patient is to sleep in machine and increase flexion as tolerated.
- PROM advance as tolerated.
- WBAT if no meniscal repair was performed.
- Emphasize extension, may initiate prone hangs without weights
- Patient will be utilizing a form extension block to fully extend leg 30 minutes three times daily.
- Initiate patellar mobilization (through dressing) especially superior/inferior – **teach patient to do.**
- Quadricep sets, active hamstrings.
- STRAIGHT LEG RAISE (without immobilizer, if present )
- Electrical stimulation
- \*Please change post-op dressing using aseptic technique. **Do not** remove steri-strips. Place bandages over arthroscopic portals and 4x4 over patellar incision and wrap with Kerlix\*

**POST-OP DAYS 3-13:**

- (The patient will return to the office 10-14 days post-op for suture removal)
- Discontinue CPM when 125 degrees flexion achieved
- Patellar mobilization, especially superior-inferior
- Closed chain quadriceps strengthening
- Stationary bike and stairmaster
- Quadriceps sets- emphasize VOM

- Partial squats, eccentric or concentric phase only
- 2"-4" counter balanced step ups (concentric phase only) and /or step downs (eccentric phase only)
- Hamstring curls without weight
- Hamstring sets
- Prone hangs with weights
- Patient prone with towel roll proximal to knee- gravity assisted knee extension
- ROM, full extension to 120+ degrees of flexion
- Continue e-stim as needed
- If using crutches, d/c by 7-10 days post-op to work on normal gait training

#### **POST-OP 2-4 WEEKS:**

- Continue with previous exercises – use resistance (weights) for STRAIGHT LEG RAISE, SAQ, and hamstrings
- Continue partial squats (eccentric or concentric phase)
- Increase height of step-ups gradually (2"-4" at a time)
- Calf raises in squat rack
- Leg press unilateral and bilateral (no more than 4 bands on a single leg press shuttle x 5 weeks)
- Functional knee extension (with theraband)
- Patient may shoot basketballs.
- Injured worker may return to desk work with the following restrictions: No prolonged standing, no running, no stooping, squatting, kneeling, bending, crawling, limited stair use.

#### **POST-OP 5-12 WEEKS:**

- Please do unilateral leg press test at 8 weeks post-op; 10 repetition maximum with both operative and non-operative legs. If 10 repetitions maximum of operative leg is 70% of non-operative leg, than a functional progression may begin; including light jogging, agility drills, lateral shuffles and progression to running and jumping
- No full lunges or squats (not greater than 90 degrees) until 3 mo. Post op
- Continue with progression of all exercises above
- Begin squats and calf raises in squat rack (if no patellofemoral joint pain)  
Increase calf raises /leg 0-90 degrees
- Increase intensity level of functional progression
- Initiate work conditioning for injured worker

**\*\*NO RUNNING, JUMPING, HIGH LEVEL PLYOMETRICS UNTIL 4 MONTHS POST OP**

The single leg hop test is used as an assessment for a discharge summary. The patient is evaluated at approximately the 10th to 12th week of S/P ACL.

Directions:

- 1) Take the patient's height in centimeters. (All measurements taken in centimeters.)
- 2) Perform three single leg hop tests with the uninvolved leg and take the best of three jumps.
- 3) Perform three single leg hop tests with the injured leg and take the best of three jumps.
- 4) Divide the length of the best jumps by the patient's height ( in cm) for both legs.
- 5) They should be around or better than 90% before being discharged.

Please note: Injured workers will be returned to full duty status pending physical demands of their job when they can run, do stairs well, tolerate kneeling, stooping, squatting or with modifications

Full functional progression back to athletic activities is expected at 8-12 weeks for injured athletes