Anterior Cruciate Ligament Reconstruction Rehabilitation Protocol

While operative treatment for ACL reconstruction is important, the rehabilitation process is also vital to your health the strength and healing time of your knee. Outlined below is a typical rehabilitation process for patients in the postoperative phase.

PHASE 1 – Postoperative – Week 1

1. Control pain and swelling – Icing and elevation are very important in the initial post-operative phase. You will be offered an icing/compressive device (NICE Machine) to use after surgery. Utilize this machine continuously for the first 3 days and then as needed. If you did not receive one of these, utilize ice packs for 20 minutes every hour.

2. ****Obtain full extension EARLY** –*This is probably the most important item to work on in the first phase.*** I encourage you to avoid propping the leg up with a pillow behind the knee, and alternatively, prop the leg up with a support under the foot, leg, and ankle which will allow the knee to extend.

3. Prevent Deep Venous Thrombosis (DVT)

There are many things that can do to minimize your risk of developing a DVT. Utilizing an Aspirin (325 mg/day for 4 weeks) will help, and early mobilization is probably the most beneficial thing that you can do. This not only means getting up and moving but also doing ankle/calf pumps beginning the evening of surgery.

PHASE 2 – Return to Life – Weeks 2-8

1. Maintain Full Extension
2. Normalize Gait
3. Return to work/life

As your pain and swelling diminish, I encourage you to get up and move around with crutches for support. During this phase, I want you to maintain partial weight-bearing with your brace locked in full extension. As your strength

and quad control improves, your therapist will help progress you first to unlocking the brace to allow knee range of motion, and then to be off the crutches while walking.

Exception:

- If I performed a bucket handle meniscus repair, you should not hear weight beyond 70 degrees of knee flexion.

- If I performed a repair of a meniscus root, then you should remain non-weight bearing for 6 weeks. Then progress to 50% weight bearing for 1 week, then 75% weight bearing for 1 week, and then full weight bearing.

Extension: Obtaining full extension is the primary goal of this first phase.
Avoid propping the leg with a pillow under the knee. Although this is the most comfortable position, it also makes it very difficult to maintain the full extension. Alternatively, prop the leg up with support under the foot and ankle.

Flexion: You also need to begin working on flexion. You should also work on prone flexion, heel slides and gravity assisted flexion. Your therapist will help you with these activities.

Patella Mobility: Moving the patella (kneecap)with glides will help prevent scar tissue formation. You do this by moving the patella up/down and in/out.

No Resistance:

- Quad sets
- Straight leg raises
- Hip abduction/adduction/flex/extension
- Knee flexion/extension (standing and prone)
- Short arc quads
- Toe raises
- Semi-squats
- Tilt board/balance board

Stationary Bike:

- The stationary bike is one of the most useful tools that you can use during your recovery
- Begin with minimal resistance and emphasize pedaling circles (pushing and pulling) so that you are

working both the quadriceps and the hamstring muscle groups
- You may gradually increase the resistance as your strength and conditioning improve
- Walking
- As you are able to wean off crutches and out of brace, walking on flat and level surfaces is an excellent form of rehabilitation.

Pool Therapy:

- If you have access to a pool, you can perform many of your exercises in the pool including walking, standing knee flexion, squats, and toe raises.

PHASE 3 – Functional Training – Weeks 9-16

1. **Obtain full flexion to 130-135 degrees**
2. **Maintain normal gait with knee extension on heel strike**
3. **Progress to functional rehabilitation**

Continue all exercises from Phase 2 and incorporate progressive resistance

Running (**Patients should demonstrate normal gait

pattern, excellent quad control, and hamstring strength prior to running)

- Begin in pool and progress as tolerated to flat even surfaces
- Backward running
- Sprint work
- Gradually build up speed and slow down gradually
- No sudden starts or stops

Jump Rope: Begin with 3 to 5 minutes and progress to 10 to 15 minutes with varying footwork

Jumping Drills: Bilateral box jumps, single-leg jumps, and landings

Skill and Agility Drills: Side-steps, Carioca, Figure of 8's large and small, shuttle runs, one leg hops

PHASE 4 – Sports Specific Training – 9-12 Months

Sport Specific Training
RETURN TO SPORT BETWEEN 6-9 MONTHS
Your release to sports and other activities that involve

pivoting, twisting, and cutting will be determined by Dr. Jones.

Things I will consider in this release include:

- A Stable Knee
- Adequate completion of rehabilitation protocol
- Quadriceps girth measurement within 1 cm of opposite side
- Quadriceps and Hamstring strength at least 80% of opposite side
- At times I will request a functional test to be performed by your Physical Therapist.