Inland Orthopaedic Surgery & Sports Medicine Clinic

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PCL Reconstruction
POST-OP INSTRUCTIONS AND REHAB PROTOCOL

This protocol has been developed for the patient following Posterior Cruciate Ligament (ACL) reconstruction. This protocol may vary in length, aggressiveness and return to sports/activities depending on factors such as: concomitant procedures or additional injuries seen at the time of surgery, primary vs revision surgery, range of motion/swelling status, pre-operative function, rehabilitation goals and expectations. Physical therapy should begin as within a week after surgery. Your rehabilitation will be a supervised program by a physical therapist and a home program as directed by your therapist.

The goal of this rehabilitation plan is to facilitate return to the pre-injury level of function. Return to activity and sports depend upon multiple factors. These factors are based on findings at the time of surgery as well the functional status of the knee. Some factors, such as time and graft incorporation are factors outside of our control. Return to sports and cutting activities is allowed after the patient achieves adequate flexibility, strength and endurance of the knee that is equal to at least approximately 90% of the other side. Generally this occurs around 9 months from the time of the operation.

The PCL reconstruction rehabilitation is unique in that extreme knee flexion places a higher amount of stress on the newly reconstructed PCL. Therefore, there are several activities that should be avoided early post-operatively with a PCL reconstruction, for best results, avoid:

- Isolated hamstring activity including curls, isometric, and intense stretching
- Open chain active knee extension from 90-70°, knee extension from 70-0° is allowed with adequate strength and full range knee extension is allowed 6 weeks post-op
- Flexion should be gained in the **PRONE POSITION** to avoid active hamstring contraction

I. **<u>POST-OPERATIVE INSTRUCTIONS:</u>**

a. **Take 1 tablet (325 mg) of aspirin per day**, starting the day after surgery and continuing **for 2 weeks**. This is done to decrease the risk of blood clots.

b. Dressing may be removed 3 days after surgery, but keep the steri-strips in place. Try to keep the wound as dry as possible until follow-up.

c. It is ok to shower after surgery, but keep the dressings and incision wrapped with saran wrap or something similar. When in the shower, do not scrub or soak the incisions. Just let soap/water run over the knee and pat dry. Do not submerge incisions in bath or pool until fully healed (4-5 weeks).

d. If you had a **nerve block at the time of surgery, it usually wears off 12-24 hrs post-operatively**. It is normal to have some numbness in the leg the first few days after surgery as a result. **The first night after surgery take pain medication before going to bed as the nerve block will often wear off during the night.**

e. Take the prescribed pain medications as directed. You can supplement your pain control with ice, elevation of the affected extremity and over-the-counter ibuprofen if needed, making sure to

follow the dosage as recommended on the bottle. Use ice max 20 min/hour. Place towel between skin and ice to protect skin.

f. Decrease the frequency of your pain medicine as your symptoms allow. Generally patients are able to be off of pain medicine around 1-2 weeks post-op.

g. After surgery you are to be strictly toe touch weight bearing on the operative leg. Use the crutches at all times as directed.

h. After surgery, the first few days are generally spent recovering and resting. When resting, work on calf pumps (moving your ankle up and down) several times per hour. This helps reduce swelling in the leg and decrease the chance of blood clots. As your symptoms allow begin walking (using crutches as needed).

i. The brace should be worn at all time except for showering. The brace is set from 0-30 degrees for the first two weeks. The flexion will be increased when you return to the office. You may remove the brace for sleeping after 4 weeks.

k. Work on achieving full extension of the knee. The most important aspect of your rehab the first two weeks is getting the knee all the way straight.

l. Return to driving. There is no conclusive data to guide the exact time when it is safe to return to driving. You cannot drive while still on narcotic pain medications. In general, there should be adequate range of motion of the knee, minimal pain/swelling, and enough strength in the leg to allow you to quickly brake if needed.

m. **DO NOT PLACE PILLOWS/BLANKETS UNDERNEATH THE KNEE AFTER SURGERY.** This can cause a flexion contracture of the knee after surgery, making full extension of the knee difficult. It is ok to place pillows/blankets under the ankle for elevation.

II. **<u>Rehabilitation Protocol 0-2 Weeks Post-Op</u>**

a. ROM 0-30°

b. Patella mobs

c. Ankle pumps

d. Gastroc/soleus stretching

STRENGTH

e. Quad sets with e-stim/biofeedback

f. Active knee extension (30-0°)

g. SLR (flex, abd, add)

WEIGHT BEARING

h. Toe touch weight bearing to surgical side

BRACE

i. Limited from 0-30°

MODALITIES

j. E-stim/biofeedback as needed

k. Ice 15-20 minutes

GOALS OF PHASE:

• ROM 0-30°

- Control pain, inflammation, and effusion
- Independent in HEP
- Adequate quad/VMO control

III. **2-6 Weeks Post-Op**

WEEK EXERCISE GOAL

a. 2-6 ROM 0-90°
b. Passive, 0-90° (flexion in prone position, no active knee flexion)
c. Patella mobilization
d. Initiate **light** hamsting stretch
e. Gastroc/soleus/ITB stretch
f. addition to prone flexion, initiate wall slides to reach goal

STRENGTH

g. Quad sets with biofeedback
h. SLR (flex, abd, add) with weight/tubing
i. Knee extension (70-0°)
j. Initiate mini-squats (0-30°)
k. Initiate leg press/total gym 0-60° (beginning at week 4)
l. Heel raise/Toe raise

BALANCE TRAINING

m. Weight shift (side-to-side, fwd/bkwd)
n. Single leg balance work

BICYCLE

o. May begin when 110° flexion is reached (between weeks 4-6)

WEIGHT BEARING

p. Weeks 2-4, Foot flat 20 lb weightbearing with crutches
q. Weeks 4-6 WBAT with crutches

BRACE

r. Continue with brace, 0-90°

MODALITIES

s. E-stim/biofeedback as needed
t. Ice 15-20 minutes

GOALS OF PHASE:

- ROM 0-110°
- WBAT to FWB
- Control pain, inflammation, and effusion
- Increase lower extremity strength
- Enhance proprioception, balance, and coordination

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IV. **6-12 Weeks Post-Op**

WEEK EXERCISE GOAL

a. 6-12 ROM 0-135°, initiate active knee flexion
b. Passive, 0-135°
c. Patella mobs
d. Hamstring/ITB stretch
e. Wall slides to reach goal

STRENGTH

f. Continue with all strengthening activities from above phases.
g. Initiate lateral/fwd step-ups/downs
h. Initiate knee extension 90-0°
i. Bike/EFX for endurance
j. Reverse lunges-knee not to migrate over toe
k. press squats at wk 8

BALANCE TRAINING

l. Single leg balance with plyotoss
m. Wobble board balance activities
n. ½ Foam roller balance activities
o. balance/agility work

BRACE

p. Discontinue brace at week 6.
q. Functional brace to be fitted

CRUTCHES

r. Discontinue

GOALS OF PHASE:

- ROM 0-135°
- Increase lower extremity strength and endurance
- Control pain, inflammation, and effusion
- Maximize proprioception, balance, and coordination

V. **12 Weeks Post-Op and Beyond**

WEEK EXERCISE GOAL

a. 12-36 ROM
b. Continue with all stretching activities

STRENGTH

c. Continue with all strengthening activities
d. increasing all weight and repetitions
e. Progress with all single leg activity

BALANCE TRAINING

f. Continue with advanced balance/agility training
g. Single leg work

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RUNNING PROGRAM

h. Initiate light running on treadmill

i. Backward walking on treadmill

AEROBIC CONDITIONING

j. Walking program

k. Bike for strength and endurance

FUNCTIONAL TRAINING

l. Lateral movements (slide board, shuffles)

m. Initiate light plyometrics/agility drills

n. High speed training

o. Initiate sport specific training

GOALS OF PHASE:

- Maximize lower extremity strength and endurance
- Return to previous activity level
- Return to specific functional level

VI. **<u>Return to competitive sports and full speed cutting activities</u>**

a. You need to be cleared by Dr. Hazelwood and your athletic trainer

b. In general, for PCL reconstruction this occurs at the earliest around 9 months

c. Return to sports and cutting activities is allowed after the patient achieves adequate flexibility, strength and endurance of the knee that is equal to at least approximately 90% of the other side. In some cases we may use other objective testing such as Isokinetic testing.

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