LAKESHORE
BONE & JOINT INSTITUTE
ORTHOPEDIC EXCELLENCE. KEEPING YOU IN MOTION.

Neel P. Jain, MD
Orthopedic Surgery
Sports Medicine
Direct Line (219) 250 - 5038
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ACLR with Allograft Protocol

Name _____ **Date** _____

Procedure _____

Procedure Date _____

Frequency 1 2 3 4 5 times/week **Duration** 1 2 3 4 5 6 weeks

FIRST THERAPY VISIT

- Therapy appointment should be scheduled for 3-5 days postoperatively.
- Goals of therapy visit include:
  - Surgical site evaluation (see below for instructions)
  - Brace/sling education and adjustment as needed
  - Review of therapy protocol, expectations, and plan
  - Initiation of early phase therapy ONLY if applicable (follow protocol as outlined below)
- Surgical site evaluation
  - Incisions are closed with one or combination of below methods
    - Staples
    - Nylon sutures (black sutures)
    - Monocryl sutures covered with steristrips or glue
    - Prineo dressing (clear adherent glue dressing)
  - Anytime the dressing is changed or examined, ***please wash hands*** prior with antibacterial soap.
  - There will be gauze and padding over the incisions and the extremity may be wrapped with an ACE wrap. The surgical dressing should be changed by the therapist using ***sterile*** technique. This includes sterile field, sterile gloves, betadine or chlorhexidine skin cleanser and sterile supplies when redressing the wounds. Do NOT remove steri-strips or glue dressing. DO NOT remove sutures or staples. The new dressing should include dry gauze and ACE wrap. Before the new dressing is applied the wounds should be clean and dry (without removing steri strips or glue dressing). Please do not use tegaderm unless it was used at the time of surgery or if specifically stated on the orders. If there are any concerns with the incisions or dressings, the therapist should call the office immediately – (219) 250-5038.
  - Unless otherwise instructed, incisions must remain dry for 7 days. They must be sealed off in the shower. The Prineo dressing/glue dressing is water resistant, and incisions covered by this dressing may get wet after 3-5 days. Once you are permitted to get the incisions wet, warm soapy water should *gently* rinse the surgical area. Do NOT scrub the area. Pat the area dry with a clean towel and keep free of lotions or creams. Do NOT soak in a pool, bath or hot tub until permitted by the surgeon's office. Please wear clean clothes following shower and be conscious of any pet hair or other contaminants near the surgical area. Do not apply any ointments or medications to the area.

*****Range of motion is an important progression of therapy, but limiting swelling is important. Respecting swelling will decrease pain and improve motion.*****

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ACLR with Allograft

	REHAB GOALS	PRECAUTIONS	THERAPEUTIC EXERCISES	PROGRESSION CRITERIA
PHASE 1 0-6 WEEKS	Protect graft fixation! Because there is no donor tissue harvested, the pain and swelling from surgery will typically subside quickly. These patients may have a false sense of progression. Remember to protect the graft from excessive loading and sharing forces, especially in the early stages as the graft heals at a slower rate. Minimize effects of immobilization Control inflammation Full extension and flexion Educate patient on rehabilitation	Brace: weeks 0-2 locked in full extension for ambulation and sleeping Brace: weeks 2-6 unlocked for ambulation if functionally safe per therapist discretion, can remove for sleeping. Allograft revascularization is slower than with autograft. Patients may weight bear as tolerated, but protected for 4 weeks with crutches and brace. (**patients should use crutches and a brace for protection for at least 4 weeks** due to the slower revascularization of allografts.)	Heel slides Quad sets, hamstring sets Patellar mobilization Non-weight bearing gastrocnemius/soleus, hamstring stretches SLR (all planes) with brace locked in full extension until quadriceps strength is sufficient to prevent extension lag Quadriceps isometrics at 60° May progress ROM as tolerated.	Good quadriceps set, SLR without extension lag Full extension No signs of active inflammation
PHASE 2 6-8 WEEKS	Initiate weight bearing (closed kinetic chain) exercises Restore normal gait Protect graft fixation	Brace: DC use of brace when patient has full leg extension and can perform SLR without extension lag	Wall slides, 0°-45°, progression to mini squats 4-way hip Stationary bike (begin with high seat and low tension to promote range of motion, progress to single leg)	

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		Crutches: DC crutches when patient exhibits non-antalgic gait pattern; consider using single crutch or cane until gait is normalized.	Weight bearing terminal knee extension with resistive tubing or weight machine Toe raises Balance exercises (e.g.: single leg) Hamstring curls Aquatic therapy with emphasis on normalization of gait Continue hamstring stretches, progress to weight bearing gastrocnemius/soleus stretches	
PHASE 3 2-6 MONTHS	Full ROM Improve strength, endurance and proprioception of the lower extremity to prepare for functional activities	Avoid overstressing the graft Protect the patellofemoral joint	Continue and progress previous flexibility and strengthening activities Seated knee extensions, 90°-45° and progress to eccentrics Advance weight bearing activities (single leg mini squats, leg press, 0° to 45° flexion, step ups beginning at 5cm and progressing to 20cm, etc.) Progress proprioceptive activities (slide board, use of ball, etc.) Progress aquatic program to include pool running, swimming, etc.)	Full, pain-free ROM No evidence of patellofemoral joint irritation Strength and proprioception of approximately 70% of the uninvolved side Physician clearance to initiate advanced weight bearing exercises and functional progression
PHASE 4 6-9 MONTHS	Continue and progress previous flexibility and strengthening activities			No patellofemoral or soft tissue complaint Necessary joint ROM, strength, endurance and proprioception to safely

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	Functional progression, including walk/jog progression, forward/backward running at half, ¾ and full speed			return to work or athletics Physician clearance to resume partial or full duty
PHASE 5 AFTER 9 MONTHS	Initiate cutting and jumping activities Completion of appropriate functional activities Maintenance of strength, endurance and proprioception Patient education with regard to any possible limitations			

Running should only start if the patient meets ALL the following:

- Full, pain-free ROM
- No effusion
- Quad strength at least 70% of the uninvolved limb
- Hop testing at 85% symmetry

Running progression to be started if strength, ROM, effusion and pain milestones have been met (at week 24- unless otherwise discussed with the surgeon):

In place on mini-trampoline or any other compliant surface is encouraged first.

Level 1 0.1 mile running, 0.1 mile walking, total 1 mile
Level 2 0.2 miles running, 0.1 mile walking, total 2 miles
Level 3 0.4 miles running, 0.1 mile walking, total 2 miles
Level 4 0.5 miles running, 0.1 mile walking, total 2 miles
Level 5 0.7 miles running, 0.1 mile walking, total 2.4 miles
Level 6 1 mile running, 0.2 mile walking, 2 cycles
Level 7 1.25 miles running, 0.25 mile walking, 2 cycles
Level 8 1.5 miles running
Level 9 2 miles running
Level 10 track running

Initially, no back-to-back days running. Stop or decrease a level if effusion or soreness increase.

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Comments:

FCE _____ Work Conditioning/Work Hardening_____ Teach HEP_____

Every patient's therapy progression will vary to a degree depending on many factors. Please use your best clinical judgment on advancing a patient. If other ideas are considered to improve patient's outcome do not hesitate to call.

Patient's recovery is a team approach: Patient, family/friend support, therapist, and surgeon. Every team member plays an important role in recovery.

Signature_____ **Date** _____