Anterior Cruciate Ligament
Medial Collateral Ligament/Posterior Oblique Ligament Reconstruction
Postoperative Rehabilitation Protocol
Jeffrey Witty, M.D. , FAAOS

This document reviews the postop protocol for an ACL/MCL reconstruction to the knee. Please review all aspects of the protocol. Please contact M.D. for any questions or concerns.

PLEASE REVIEW THE FOLLOWING NOTES FOR KNEE PROTECTION AFTER SURGERY

Notes**:**

- Please review any additional physician notes for adjustments to protocol depending on concurrent pathology (ex. meniscus repair).
- AVOID VALGUS force to knee during rehab exercise
- No aggressive PROM to avoid stretching graft tissue
- PT to educate and observe patient to avoid pivoting over the knee
- PT to educate and observe patient to avoid tibial external and internal rotation of the knee
- PT to observe and adjust rehab based on patient response regarding pain and effusions.
- Unlike isolated ACL reconstruction, DO NOT ALLOW HEEL PROP under the ankle. This avoids hyperextension and stretching any posterior oblique ligament grafts or repair.
- While at rest and during exercise, educate patient to keep patella facing straight up (toward ceiling) to avoid the leg rotating inward and putting valgus stress on the knee.
- Educate patient to avoid dragging their foot during ambulation with crutches.
- **Semimembranosus precautions**: In all cases, avoid isolated open chain, hamstring strengthening until 4 months postop
- Range of motion exercises must be performed AT LEAST 4 times a day.

Modalities:

- Ice, compression, thigh high compression sleeve, and other swelling reduction ok to start immediately.
- Ice pack/cryo 20 - 30 min on and 20 - 30 min off
- Quickly transition from any bulky postop dressing to thinner compression dressing by POD2 to facilitate cryotherapy.
- Thigh high compression sleeve at least 6 weeks postop
- E – stim and biofeedback to quad starting POD1

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	Weightbearing	Brace	ROM	Exercise
Phase I Week 0 - 2	NWB, crutches	Immobilizer/brace in full extension at <u>all</u> times except ROM and exercise	Seated gravity assisted PROM 0 – 60 Avoid activation of semimembranosus if repair performed.	Seated knee extension stretch. No heel prop. Do not hyperextend the knee. Quad sets Patella mobs avoiding skin incisions
Phase II Week 2 - 6	NWB, crutches	Immobilizer / brace in full extension at <u>all</u> times except for ROM and exercise	Progress seated gravity assisted PROM / AAROM as tolerated 0 – 90. Goal 0 – 90 by POW 4 Avoid activation of semimembranosus if repair performed.	Phase I as above
Phase III Week 6 - 8	Progress to WBAT and wean off crutches	Transition to hinged knee brace. Hinged knee brace at all times.	As tolerated Avoid activation of semimembranosus if repair performed.	Phase II as above Begin stationary bike with low resistance Begin leg press 0 – 70 deg up to 25% body weight
Phase IV Week 8 – 12 **Progression to strengthening phase**	WBAT	Hinged knee brace at all times.	As tolerated Only 0 – 70 during weightbearing exercise to minimize graft strain.	Phase III as above. Once patient able to tolerate 20 min of walking with normal gait, begin a weightbearing strength program consisting of closed chain.

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Phase V **After week 12**	WBAT	Hinged knee brace at all times	As tolerated Progress beyond 0 – 70 for weightbearing exercise.	Continue Phase IV Begin periodized strength program and progress depending on individual patient needs. Consider at least 6 weeks for physiological adaptation between significant rehab changes.
Phase VI **As early as week 16**	WBAT	Hinged knee brace at all times	As tolerated	Phase V as above. May start jogging and side to side movement if adequate balance and strength determined. Progress strengthening as tolerated **Ok to begin isolated hamstring exercise.**
Phase VII **Return to activity and sport phase**	WBAT	Hinged knee brace until 6 months postop. Can transition to custom low profile brace as available and as needed. Football lineman should consider custom brace wear to minimize reinjury.	As tolerated	Phase VI as above. Progress exercise and strengthening as tolerated. Usually minimum of 9 months needed prior to return. Athletes will need to pass functional testing. Workers will need to pass functional testing.

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Timeline:

Full range of motion and normal gait pattern: by 3 – 4 months
Light jogging: Earliest by 4 months if adequate balance and strength
Side to side movement: Earliest by 4 months if adequate balance and strength
Return to sport: Earliest 9 months and out to 12 months

Protocol adapted from:

LaPrade et al Clin Orthop Relat Res 2012
Marx et al Clin Orthop Relat Res 2012
LaPrade et al AJSM 2018

Physician Notes:

- Compromise between Marx and LaPrade technique during phase I and II
    - Marx technique
        - POW 0 – 2: no motion
        - POW 2 – 3: 0 – 60
        - POW 4 – 6: 0 – 90
        - After POW 6: unrestricted ROM
    - LaPrade technique
        - POW 0 – 2: 0 – 90
        - After POW 2: unrestricted ROM
- May modifiy based on technique used.