

Medial Patellofemoral Ligament Reconstruction Rehabilitation Protocol

Time	Goals	Precautions/Restrictions	Treatment
Weeks 0 – 2	<ul style="list-style-type: none"> • Protect surgical site • Reduce pain and swelling • Active ROM: 0-90 degree • Full passive extension • Active quadriceps control • Reduce muscle atrophy • Safe use of assistive device 	<ul style="list-style-type: none"> • WBAT with crutches • Avoid knee valgus • Brace must be on at all times during the day and while sleeping, off for hygiene 	<ul style="list-style-type: none"> • ROM (as tolerated) <ul style="list-style-type: none"> ○ PROM – AAROM -AROM • Quadriceps recruitment/NMES • Global LE/hip strengthening • Gait training with crutches • Modalities as indicated <ul style="list-style-type: none"> ○ Cryotherapy: 5-7 times per day • Initial Visit: FOTO, LEFS, PSFS
Weeks 2 – 6	<ul style="list-style-type: none"> • Full, symmetric and pain-free AROM <ul style="list-style-type: none"> ○ 2-4 wks: 0-120 deg ○ 4-6 wks: full ROM • SLR without extensor lag • Normalized gait mechanics • DL squat with good mechanics • Progression of quadriceps strength/endurance • Increase functional activities 	<ul style="list-style-type: none"> • Open kinetic chain is limited to bodyweight leg extensions (weeks 2-6) • Closed kinetic chain strength 0-45 degrees flexion • No resisted open kinetic chain exercises • No running, jumping, cutting, pivoting, or twisting • Avoid painful activities/exercises • discontinue brace at 6 weeks if able to obtain full extension without lag 	<ul style="list-style-type: none"> • AAROM - AROM • Gait training progressing once adequate quad strength demonstrated • Core stabilization exercises • Closed kinetic chain strengthening within protected range of motion • Global LE strengthening <ul style="list-style-type: none"> ○ Begin functional strengthening exercises (bridge, mini-squat, step up, etc) ○ Stationary bike • Optional therapies (if available/as indicated): <ul style="list-style-type: none"> ○ BFR therapy ○ Anti-gravity treadmill for walking gait ○ Aquatic therapy once incision is healed and cleared by surgeon (2-4 weeks) ○ NMES • Modalities as indicated • Week 6: FOTO, LEFS

This protocol is not meant to be prescriptive but a recommendation to guide the rehabilitation process.
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- Weeks 6 - 12**
- Full, symmetric and pain-free ROM without assistive device
 - Progress quadriceps strength/endurance
 - Increase functional activities
 - Total leg strength
 - Progress from assistive device as able
 - May initiate resisted open kinetic chain exercise
 - 90-45° at 6 weeks
 - 90-30° at 8 weeks
 - 90-0° at 10 weeks
 - 90-0° with progressive loading at 12 weeks
 - No running, jumping, cutting, pivoting, or twisting
 - Avoid painful activities/exercises
 - Avoid patellofemoral pain
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 - End range flexion and extension
 - Aerobic training on stationary bike, elliptical, stair climber, UBE
 - Core stabilization exercises
 - Progressive double and single limb strengthening
 - Double limb to single limb balance/proprioception
 - Aerobic training:
 - Walking program when walking with normal gait mechanics
 - Single to multi-plane exercise
 - Progression of balance/proprioception
 - Modalities as indicated
 - Week 12: FOTO, LEFS, PSFS

- Weeks 12-16**
- Full, symmetric ROM
 - No effusion with increased activity
 - Increase intensity and duration of functional LE strength
 - Initiate return to jogging program
 - Begin low level plyometric and agility training
 - Avoid painful activities/exercises
 - Jogging program initiated at 12 weeks if cleared by surgeon
 - No effusion
 - Full AROM
 - >80% LSI
 - No jogging on painful or swollen knee
 - Lateral support/buttress brace per MD or patient preference
 - Increase loading capacity for lower extremity strengthening exercises
 - Continue balance/proprioceptive training
 - Week 12: begin return to jogging program
 - If applicable, start with pool/anti-gravity treadmill
 - Begin low level plyometric and agility training at 12 weeks
 - 3-4 month follow up with MD (SGYM)

- Months 4-6**
- Continue to progress functional strengthening
 - Successful progression of the return to running program
 - Initiate higher level plyometric and agility training
 - No jogging/running on a painful or swollen knee
 - Avoid painful activities/exercises
 - Avoid patellofemoral pain
 - No participation in sports unless specified by care team
 - Progression of return to jogging program
 - Gradually increase lifting loads focusing on form, control, and tissue tolerance
 - Progress as tolerated:
 - Core Stability
 - Strength
 - Endurance
 - Proprioception/Balance
 - Increase intensity of plyometric and agility training
 - Foot speed and change of direction
 - Functional assessment at 6 months per MD
 - Month 6: FOTO, LEFS, PSFS

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Months 6 +

- Continue to progress functional strengthening
- Sport-specific training
- Begin gradual return to sport
- Pass return to play criteria
- No participation in sports unless specified by care team
- Avoid painful activities
- Gradual return to full participation in sports
- Progress as tolerated:
 - Core Stability
 - Strength
 - Endurance
- Begin sport-specific training
 - Proprioception/Balance
 - Plyometric training
 - Agility drills
 - Sport-specific activities
 - Single-to multi-task
 - Reactionary drills
 - Perturbation training
 - Closed to open environment
- Gradual return to sport progression
Functional assessment as needed per MD
- Final visit: FOTO, LEFS, PSFS

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