

ACL reconstruction with Meniscus repair Protocol

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Guidelines:

1. Use professional judgment as patients progress. Even if an exercise or activity is listed at a particular time frame, some patients may not be ready to perform it.
2. Do not do resisted long or short arc quads, to avoid adversely stressing the graft. It is advised to avoid returning to resisted knee extension exercises.
3. Patients are not allowed to return to more aggressive physical activities such as running or jumping until sufficient healing and progress has occurred. Criteria for return to activities include both healing time from surgery, and each patients actual progress with his/ her rehab.
4. General Time Frame on selected activities: (see specific weeks for more details)
Gait-NWB/TWB for 6-8 weeks.
Running- 3-4 months, depends on meniscus healing
Golf- 3-4 months
Aggressive Throwing/Hitting-4 months
Jumping- 5 months
Return to full sports- 5-8 months pending on Dr's release and pt's commitment to rehab.
5. Correct technique is extremely important in how the patient performs exercises.
6. For PROM, getting and keeping full extension (surgical knee=other knee) is critical to achieve ASAP. With flexion expect at least 10 degrees improvement per week, with a minimum of 120 degrees by 4 weeks post op depending on site of meniscus repair. Call physician for specifics.

Immediate Postop Care:

1. Patient will have dressing on until first post op PT visit.
2. Polar Pak is used continuously until first post op PT visit.
3. Patient should stretch into knee extension with heel prop position, keeping knee extended for 15 minutes, 4 times/day.
4. Exercises: quad sets, hamstring sets, glut sets, ankle pumps, hamstring stretch in sitting, gastroc stretch in heel prop position via towel pull.
5. Patients may have a straight leg brace immediately after surgery. DC at first post op visit if patient has good quad tone, and LE control in weight bearing. Can use to help increase extension at night or to protect leg when patient is in public, or for pain prn.
6. Patient will be NWB/TWB proprioceptive gait through 6 weeks post op, then progressing to FWB by 8 weeks.

FIRST POST- OP VISIT

PROM: 0 ext to 70-90 degrees flexion. Especially make sure you get and keep full extension ASAP. Hyperextension even this early is OK. May need to be cautious with flexion if physician had noted ROM restrictions.

AMB: Continue NWB/TWB proprioceptive gait

EXERCISE: ROM, SLR, quad sets, ankle pumps, NWB hip strengthening. Strengths for quad-ham-calf with modifications as needed for WB status. Patient to do patella mobs and self-message for early soft tissue work

SPECIAL ACTIVITIES: Dressings are removed at this visit, down to steri strips. No ointments, betadine ECT should be used on the incision or portals. If any drainage is present OK to use 4X4's. OK for patient to shower but they must keep knee covered with plastic wrap during shower to keep incision dry. Keep wound clean/dry for 10-14 days post-op. Patellar mobility (esp superior glide), soft tissue mobility, electric stim if needed for gross swelling, electric stim if needed for neuromuscular stim to quads/VMO, pulsed 3 MHz ultrasound if hard/ thick swelling esp suprapatellar. Use Polar Pack intermittent during the day and continuous at night. Use Ace Wrap or compression sleeve for decreasing swelling.

WEEK 1:

PROM: full extension to 90-100 degrees flexion. Still emphasize (even into hyperextension). Want L=R ASAP unless Dr. Advises otherwise (would be cautious with flexion if Dr. specifies)

AMB: Continue NWB/TWB proprioceptive gait

EXERCISE: continue NWB strengthening for LE. Also add abdominal exercises. Although patient is still NWB, the focus should be on functional use of abdominal, for example Swiss Ball balance reach with involved LE, ball catches, sit backs.

SPECIAL ACTIVITIES: Gradually wean off polar pack. May also add heat/cold contrasts if swelling is difficult to disperse. Continue with patella and soft tissue mobility, modalities as needed. If using electric stim for quad/VMO activity, do in conjunction with functional quad exercise such as TWB terminal knee extension into ball or against band resistance.

WEEK 2: (Patient will recheck with Dr. Bruner at 2 weeks, 2 mo, 4mo, 6 mo)
PROM: full extension- 110 degrees

AMB: Continue NWB/ TWB

EXERCISE: Progress same type of NWB exercise: seated balance shifts, open- chain proprioception and UE/LE reaches, strength, control, all three planes (sagittal, frontal, transverse) but still limiting range and speed as patient can control. Challenge balance and intensity with Medicine Ball work, ECT. Continue to emphasize good technique with exercises.

SPECIAL ACTIVITIES: pay close attention to soft tissue, with adding massage to portals and possibly to patellar tendon incision if healing well.

WEEKS 3-6:

PROM: full extension- 120 degrees at 4 weeks and 140 degrees flexion at 6 weeks

AMB: Continue NWB/TWB gait until 6 weeks. At that time may increase to WBAT beginning with 2 crutches.

EXERCISE: continue same as previously listed. OK to add Total Gym leg press at no more than 30% of body weight by 4-5 weeks post op. May add stationary bike at low level resistance.

WEEKS 6-8:

PROM: Should have full range by approx 8-12 weeks out

AMB: At 6 week's progress to WBAT. Monitor any problems with pain, swelling, quad control as patient progress with WB status. Patient should have normal gait before off crutches completely

EXERCISE: begin with weight shifts, which should be done multi- direction, and can include single leg balance for early proprioception if **patient has good quad control**. Progress carefully with further closed chain exercise such as step-ups, step-downs (recommend starting with 2" height), **balance reaches**, squats (still with limited range), multi plane lunges, lots of balance and proprioception work, can add stationary bike. Work on introducing gentle lateral movements such as side- steps with and without theraband, walk- thought cariocas, high- knee ECT. **Do not push activity aggressively or hard.**

SPECIAL ACTIVITIES: No running, jumping, kicking, sports activates.

8-10 WEEKS:

ROM: Should have L=R. If having problems or if patient has lost motion, should contract physician.

EXERCISES: OK to carefully progress to fitness center work-outs including cardiovascular equipment (NO RUNNING) and weight equipment **if patient is ready**. Typically patients are allowed to perform lightweights with the quart rack. Limit 0-60 degrees range. May also begin leg press, hamstring curl, free weights, lunges with weights ECT, but **no hip sled, power cleans, clean and jerk, reminder for no leg extensions with weights**. Continue focus on balance/proprioception and simulation of functional activities for combination work of strength/balance/proprioception.

SPECIAL ACTIVITIES: Still no running, jumping, sports activities of any kind

10-12 WEEKS:

EXERCISE: Continue advancing cardiovascular workouts, and strength training for all muscle groups, in combination with proprioception, increased range, increased load/demand, simulation of functional activities including return-to-sport positions/reaches. Continue dumbbell workout, such as matrix lunge pattern. At the 9-10 week mark, advance to low level “step and sticks” to work toward bent- knee landing in preparation for running, if Dr. plans to release at 12 weeks for impact activities. If patient will not be released for impact until 16 weeks, hold step and sticks until 14 weeks post.

THREE – FOUR MONTHS: SPECIAL ACTIVITIES:

- May start outdoor bike
- May be released for straight- ahead running if OK with Dr. and PT (No sprinting)
- After two weeks of funning program, may gradually progress with lower level lateral movements, agility work IF good control, no pain, good stability, and OK with Dr. (agility to include defensive slide, floor ladder drills, figure 8, cariocas) Advance intensity by 16 weeks.
- Carefully increase demand into transverse plane movements
- Progress to **low level plyometrics** including stationary jumps, hops, skipping rope Continue advancing functional abdominal work
- Spots specific drills my be implemented *with caution*
- Work on deceleration activities with emphasis on bent- knee position and injury prevention including 3-step stop, bent knee landing, and rounded turns.
- Golf- may be released for full participation at 3-4 months if patient ready,

*****With this increase in activity, watch for patellofemoral or pes pain and adjust accordingly *****

FOUR- FIVE MONTHS: SPECIAL ACTIVITIES:

- Continue thorough stretching programs
- Advance sports specific drills and running program to increased intensity
- Running program should include increased speed, rounded turns, backpedal, low-level direction changes.
- **Continue to closely monitor technique and injury prevention principles.**
- Advance with more aggressive agility drills including jump, hop, plyometric activities
- **Sports activities:** soccer- continues ball drills. Allowed to progress to hard kicks on goal depending on whether the plant or kick leg is the involved side. Hard kicks OK if surgery side is the “kick” leg, not the “plant” leg. Basketball- lay up drills, jump shots OK, but no scrimmaging or ever “one on one”
Softball/Baseball- OK to advance to throwing, hitting, funning bases.

FIVE- SIX MONTHS: SPECIAL ACTIVITIES

- Intensify demand/load duration ECT. For the 3-4 month activities
- Progress with appropriate sport-specific drills
- May hit against backboard with request sports
- Some patients may have full release to play sports at this time frame, but **ONLY** with Dr. Bruner’s approval

SIX- EIGHT MONTHS:

Should have full release at this time unless complications, such as repeat scope, poor control with deceleration/plyometric/sport activities, unresolved pain problems.

Addendum Exercise

Exercise:

1. Balance Reaches- generally done by balancing on one leg, and then reaching the opposite leg at various angles or either arm at various angles or heights. Can increase difficulty by changing surface, adding dumbbells, changing head position ECT.
2. Abdominal Exercise examples- on Swiss Ball with contralateral knee- elbow, overhead reaches with ball incorporating diagonal and sagittal movement, sit backs. Also can do single leg balance with diagonal reaches overhead with medicine ball.
3. Matrix Lunge- This lunge pattern incorporates all three planes of movement, and is done by alternating left/right steps. The pattern is anterior lunge, lateral lunge, and posterior rotation lunge (similar to a pivot movement). This exercise can be done with or without dumbbells, and varying depth of reach toward floor.
4. Step and Stick- The purpose of this exercise is to prepare the limb to absorb body weight in preparation for running. The most basic form is done on a level surface, by starting with the non- surgery leg back, and the person doing a gentle hop forward to land on the surgery leg with a bent knee. Focus is for patient to control this deceleration with good form and control. The exercise is advanced by starting the movement off of a step, progressing from 2" to 4" ECT. The patient must be able to land with control in the bent- knee position before he/she would be allowed to run.