

REHABILITATION FOLLOWING ACL RECONSTRUCTION

For Dr. Crockett and Dr. May

Use of ROM brace locked out at zero degrees extension for ambulation for six weeks

No running for four months after surgery

No Biodex or KT testing for four-six months after surgery

No resisted open chain knee extension exercises

0-2 weeks

Brace locked at zero degrees extension for ambulation

Two crutches as tolerated (less 50% weight bearing)

Ice 20 minutes every hour and elevate the knee above heart level with knee in extension

Come out of brace 4-5 times daily to perform self ROM 0-90°

Exercises

- Intermittent ROM exercises (0-90 degrees)
 - Passive knee extension to zero
 - Passive seated knee flexion only (NO HEEL SLIDE!!!)
- Patellar mobilization
- Ankle pumps
- Straight leg raises (Hip flexion and abduction only)
- Initiate standing weight shifts
- Continue quad sets with use of NMES as needed

WEEK 2-5

Continue to use the ROM brace locked at zero degree for ambulation

May bear weight as tolerated by pain

- NON WEIGHT BEARING if meniscus repair was performed

The brace may be unlocked anytime the patient is not bearing weight with the involved leg

Exercises

- Continue the previous exercises
- AROM 0-115 degrees
- PROM 0-125 degrees
- Patellar mobilization
- Calf stretching
- Calf raises
- Standing weight shifts and mini squats (ROM 0-40)
- Initiate proprioception training
- Well leg exercises
- Progressive resisted exercise program start with 1 lb., increase 1 lb. per week as tolerated by pain

WEEK 6-12

May unlock the brace and start weaning off of ROM brace

- Continue the previous exercises
- AROM 0-125 degrees
- PROM 0-135 degrees
- Bicycle for ROM stimulus and endurance, but no resistance – must be pain free
- Initiate gentle hamstring stretching
- Initiate SLR hip adduction as tolerated by pain
- May start hamstring curls against gravity without any resistance as tolerated by pain
 - may start with 1lb. weight and increase gradually as tolerated by pain
- Leg press (0-60)
- Initiate core strengthening
- Emphasize closed chain exercises:
 - Step Ups
 - Mini Squats (0-60)
- Stairmaster if the patient has no patellofemoral pain
- light proprioceptive training: Balance Board or Single Leg Balancing

WEEK 13-17

AROM and PROM to full

- Continue the previous exercises
- Initiate pool water running
- Bicycle/Stairmaster
- Initiate Elliptical
- Proprioception training
- Continue closed kinetic chain strengthening
- Leg press (0-90)
- Mini squats
- Lateral step ups
- Hamstring curls
- Hip Abd/Add
- Wall Squats
- Lunges (stationary)

IV. LIGHT ACTIVITY PHASE (MONTH 4-5)

Isokinetic Test (180 degrees/sec for 5 reps and 300 degrees/sec for 15 reps both for Full ROM)

KT 1000 Test-Total Displacement at 15 lb., 20 lb., and 30 lb., Manual Maximal Test

For Dr Crockett - the above tests are to be done after **4 calendar months** after surgery

For Dr May - the above tests are to be done after **6 calendar months** after surgery

May start straight jogging on a flat, dry surface after 4 calendar months after surgery

May initiate plyometric program

Exercises:

- Emphasize eccentric quad work
- Continue closed chain exercises, step-ups, mini-squats, leg press
- Hamstring curls and stretches
- Bicycle for endurance
- Pool running (forward/backward)
- Stairmaster
- High speed isokinetics
- Initiate plyometric program
- Straight line interval running program

Around five months after surgery:

- Initiate agility program and functional progression drills to tolerance:
 - Carioka
 - Lateral Shuffles
 - Backward Pedaling
 - Hopping drills (start with landing on 2 feet, progress to single leg as appropriate)
- Initiate sport specific training and drills

V. RETURN TO ACTIVE PHASE (MONTH 6-9)

Goals

Achieve maximal strength & endurance

Return to sport activities

- Approval for return to competitive sports activity must be approved by MD. Patient should be able to fully complete the "Clancy Running Program" with no signs of soreness, swelling, or obvious functional movement deficiencies.
- Continue home strengthening program for one year after surgery (3-4 days per week)

Post-Clinical Rehabilitation Exercise Protocol = 6-Pack Program: 3-4 days/week

Criteria to Initiate Program

1. Satisfactory isokinetic and KT test results
2. Functional Test 70% > contralateral leg
3. Satisfactory clinical exam

Strength

Leg Press
Squats
Hamstring Curls
Lunges
Calf Raises

*Choose 4-5

Power

Scissors Jumps
Stationary Leaps (Tuck Jumps)
Repetitive Broad Jumps
Box Hops Up
Box Hops Down
Foot Frequency Circuit (Line Hops)

*Choose 3-6

Endurance

Bicycle (>20 minutes)
Stairmaster (>20 minutes)
Elliptical (>20 minutes)
Pool Program (>20 minutes)

*Choose 1-2

Stability

Balance Board
Single Leg Stance
Step Downs (3 directions)
Wall Sits
Swiss Ball Bridges/Leg Curls

*Choose 2-4

Functional Progression

High Knees
Butt Kicks
Forward Walking Lunges
Specific Position
Power Skips
Carioca
Lateral Shuffle
Back Pedal

*Choose 4-8

Running Program

Striders, 60-70% max, 40 yds, 2x
Accelerations 60-85% max, 40 yds,
Starts, 20yds, Sports/Position
Striders, 60-75% max, 40 yds, 2x