
MPFL Reconstruction



UT★Physicians
Orthopaedic Surgery

Post-Operative Rehabilitation Protocol

Ironman Sports Medicine Institute
1st Edition

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Orthopaedic Surgery

MPFL Protocol

PHASE 1 - ACUTE (0-6 Weeks)

PHASE GOALS: PROTECT REPAIR, RESTORE AMBULATION & ADL STATUS

RANGE OF MOTION

0-1 WEEK - NO FLEXION - ALLOW QUAD ACTIVATION

0-2 WEEKS - SLOWLY PROGRESS FLEXION TO 45 DEGREES

2-6 WEEKS - SLOWLY PROGRESS FLEXION TO 90 DEGREES

WEIGHT BEARING

0-6+ WEEKS - WEIGHT BEARING AS TOLERATED

BRACE & CRUTCH USE

0-2 WEEKS - BRACE LOCKED IN FULL EXTENSION

2-4 WEEKS - OPEN BRACE TO 60 DEG *WITH GOOD QUAD CONTROL

4-6+ WEEKS - OPEN TO FULL & D/C WHEN GAIT IS NORMAL

STRENGTHENING & CONDITIONING

QUAD SETS, 4-WAY LEG RAISES, & SINGLE-LEG BALANCE

UPPER BODY ERGOMETER

CRITERIA FOR FULL AMBULATION

- **≥ 0 DEG KNEE EXTENSION & 70 DEG KNEE FLEXION**
- **≥ 30 STRAIGHT LEG RAISES WITHOUT A LAG**
- **SYMMETRICAL GAIT WITHOUT A LIMP**

MPFL Protocol

PHASE 2 - STRENGTH (6-12 Weeks)

PHASE GOALS: IMPROVE STRENGTH & INITIATE JOGGING PROGRAM

RANGE OF MOTION

6+ WEEKS - SLOWLY PROGRESS FLEXION TO FULL OVER NEXT 6 WEEKS

STRENGTHENING

SHORT-ARC LEG PRESS, STEP-UPS, & ROMANIAN DEADLIFTS (RDLs)

SQUAT PROGRESSION (BODYWEIGHT SQUATS -> SINGLE LEG SQUATS)

RESISTED HIP ABDUCTION LATERAL BAND WALKS

CORE EXERCISES (V-UPS, SINGLE-LEG BRIDGING)

CONDITIONING

STATIONARY BIKING - INITIATE AT 110 DEGREES FLEXION

ELLIPTICAL & ROWING MACHINE

CRITERIA FOR JOGGING

- **12 WEEKS POST-SURGERY**
- **PAIN LESS THAN 3 / 10 (WORST)**
- **WITHIN 2 DEG NORMAL KNEE EXTENSION & 120 DEG KNEE FLEXION**
- **QUADRICEPS & HAMSTRING STRENGTH \geq 60% NORMAL**
- **AT LEAST 1 MINUTE OF SINGLE LEG SQUATS**
- **MD OR PT APPROVAL**

MPFL Protocol

PHASE 3 - AGILITY (12-16 Weeks)

PHASE GOALS: INTRODUCE DYNAMIC & POWER MOVEMENTS

STRENGTHENING

GYM SPECIFIC STRENGTHENING (BARBELL SQUATS & DEADLIFTS)

BIODEX QUAD & HAMSTRING FATIGUEING PROTCOLS

CORE EXERCISES (MOUNTAIN CLIMBERS, PLANKS, V-UPS)

CONDITIONING

ROAD OR STATIONARY BIKING

JOGGING PROGRAM

SWIMMING (PROGRESS KICKING GRADUALLY & PAIN-FREE)

PLYOMETRICS & LIGHT AGILITY

LADDER DRILLS, BOX JUMPS (UP TO 12”), SIDE SHUFFLE

CRITERIA FOR HEAVY AGILITY & SPORT SPECIFIC MOVEMENTS

- **16 WEEKS POST-SURGERY**
- **PAIN LESS THAN 2 / 10 (WORST)**
- **QUAD & HAM STRENGTH \geq 80% NORMAL; \geq 50% H/Q RATIO FOR FEMALES**
- **AT LEAST 3 MINUTES OF SINGLE LEG SQUATS (RESISTED)**
- **\leq 5 ON LANDING ERROR SCORING SYSTEM (LESS)**
- **MD OR PT APPROVAL**

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PHASE 4 - RETURN TO PLAY (16+ Weeks)

PHASE GOALS: INITIATE SPORTS SPECIFIC MOVEMENTS & RETURN TO PLAY

STRENGTHENING

PROGRESS GYM STRENGTHENING (BARBELL SQUATS, DEADLIFTS, ETC)

BIODEX QUAD & HAMSTRING FATIGUE PROTOCOLS & CORE EXERCISES

CONDITIONING

JOGGING, BIKING, & SWIMMING

INTERVAL SPRINT WORKOUTS

PLYOMETRICS & AGILITY (2-3 DAYS/WEEK)

BOX JUMPS & SINGLE-LEG HOPS (PROGRESS TO ROTATION)

LATERAL & ROTATIONAL AGILITY

UNPREDICTABLE CUTTING & CONTACT DRILLS

CRITERIA FOR RETURN TO PLAY

- **PAIN LESS THAN 2 / 10 (WORST)**
- **> 75/100 ON ACL PSYCHOLOGICAL SURVEY**
- **QUAD & HAM STRENGTH \geq 90% NORMAL; \geq 60% H/Q RATIO FOR FEMALES**
- **90% NORMAL ON ALL SINGLE-LEG HOP TESTS**
- **95% NORMAL ON FIGURE OF 8, 5-10-5 PRO-AGILITY, & SL VERTICAL JUMP**
- **MD OR PT APPROVAL**