

# Hugh Jones Orthopaedic Surgeon

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**M.B.B.S.,F.R.A.C.S. (ORTH)**

*ACL REHABILITATION PROTOCOL Dr Hugh Jones*

## **1. Immediate Post-Op**

- *Bledisloe brace locked at 0*
- *Cryo cuff incorporated in brace with **TED** stockings*
- *Patient instructed in performance of **ROM** exercises, 2-3 times daily*
- *“Towel” extensions bobtain passive extension at least 30 minutes by propping heel up on pillows*
- *Passive flexion – off side of bed*
- *Good leg assist for passive **ROM** out of brace*
- *Prone extension stretch*
- *Isometric hamstrings*
- *Isometric quads at 45deg. Quad sets, SLR at 0deg*
- *SLR fro quad control*
- *Co-Constrictions*
- *Ankle exercises (doris/plantarflexion)*
- *Weight bearing as tolerated with crutches*

## **2. Days 3-4 to 2-3 weeks**

- *Goal: 0-100 degrees of flexion (emphasis on full extension)*
- *Outpatient physiotherapy : 3xweek*
- *Continue use of cryocuff as needed*
- *Home exercises 3xday*
- *Towel extensions*
- *Prone passive stretching (for extension)*
- *Wall and heel slides for flexion (or comparable flexion exercises)*
- *Active assisted knee flexion only*
- *Good leg assist passive extension*
- *Isotonic hamstrings*
- *Open chain quads 90-45deg ( of tolerated)*

### 3. Weeks3-6

- Fit with **Protective Derotation Brace** (0-100deg minimum) (weeks2-4 depending on individual case) Exception: Meniscal repair stays in Bledisloe brace for 6wks
- Wean down to one crutch at a time
- Continue **ROM** exercises as before with home program
- Water conditioning (can start earlier if there is complete wound healing)
- Swimming-(well leg kick only)
- Stationary biking, stairmaster, ¼ squats
- Start easy closed chain quads exercises
- Isotonic hamstrings
- Quads 90-30deg (if no patellar irritation)
- Stress full extension. Should have 120deg of flexion by 6wks

### 4. Weeks6-12

#### Most strengthening exercises for quadriceps are to be closed kinetic chain exercises

- Bilateral knee bends → progress to unilateral knee bends
- Calf raises (double→ single leg)
- Leg press machine
- One leg balancing
- Brace for high risk situations only
- Wean off crutch or cane
- Stationary bike ( for ROM first, then gradually add resistance)
- Continue heel slides for flexion at home
- Passive flexion stretch
- Water conditioning
- Swimming (flutter kick only)
- Increase hamstrings strengthening
- If quad strength ≥ 70%- rope jumping (with brace) , leg press, hip slide, squat rack (90-10deg ) , stairmaster
- Discontinue Derotation Brace for ADL'S

## 5. 3-5 Months

- *Cycling and Swimming (progress on road bike)*
- **LOW ANGULAR VELOCITIES**
- *Jogging at 3-4mths (if quad strength  $\geq$  70%)*
- *Proprioceptive exercises ( balance board)*
- *Leg press*
- *Closed chain quads strengthening with increased resistance*

## 6. 5-12 Months

- *Progressive strengthening without resistance or extension*
- *Proprioceptive exercises*
- *Sports specific activities*
- *Biking and Swimming*
- *Return to all sports (per Doctor's instructions)*
- *Running → Cutting sports*
- *Jumping sports last*
- *Running programme with emphasis on agility and power*
- *Functional activities, side cutting, back pedalling, cutting, pivoting.*