



# Physiotherapy Protocol

## Medial Patellofemoral Ligament (MPFL) Reconstruction

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### University Hospitals Bristol Protocol

STAGE	GOALS
<p><b>Week 0-2</b></p> <p>Inpatient in hospital days 1-2.</p> <p><b>Aims:</b></p> <ul style="list-style-type: none"> <li>› Decrease/control swelling and pain</li> <li>› full active and passive extension</li> <li>› 90° flexion</li> <li>› Ability to SLR</li> <li>› Full weight-bearing as tolerated</li> </ul>	<ul style="list-style-type: none"> <li>› Active and active assisted knee flexion</li> <li>› Static and inner range quadriceps exercises</li> <li>› Straight leg raise taught</li> <li>› Ankle dorsiflexion/ plantarflexion exercises</li> <li>› Mobilise weight-bearing as tolerated with crutches</li> <li>› Swelling management</li> <li>› Gentle closed chain quadriceps exercises</li> <li>› Emphasis on alignment and co-contraction.</li> <li>› Port hole / scar management</li> <li>› Start basic proprioception, balance and co-ordination training</li> <li>› Core and hip stability exercises</li> </ul> <p><b>Contraindications</b></p> <ul style="list-style-type: none"> <li>› No resisted (hamstring graft), hamstrings or flicks for 4/52</li> </ul>
<p><b>Week 2-6</b></p> <p>Review 10-14 days post op for removal of sutures and x-ray.</p> <p>Able to drive an automatic car if left knee has been operated.</p> <p><b>Aims:</b></p> <ul style="list-style-type: none"> <li>› Full extension (normal/hyper-extension) and near full flexion</li> <li>› Good activation of quadriceps and straight leg raise with NO lag.</li> <li>› Minimal pain</li> <li>› Mild/ stable effusion</li> <li>› Normal gait pattern</li> </ul>	<ul style="list-style-type: none"> <li>› Swelling management</li> <li>› Wean off crutches as pain and quadriceps control allows</li> <li>› Progress closed chain quadriceps exercises with co-contraction- double leg wall mini squats, sit to stand, lunges</li> <li>› Closed chain knee flexion exercises</li> <li>› Hamstring donor site management – soft tissue techniques, gentle stretching, concentric and eccentric exercises</li> <li>› Patella mobilizations - avoiding lateral glides</li> <li>› Proprioception, balance and co-ordination training</li> <li>› Core and hip stability exercises</li> <li>› Once 100° flexion is achieved can start using a stationary bike</li> </ul> <p><b>Precautions:</b></p> <ul style="list-style-type: none"> <li>› Avoid overstressing fixation.</li> </ul>

continued overleaf



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<p><b>Week 6–12</b></p> <p>Able to drive an automatic or manual car.</p> <p><b>Aims:</b></p> <ul style="list-style-type: none"> <li>› ROM must exceed 90° flexion – if not refer back to clinic as may need manipulation.</li> <li>› Increase quadriceps and VMO control for restoration of proper patella tracking.</li> <li>› Good proximal alignment and control</li> </ul>	<ul style="list-style-type: none"> <li>› Exercises need to be tailored to their functional aim</li> <li>› Road cycling – no clips or cleats – “normal pedals only”</li> <li>› Cardiovascular fitness</li> <li>› Proprioceptive exercises – add controlled rotational exercises</li> <li>› Swimming – freestyle and pool walking</li> </ul> <p><b>Precautions:</b></p> <ul style="list-style-type: none"> <li>› Avoid impact work and deep squats/lunges especially if pre-existing PFJ pain and/or degenerative articular lesions (Fithian 2010).</li> </ul> <p><b>Contraindications:</b></p> <ul style="list-style-type: none"> <li>› No breast stroke until 3 months.</li> </ul>
<p><b>Week 12–16</b></p> <p>Clinic review plus outcome scores.</p> <p>By 3 months the graft fixation is consolidated.</p> <p>At 4 months there is complete revascularization of the graft, laying down of collagen and gradual increase in strength.</p> <p><b>Aims:</b></p> <ul style="list-style-type: none"> <li>› knee extension strength at least 70% of other knee.</li> <li>› Good active patella control with no evidence of lateral tracking or instability.</li> </ul>	<ul style="list-style-type: none"> <li>› Increase fitness</li> <li>› Introduction of impact work – ONLY if good range extension, eccentric quadriceps control with correct alignment.</li> <li>› Gradual increase in resisted open chain/ closed chain quadriceps (avoid pain)</li> <li>› Continue with proprioceptive training – increase rotational control</li> </ul>
<p><b>Week 16+</b></p> <p><b>Aims:</b></p> <ul style="list-style-type: none"> <li>› Full pain free ROM.</li> <li>› Raise fitness targets and set new goals</li> <li>› Increase speed of balance reactions and improve co-ordination</li> <li>› Normal gait in running. Good control of cutting, pivoting, stopping and starting if required</li> </ul>	<ul style="list-style-type: none"> <li>› Initiate running – gradual paced change of terrain / gradient and duration</li> <li>› Progressive introduction of dynamic activity jumping / hopping (start on the trampette, emphasis on alignment of both push off and land)</li> <li>› Change of direction; start single direction and progress to cutting, multidirectional and pivoting stopping/starting and acceleration/ deceleration</li> <li>› Backwards running</li> </ul>

continued overleaf



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STAGE	GOALS
<p><b>(Week 16+ continued)</b></p> <ul style="list-style-type: none"> <li>› Sport specific exercises progressively sequenced to include walking followed by running forwards/ backwards/ sideways; changing directions</li> <li>› Advice on returning to training</li> </ul>	
<p><b>6 months+</b></p> <p><b>Aims:</b></p> <ul style="list-style-type: none"> <li>› Begin contact sports training</li> </ul>	<p><b>Prior to return to sports training:</b></p> <ul style="list-style-type: none"> <li>› Satisfactory single limb dynamic control</li> <li>› 85% hop for height, length and cross over</li> <li>› 80% strength of non-involved limb</li> <li>› Confidence in knee</li> <li>› Return to activity</li> <li>› non contact training initially</li> </ul>

This resource is provided by Dr Balalla for implementation by a qualified physiotherapist. Every patient's condition is unique and this information may not represent the full physiotherapy management plan directed by Dr Balalla.

To discuss any of the information above, please phone Dr Balalla's rooms on (02) 9680 1315, or email enquiries@drbalalla.com.au.

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