REHABILITATION FOR THE ACTIFIT™ MENISCAL SCAFFOLD IMPLANTATION PATIENT

PHASE	CRITERIA	RANGE OF MOTION	WEIGHT BEARING	EXERCISE	GOALS
PHASE 0 PRE-OPERATIVE	Meets surgical criteria for meniscal transplant	Not restricted	Not restricted	▪ Choose exercise, resistance and equipment after establishing patient's symptom severity and irritability ▪ Educate patient on expected post-operative outcome/ exercise protocol ▪ Teach VMO exercises to prevent AKP ▪ Introduce flexibility exercises ▪ Assess and correct any muscle imbalance ▪ Progress CV exercises e.g., static bike, swimming, etc. ▪ Add varied resisted exercises, working isometrically, concentrically and eccentrically ▪ Provide adequate rest periods between exercises and exercise sessions	☐ Increase patient compliance/ knowledge ☐ Maintain active and passive ROM ☐ Maintain/ increase muscle strength and endurance ☐ Maintain/ increase cardiovascular endurance ☐ Prevent over-training ☐ Prevent severe long term exacerbation of patient's symptoms ☐ Establish patient's post-operative expectations/ functional goals
PHASE 1 IMMEDIATE POST-OPERATIVE/ MAXIMUM PROTECTION 0-6 WEEKS	Successful operative outcome Surgeon in agreement with post-operative rehabilitation protocol	Brace 0°-45° for first 3 weeks, then 0°-90° for following 3 weeks Brace may have a	PWB 0-2 wk Advance to FWB 2-4 wk	▪ Cryotherapy ▪ CPM ▪ Circulatory exercises (dorsiflex, static quadriceps, static gluteus max's) ▪ Abductor/ Adductor/ Gluteal exercises ▪ Unicam Bike™ (Passive swing setting for affected knee, adjusted to suit ROM) ▪ Upper Body work	☐ Protect Actifit scaffold and granulation tissue ☐ Control inflammation ☐ Establish full E ☐ Regain Q control ☐ Prevent adhesions ☐ Aid joint nutrition ☐ Pain relief ☐ Reduce deconditioning

DRIVING allowed from 4 – 6 Weeks if can perform effective emergency stop and meets with surgeon's approval.		valgus or varus stress depending on medial or lateral meniscus and/ or on surgeon's preference Locked 0° E when mobilising and sleeping		▪ Isometric Q exercises ▪ Heel slides (0°-45-90°) (See ROM Phase 1) ▪ H and calf flexibility exercises. ▪ Patella & Tibiofemoral (grade 1-3) joint mobilisations	▪ Core Stability exercises as able ▪ Hydrotherapy, dependant on wounds and brace suitability ▪ Soft Tissue mobilisation ▪ EOR E mobilisations ▪ Early Proprioception exercises (joint position, force reproduction sense, balance dependant on WB status)	☐ Restore function for D/C home ☐ Improve confidence ☐ Prevent adverse effects of immobilisation	
PHASE 2 MODERATE PROTECTION/ STRENGTHENING 6-12 WEEKS	SLR with no lag Full terminal E F to 90° No/ minimal inflammation	No Brace Restrict WB ROM to 0°-60°	Full	▪ Gait re-education ▪ Assess and correct muscle imbalance, progress core stability work ▪ Reintroduce VMO exercises	▪ CKC 0°-60° ▪ Heel raises ▪ OKC Q & H exercises progressing range, resistance and volume as clinically appropriate (N.B. ensure adequate eccentric strength before progressing	☐ Establish normal gait ☐ Improve ROM ☐ Avoid over-stressing the new meniscus tissue ☐ Increase muscle strength and	☐ Improve proprioception ☐ Restoration of kinematics ☐ Promote neuromuscular responses ☐ Improve dynamic stability

				▪ Flexibility mobilisations and exercises ▪ Unicam Bike™ (Active drive setting for affected side) or Static Exercise bike/ turbo-trainer ▪ Progress proprioceptive exercises to sport/ function specific	on to plyometric exercises) ▪ PNF ▪ Gymball exercises ▪ Progressively add resistance to gym exercises as clinically appropriate ▪ Encourage ideal dynamic biomechanics (progressing from static limb alignment, to double footed small knee bends to single leg bends to dynamic jumps, leaps and hops at speed but PWB i.e. in pool or using parallel bars progression will be dependant on clinical judgement)	balance ☐ Increase cardio-vascular fitness	
PHASE 3 MINIMAL PROTECTION/ FUNCTION 3-4 MONTHS	Check with surgeon Normal gait F >100˚	No restriction		▪ Advanced CKC Exercises ▪ Stepper/ Bike/ Nordic Track/ Rower	▪ Swimming (No breaststroke leg kick until 4 MONTHS) ▪ Interval jogging on a sprung surface (straight line) or pool,	☐ Avoid over-stressing the new meniscus tissue ☐ Increase ROM, Strength,	☐ Improve joint and muscle contraction coordination and firing ☐ Encourage normal movement patterns

	No PFJ problems			▪ Advanced proprioceptive exercises ▪ Vary load, set and rest times to resisted exercises in order to bias muscle strength & endurance	progressing duration or speed or volume following clinical judgement ▪ When eccentric strength allows teach low intensity, low volume plyometric exercises, progressing as appropriate ▪ Begin Isokinetically resisted exercises	endurance and proprioception
PHASE 4 RETURN TO FULL ACTIVITY 4 MONTHS ONWARDS	Necessary strength/ ROM/ Endurance/ Proprioception No AKP Surgeon's approval	No restriction		▪ Increase volume and intensity of muscle strength, power, endurance and CV training ▪ Ensure periodisation and adequate rest periods are adhered to ▪ Liaise with coach if appropriate	▪ Gradually progress to all surface running, speed and agility work ▪ Commence advanced plyometric exercises specific to individuals needs ▪ Functional sport specific training ▪ Return to contact from 6-9months post-op if clinically appropriate	☐ Safely improve physical condition and fitness preventing over training ☐ Increase confidence ☐ Injury prevention ☐ Safe and gradual return to full function