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Overview of postoperative management of patients undergoing hip abductor tendon repair outlining specific goals, weight-bearing (WB) graduation, hip range of motion (ROM) and exercise prescription

Phase	Postoperative goals	Patient education and exercise prescription
Phase 1 (1-2 weeks)	1. Reduce postoperative pain/oedema. 2. Avoid excessive WB (>20% BW). 3. Avoid provocative postures and positions that may adversely stretch/load the repair site. 4. Maintain lower limb joint	• Educate on strategies to reduce pain/inflammation. • Education and practice in proficient heel-toe WB ambulation (≤20% BW), using 2 crutches. • Education on provocative postures and positions that may adversely stretch/load the repair site. • Passive and active-assisted hip ROM exercises within a pain-free ROM (avoidance of hip flexion >90°, internal rotation beyond neutral and/or hip adduction beyond the midline). • Active ankle dorsi- and plantar-flexion exercises. mobility, muscle tone and circulation. • Isometric contraction of the quadriceps, hamstrings, adductor and gluteal musculature.
Phase 2 (2-4 weeks)	1. Pain and oedema well managed. 2. Proficient heel-toe gait at 50% BW with 1-2 crutches. 3. Proficiency in undertaking home-exercise programme.	• Progress from ≤20% BW (1-2 weeks) to 50% BW (4 weeks), using 1-2 forearm crutches. • Education on quality of gait, particularly with the progression toward a single forearm crutch. • Introduce gentle stretching of the hip flexors. • Introduce additional home-based exercises, such as: knee extensions, prone knee flexion, multi-plane isometric hip adduction, bilateral supine bridging, resisted knee flexion, heel raises and standing hip extension. • Introduce hydrotherapy, including: deep water walking (forwards, backwards, sideways), heel raises, mini squats, straight leg hip flexion and extension, cycling, scissor kicks.

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Phase 3 (4-8 weeks)	1. Pain-free full WB gait by 8 weeks (1 crutch permitted for protection, stability and/or safety as required. 2. Pain-free during low demand daily tasks. 3. Proficiency in performing all new home-based exercises. 4. Near full and comfortable hip ROM (≥75% hip ROM in all planes compared to the contralateral hip).	• Progress from 50% BW (4 weeks) to full WB as tolerated from 6 weeks, using 1 forearm crutch as required. • Progress toward full pain-free passive and active hip ROM. • Education on quality gait required. • Increase demand of home based exercises, including: isometric and isotonic external hip rotation (using theraband), clam exercises, supine hip flexion, straight leg raises, bilateral supine bridging (with added theraband resistance) and standing hip abduction (without resistance). • Introduce stationary cycling (week 4-6) and gentle freestyle swimming for hip ROM and/or cardiovascular fitness. • Hydrotherapy: add shallow water walking (waist depth), straight leg hip abduction and circumduction, deep squats, step ups/downs, lunges, single leg balance and proprioception exercises. • Gentle remedial massage and soft tissue mobilisation.
Phase 4 (8-12 weeks)	1. Pain-free and full active hip ROM (≥90% hip ROM in all planes compared to contralateral hip). 2. Pain-free 6-minute walk test without the use of walking aids (gait speed patient dependent). 3. Ability to single leg stand for 15-30 seconds, with VAS ≤3/10. 4. Proficiency in performing home- and clinic-based exercises for the independent continuation of post-discharge rehabilitation.	• Full WB as tolerated, crutch/cane for stability as required. • Education on quality gait and undertaking functional activities (i.e. rising from sitting) required. • Increase demand of home based exercises, including: trunk flexion and core stability activities, prone hip extension, quadruped exercises with hip extension, standing resisted (theraband) hip extension and abduction, side-lying hip abduction. • Introduce WB functional activities as permitted (week 11-12), including: bilateral wall and free-standing squats (with assistance if required), single leg stance balance and weight shift activities, proprioceptive WB exercises.
Phase 5 (3-6 months)	1. Normal, pain-free and unaided gait. 2. Hip abductor strength ≤75% on	• Education and exercises pertinent to the training of daily activities for the individual patient is required. • End range and multi-plane stretching and soft tissue therapy of

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	MMT and/or HHD, compared with the contra-lateral limb.	surrounding hip musculature, including: gluteus medius, minimus, iliotibial band and tensor fascia lata.
	3. Comfort in ambulating stairs (ascent and descent) and gradients. 4. Return to work (dependent on occupational demands). 5. Proficiency in performing all full WB strengthening, functional and proprioception activities.	• Increase demand of home based exercises, including: single limb supine bridge exercise, side and prone bridging, pelvic drops and lateral band walks. • Increase demand of WB functional activities as required, including: single limb squat, lunge, single leg balance and stepping activities. • Outdoor road cycling is permitted, while rowing ergometry and elliptical trainers can be introduced. • Please note: graduation in WB activities should be based upon the assumed healing and maturation of the surgical repair, as well as the individuals' surgical details, lower limb strength/function and tolerance to exercises (pain and control).
Phase 6 (6 months onwards)	1. Ability to tolerate pain-free walking distances of any length/duration. 2. Hip abductor strength ≥90% on MMT and/or HHD, compared with the contra-lateral limb. 3. Ability to perform all activities of daily living pain-free. 4. Ability to effectively negotiate uneven terrain and soft sand. 5. Return to pre-operative low-impact recreational activities and/or sport as required.	• Ongoing education may be required in undertaking specific work, recreational and/or sporting activities, with particular reference to optimal ergonomic and/or technique modification to avoid provocative positions and/or movements that could be implicated in a recurrence of symptoms. • Exercises employed should begin to replicate what is required for the patient's individual activity goals, which may include sport specific activities.