**Additional file 2:** Specific examples of exercises included in home exercise program

| Exercise Aim | Dosage | Exercise Options |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Deep hip rotator strengthening | 2 - 3 sets | S:\BODYSYSTEM_Photos\Wilson sept nov 2012\seconds wilson\gym2012_0007.jpg | S:\BODYSYSTEM_Photos\Exercise Poses (L v Wald)\gym2011_1103.jpg |  |  |
| 20 - 40 reps | Prone Hip ER | Four Point Kneel Hip ER |
| 1 - 3 times per day | Start: isometric 5-second hold against band | Start: isometric 5-second hold against band |
| Progress: concentric-eccentric through range hip ER | Progress: concentric-eccentric through range hip ER |
| Hip extensor muscle strengthening | Motor control: | S:\BODYSYSTEM_Photos\Exercise Poses (E Morton - 2011.12)\gym2011_1365.jpg | S:\BODYSYSTEM_Photos\Exercise Poses (E Morton)\STABILITY\ST_SUPINE BRIDGE.jpg | S:\BODYSYSTEM_Photos\Bodysystem Physio-Rowing Dec 13\BSP-Rowing_0002.jpg | S:\BODYSYSTEM_Photos\Bodysystem Physio-Rowing Dec 13\BSP-Rowing_0004.jpg |
| 2 - 3 sets | Prone Hip Extension | Bridging | Prone Hold Hip Extension - knees | Prone Hold Hip Extension - toes |
| 20 - 40 reps | Gluteal squeeze and leg extension 3 - 5-second hold and lower | Gluteal squeeze and lift up into bridge position 3 - 5-second hold and lower | From knees move affected leg into hip extension 3 - 5-second hold and lower leg | From toes move affected leg into hip extension 1 - 5-second hold and lower leg |
| 1 - 3 times per day |
| Strength: |
| 1 - 3 sets |
| 6 - 12 reps |
| Once daily |
| Hip abductor muscle strengthening | Motor control: |  |  |  |  |
| 2 - 3 sets | ST LL BRIDGE WITH BAND.jpg | S:\BODYSYSTEM_Photos\Exercise Poses (E Morton)\STABILITY\ST_SUPINE 1 LEG BRIDGE.jpg | S:\BODYSYSTEM_Photos\Exercise Poses (L v Wald)\gym2011_1071.jpg | S:\BODYSYSTEM_Photos\Wilson sept nov 2012\seconds wilson\gym2012_0358.jpg |
| 20 - 40 reps | Bridging with Band | Bridge with Leg Extension | Standing Hip Abduction | Bridge with Foot on Unstable Surface |
| 1 - 3 times per day | Bridge with band around knees, gently abduct against band. | Start: lift up with two feet on ground, extend one leg then the other then lower with both legs on ground. | Single leg stance and abduct leg out to side. Keep trunk straight, do not laterally flex. | Keep pelvis level, activate gluteals and lift up |
| Strength: |
| 1 - 3 sets | 3 - 5-second hold and lower | Progression: extend unaffected knee, lift up using affected side, 2 - 5-second hold and lower | Perform both standing and then with band on affected side |
| 6 - 12 reps |
| Once daily |
| Functional strengthening | 2 - 3 sets | S:\BODYSYSTEM_Photos\Bodysystem Physio-Rowing Dec 13\BSP-Rowing_0011.jpg | gym2012_0533.jpg | S:\BODYSYSTEM_Photos\Exercise Poses (E Morton)\STRENGTH\STRGTH LL BOX STEP UP.jpg | gym2012_0528.jpg |
| 15 - 20 reps |  |  |  |  |
| Once daily | Wall Slides with Gluteal Activation | Squats | Step Ups | Single Leg Squats |
| Band around distal thighs. Slide down wall, activate gluteal muscles at 60 - 90° knee flexion, 5 - 30-second hold then push back up into standing | Flex at hips and squat to comfortable depth, tighten gluteal muscles to return to standing | Affected side on top of step, tighten gluteal muscles to step unaffected side up onto step | Stand on affected side, squat down to comfortable level ensuring adequate hip, knee and ankle alignment. Tighten gluteals to return to standing |
| Balance exercises | 1 - 3 minutes | S:\BODYSYSTEM_Photos\Wilson sept nov 2012\seconds wilson\gym2012_0348.jpg | S:\BODYSYSTEM_Photos\Exercise Poses (E Morton - 2011.12)\gym2011_1338.jpg | S:\BODYSYSTEM_Photos\Exercise Poses (E Morton - 2011.12)\gym2011_1336.jpg | S:\BODYSYSTEM_Photos\Wilson sept nov 2012\seconds wilson\gym2012_0376.jpg |
| daily | Single Leg Balancing | Wobble Board with Gluteal Activation | Wobble Board with Gluteal Activation - Single leg | Gluteal Activation with Functional Movements |
| Stand on affected leg, ensuring no Trendelenburg sign | Balance on wobble board maintaining gluteal activation | Single leg balance on wobble board, maintaining gluteal activation | Maintain gluteal activation on unstable surface, lean trunk forward and reach with contralateral upper limb |
| Anterior hip stretch | 1 - 2 minutes | S:\BODYSYSTEM_Photos\Exercise Poses (E Morton)\FLEXIBILITY\FLEX_KNEEL HIP FLEX STR.jpg |  |  |  |
| 1 - 3 times daily | Anterior Hip Stretch |
| Ensure pelvis is posteriorly tilted, trunk upright and gluteals activated on back leg |

Legend: ER = external rotation; IR = internal rotation