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| **TIER2: REHABILITATION 1:1 in gym** | ***Squatting*** | ***Balance*** | ***Strength*** | ***Acceleration/Deceleration*** | ***Lateral movement*** | ***Multidirectional*** | ***Core*** | ***Sport/Cardiovascular***  |
| 5 total sessions a week. I.e. 3 x week exercises + 2 sessions running/agility/sport. I.e. 5 x week exercises if not performing running/agility/sport |
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|
|  | OLR Test\*\* | Various Balance Tasks | 1RM Leg Press\*\* Hamstring Bridge\*\* | Single hop for distance/Triple crossover hop\*\* | Side hop test\*\* | Agility T - Test\*\* |   | MRTSS\*\* |
| SL Squat Test\*\* | Various |
| **Phase 1** | Bilateral STS  | SL stance EO flat surface | DL Leg Press  | Forward step up low - high | Stationary lateral band  | Lateral + Diagonal walk with band | Bosu supermans | Power walk/Bike/Swimming/Cross Trainer/water aerobics/kayaking/rowing |
| Progress high - low | SL stance EC flat surface | DL Hamstring Bridge | Forward step down low - high | Progress to Lateral band walk |   | Progress to swiss ball  | Phase 1.1 10 mins 1.2 20 mins 1.3 30 mins |
|   |   |   | Add weight |   |   |   | Phase 1.4 30 mins with 5 x 60s high intensity  |
|   |   |   |   | Progress speed - quick feet up and down no weight 3 x 20 |   |   |   | Phase 1.5 30 mins with 5 x 2mins high intensity |
|   |   |   |   |   |   |   |   | Phase 1.6 45 mins with 15 mins high intensity |
| **Dosage** | 3 x 15 - 30 | 3 x 30s each leg | 4 x 8RM / 3 x 10 - 30 | 3 x 20 + 20% BW added weight 40cm step | 3 x 15 each side / 3 x 15m | 3 x 15 each side / 3 x 15m | 3 x 10 each side | 10 - 20 - 30 minutes every second day |
| Reassesment\*  | PASS = 40 reps to 90 deg + WB symmetry and functional alingment #1 | PASS = SL EC 15s | PASS=1.5 BW (LegPress)/>30 reps HamBridge | PASS = nil response^ and achieved above dosage + functional alignment criteria#2 | PASS = nil response^ and achieved above dosage + functional alignment criteria#2 | PASS = nil response^ + achieved dosage + functional alignment criteria# | x 10 with good control  | PASS = Pass the following 9 tests\* See Tab 3 Return to Running Outcome Measures |
| **Phase 2** | OLR (other foot touching out in front)  | SL stance EO foam/bosu | SL Leg Press | Double leg jumps on spot, small on the spot | Lateral step up low - high | Diagonal Step Up low to high | Prone plank hold | Phase 2.1 Run 15 minutes + 30 mins Phase 1 |
| Progress high - low | SL stance EC foam/bosu | SL Hamstring Bridge | Progress height of jump, | Lateral step down low - high | Diagonal Step Down low to high | Add leg lift | Phase 2.2 Run 20 minutes + 25 mins Phase 1 |
|   |   |   | Progress to forward progression, small - big | Add weight  | Add weight  | Add arm lift  | Phase 2.3 Run 30 minutes + 20 mins Phase 1 |
|   | *Bilateral Squats 0-60 with TB* |   |   | Forward and then jump up | Progress speed - quick feet 3 x 20 | Progress speed - quick feet 3 x 20 |   | Phase 2.4 Run 45 minutes including 10 mins high intensity |
|   |   |   |   |   | Lateral bounds 3 x 10 each side | Diagonal forward Bounds 3x 10 each side |   | Phase 2.5 Run 50 minutes including 20 minutes high intensity |
|   |   |   |   |   |   |   |   | Skills sport specific straight line/light impact  |
| **Dosage** | 3 x 15 - 30 each leg/ *3 x 10 - 20* | 3 x 30s each leg | 4 x 8 - 12 RM ACLR leg / 4 x 5 - 25 ACLR leg | 5 x 30s | 3 x 20 + 20% BW added weight 40cm step up/down | 3 x 20 + 20% BW added weight 40cm step up/down | 3 x 30 - 60 seconds | As above |
| Reassesment\*  | PASS = 40 OLR with foot touching to 90 deg/WB *symmetry with bilateral squat, pass functional alignment#1* | PASS = SL EC foam | PASS=1.0 BW (LegPress) >85%LSI(HamBridge) + > 25 | PASS = nil response^ + achieved final exercise +dosage + functional alignment criteria#2 | PASS = nil response^ + achieved dosage + functional alignment criteria# | PASS = nil response^ + achieved dosage + functional alignment criteria# | 60s with good form  | Complete above + PASS= >95% MRTSS.  |
| **Phase 3** | OLR (no foot touching)  | Star excursion (arm reach+foot reach) EO flat  | SL Leg Press | "Quick feet, Forward step bounce back~"  | "Lateral lunge, slide and touch cone drill" | Diagonal lunge and push back, alternating  | Double Leg Bosu 1/2 kneel balance | Phase 2.1 Sport 15 minutes + 30 mins Phase 2 |
| Progress high to low, sitting to barely touching plinth | Star excursion (arm reach+foot reach) EC flat  | DL Hamstring Ball Curls | *Continue double leg 3 x 5 max forward* | Lateral lunge and bounce back  | Forward lunge, push off, change direction and step up | Add ball catch / upper body  | Phase 2.2 Sport 20 minutes + 25 mins Phase 1 |
| *Bilateral Squats 0-60 with TB + weight* |   |   |   |   | Eduction re positive shin angle, CoM | Continue plank  | Phase 2.3 Sport 30 minutes + 20 mins Phase 1 |
|   |  |   |   |   |   |   |   | Phase 2.4 Sport 45 minutes including 10 mins high intensity running |
|   |  |   |   |   |   |   |   | Phase 2.5 Sport 50 minutes including 15 mins high intensity + 10 minutes low intensity |
| **Dosage** | 3 x 15 - 30 each leg/ *3 x 10 - 20* | 3 x 30s each leg | 4 x 8 - 12 RM ACLR leg/ 4 x 10 - 30  | 3 x 30s each leg  | 3 x 10 each side  | 3 x 10 each side | 3 x 30 - 60 seconds | As above  |
| Reassesment\*  | PASS = 40 OLR (to (90 deg, barely touching) no ℗ | PASS = 30s of each above conditions | PASS = 1.5 BW (LegPress)/ > 30 DL Hamstring curl reps | PASS = nil response^ + achieved final exercise dosage + functional alignment criteria#2 | PASS = nil response^ + achieved dosage + functional alignment criteria# | PASS = nil response^ + achieved dosage + functional alignment criteria# | 30s hold with x 2 ball catch | PASS = nil response^ + achieved dosage 2.5 |
| **Phase 4** | Single Leg Squats 0-60 | Star excursion (arm reach+foot reach) EO foam  | SL Leg Press | Scissor Jump~ | Double leg side to side jumps  | 45 degree turns cones x 5 | Single leg bosu 1/2 kneel balance  | Full training up to 1 hour 3 x week (no match play) |
| *Bilateral Squats with TB + progressive weight* | Star excursion (arm reach+foot reach) EC foam  | SL Hamstring Ball Curls  | Progress to lunge jump  | Increase lateral distance | 90 degree turn cones x 5 | Add ball catch / upper body | Full training up to 1.5 hour 3 x week (no match play) |
|   |   |   | *Continue 2 x 5 double leg max jump forward* | *Continue 3 x 5 lunge, slide nad touch cone on ACLR* | 180 degree turn cones x 5 | Continue plank  | Full training including match play up to 4 x week |
|   |   |   |   |  |  | Speed progression 70 - 80 - 90 -100 |   |   |
| **Dosage** | 3 x 15 - 30 each leg/ *3 x 10 - 20* | 3 x 30s each leg | 4 x 8 - 12 RM ACLR leg / 4 x 5 - 15 each leg |  3 x 30s each leg  | 5 x 30s | x 5 rounds  | 3 x 30 - 60 seconds |   |
| Reassesment\*  | PASS = x 15 SLSq to 60 degrees with passing the functional alignment criteria#1 | PASS = 30s of each above conditions | PASS = 1.5 BW (LegPress)/ > 85% LSI SL Hamstring curl + > 12 | PASS = nil response^ + achieved final exercise and dosage + functional alignment criteria#2 | PASS = nil response^ + achieved dosage + functional alignment criteria# | PASS = nil response^ + achieved dosage + functional alignment criteria# | 30s hold with x 2 ball catch | PASS = nil response^ + achieved dosage |
| **Phase 5** | Single Leg Squats 0-90 | Star excurions EO flat with Arm weights 2-5kg opposite arm running action/cables | SL Leg Press ongoing inc weight/maintenance x 2 week | Single Leg Hops - start small, on spot | Single leg hops side to side | Square any direction hops | Double leg swiss ball  | Match play up to 45 - 60 minutes minutes x 1 week |
| *Bilateral Squats with TB + progressive weight* | > Theraband trunk perterbation | Inner range/fucntional hamstring - standing curl  | Progress height of hop | Increase distance  | Shuttles with lying down at each end | Add ball catch | Match play full load  |
|   |   |   | Hop forward - small - big distance | Take away UL  | Continue agility drills as above | Continue plank  |   |
|   |   |   |   | Take away UL  |   |   |   |   |
|   |   |   |   | Progress to cross over hop |   |   |   |   |
|   |   |   |   | *Continue 2 x 5 max double leg jump forward*  | *Continue 3 x 5 lunge, slide nad touch cone on ACLR* |   |   |   |
| **Dosage** | 3 x 15 - 30 each leg/ *3 x 10 - 15* | 3 x 30s each leg | 5 x 6-8RM ACLR leg/ 3 x 10 -15 ACLR leg | 5 x 5-8 max jumps  | 5 x 5-8 max jumps  |  3 x30s hops, 5 x 30m shuttles |   |   |
| Reassesment\*  | PASS = x 10 SLSq to 90 degrees with passing the functional alignment criteria#1 | PASS = 30s of each above conditions | PASS =>80% LSI standing curl / hamstring quads ratio 60% | PASS =>90% LSI Single Hop Test AND PASS =>90% LSI Triple Hop Test | PASS = >90% LSI Side hop test\* | PASS = nil response^ + achieved dosage + functional alignment criteria# |   | PASS = nil response^ + achieved dosage |
| **Phase 6** | Single Leg Squats 0-60 + weight | SL Stance E0 + Ball Throw/sport specific skill with perturbation | Dynamic hasmtring - stationary "B-skip" , | Drop Jumps~ - DL. Small - big step and jump height  | "Theraband trunk perturbation quick feet, side hop, return home" | "5 cone agility drill"  | Bosu swivel  |   |
| *Bilateral Squats with TB + progressive weight* |   | Progress to theraband, then to B-skip dynamic, bottom kicks | Drop Jumps~ - SL Small - big step and jump height |   | "5 cone agility drill" with partner/copy/chase | Add crunch in middle |   |
|   |  |   | Standing ham curl ongoing inc weight  | *Continue 1 x 5 DL, 1 x 5 max hops* |   | Speed progression 70 - 80 - 90 -100 | Continue swiss ball + upper body  |   |
| **Dosage** | 3 x 15 - 30 each leg/ *3 x 8 -15* |   | 3 x 10-20 each leg, then 5 x 20m B-skip/bottom kicks | 5 x 5-8 max jumps | 3 x 30s | 5 rounds  | 3 x 10 - 20 each side  |   |
| Reassesment\*  | PASS = x 10 SLSq to 60 degrees with + weight (=20%BW), passing the functional alignment criteria#1 | PASS =30s of above conditions  | PASS =>90% LSI standing curl and >70% hamstring quads ratio | PASS = nil response^ + achieved dosage + functional alignment criteria#2 | PASS = nil response^ + achieved dosage + functional alignment criteria# | PASS = nil response^ + achieved dosage + functional alignment criteria# | PASS = achieved dosage | PASS = |
| **Phase 7** | Star Excursion Drill (8 spots)  | Bound and land with thow and catch/sport specific skill | Standing ham curl ongoing inc weight  | Double leg jump onto height  | "5 point lateral slide drill"  | "5 cone agility drill" with partner/copy/chase | Side plank  |   |
|   | *Bilateral Squats with TB + bar progressive weight* |   |   | Hop + landing up onto a height | "5 point lateral slide drill react to partner, finish with sport specific skill | "5 cone agility drill" with skill/finish with skill | Add leg lift - to hover  |   |
|   |   |   |   | Consquective jumps onto height/hurdles, finish with a sport specific skill | Speed - start 70 - 80 -90 - 100 |   | Add arm lift with 2-5kg weight |   |
| **Dosage** | 8 reps each direction/ *3 x 6-10* |   | 5 - 6-10 RM ACLR leg  | 3 x 10 - 20  | 5 rounds each | 5 rounds  |   |   |
| Reassesment\*  | PASS = >90% LSI star excursion/*Squat BW*  | PASS =30s of above conditions  | PASS =>95% LSI standing curl  | PASS = nil response^ + achieved dosage + functional alignment criteria#2 | PASS = nil response^ + achieved dosage + functional alignment criteria# | PASS => 90% LSI Agility T test | PASS = 30s with arm and leg lifted each side  | PASS = |