## PREHAB / REHAB

## PROGRAMME FOR STUDENTS

ILBER

## PREHAB / REHAB: INTRODUCTION

This programme has been designed to provide you with the key exercises that will enhance and enable you to return to sport from a pre-existing injury by building strength and stability around the vulnerable joint. The programme will allow you to pro-actively reduce the likelihood of sustaining non-traumatic injury by increasing robustness and address deficits in your movement, strength and stability in line with the specific demands of your sport.

Alongside Mr Jones, Chris Lyttle is a fully qualified physiotherapist who has produced the Prehab and Rehab Programme. Chris provides a drop-in clinic at Gordon's School for those who need an injury assessment. Please contact Mr Jones if you feel that you need to see him. His contact details are below if you like to see him at his practice.

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## SHOULDERS

#### **Resisted shoulder scaption** 1.

- Stand with 1-2kgs weights in your hands, arms at sides, elbows straight and thumbs up.
- Slowly raise your arms diagonally between your side and front overhead.
- Return to the starting position slow and controlled movement 3 x 15+ reps.

#### Side lying external rotation 2.

- Lie on your side with a weight in your top hand, elbow bent to 90 degrees (towel optional).
- Rest your head on your free arm.
- Externally rotate the arm to lift the weight up.
- Keep your body still; do not turn the trunk to assist the movement 3 x 15+ reps

#### Shoulder external rotation 3.

- Lie on your stomach with your upper arm perpendicular to your body and your forearm hanging over the side of the bed.
- Move your hand in a circular motion up towards the ceiling as high as you can.
- Lower your hand.
- When you move your hand, keep your upper arm in contact with the bed and perpendicular to your body at all times.
- To progress, repeat with a 1kg weight 3 x 15+ reps.

#### 4. Horizontal abduction to forehead

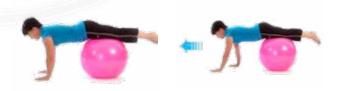
- Stand up and hold a band in both hands in front of your chest.
- Keeping your elbows straight, pull the band to your forehead by opening your arms on each side.
- Come back to the starting position and repeat 3 x 15+ reps.

#### 5. Side lying horizontal abduction

- Lie on your unaffected side with a weight in your hand.
- Place your arm straight in front of you (perpendicular to the body)
- and support it with your unaffected arm.
- Slowly move the weight upwards until it is in line with the body, no further.
- Return to initial position and repeat 3 x 15+ reps.

#### 6. Swiss ball plank walkout

- Put your thigh on the ball and roll onto the ball into a plank position. Your back must be straight, but not arched and your chin must be tucked in.
- Engage your core by bracing/tensing your tummy. Walk out on your hands as far as you are able
- without falling off. Walk back to starting position, then repeat the motion x 6-8











## SCAPULA

#### 1. Skydiver

- Lie on your stomach with a small rolled towel under the forehead and either just use the weight of your arms or hold one small 1kg weight in each hand.
- Start with your arms at your sides and raise your arms off the floor, keeping the elbows straight.
- Try to squeeze your shoulder blades together and down as you do the movement. Hold for 10 secs x 8-10.

#### 2. Crucifix

- Lie on your stomach with a small rolled towel under the forehead and either use the weight of your arms or one small 1kg weight in each hand.
- Keep the arms out on the sides and thumbs pointed up and squeeze the shoulder blades together.
- Do not elevate the shoulders toward your ears as you do the movement.

#### 3. Swiss ball press

- Lie on your back with your knees bent.
- Put a Swiss ball in the palm of your hand, keeping it balanced.
- Extend the elbow to press the ball up and lower it slow and controlled.
- Do not let the Swiss ball fall off.
- Start with a smaller ball for an easier version. 3 x 10+ reps

## 4. Ball push-up plus

- Assume a push up position on your toes with your hands on the ball.
- Perform a push up on the ball.
- Once your arms are straight at the halfway point of upward phase of the push up, round your shoulders as if you are pushing away from the ball.
- Slowly relax the rounded shoulder position and return to the start position and repeat 3 x10+ reps.







# NECK

### 1. Push back at wall

- Cup the elastic in wide band around head, crossing over the ends to hold in the opposite hand.
- Place your hands at head height on the wall, with elbows bent and the elastic slightly loose.
- Bring your head back into the neutral position, chin slightly nodded and head aligned with your body.
- Straighten your elbows to tension the elastic, maintaining the neutral position of the head and neck. Hold for 10-15 secs
- Bend your elbows to release the tension, then repeat x 5 reps x 2 sets

### 2. Push back at wall, pure rotation

- Cup the elastic in a wide band around the back of your head.
- Place your hands at head height on the wall, with elbows bent and the elastic slightly loose.
- Bring your head back into the neutral position, chin slightly nodded and head aligned with your body.
- Straighten your elbows to tension the elastic, maintaining the neutral position of the head and neck
- In this position, keeping the chin slightly tucked, turn your head in one direction, back to neutral and then to the other direction and back to centre. Hold for 5 secs each way
- Bend your elbows to release the tension, then repeat. Repeat x 5 reps

### 3. Elastic sideways lunge

- Stand in a good upright posture, with the elastic fixed at a point on the side of you, leveled with your head.
- Fix the other end of the elastic around your head, possibly securing it with a loop to avoid slippage.
- Stand tall, with your head back in line with your body, and your chin tucked to neutral.
- Not allowing any movement of your neck, step sideways to increase the elastic resistance, only going as far as you can maintain a neutral head/neck position.
- Pause and hold for 10 secs then come back to the start position to let go off the resistance. Repeat x 6
- Repeat using the other leg, same reps. Repeat x 2 sets
- Make sure to pick a theraband that has no weak points that could potentially tear.

### 4. Elastic neck flexion

- Sit or stand in a good upright posture, with the elastic fixed at a point behind you above the level of your head.
- Fix the other end of the elastic around your head, securing it with a loop to avoid slippage.
- Bring your head back in line with your body, and your chin tucked to neutral.
- Initiating with a nod, curl your head forward, chin to chest, then come back to the starting position to let. All slow and controlled.
- Repeat x 6-8 x 2











# LOWER BACK

#### 1. Lumbar rotation stretch

- Lie on your back, then bring one knee toward your face so that your hip is flexed to 90 degrees.
- With the opposite hand, pull it sideways toward the floor to feel a stretch in the lower back/buttock.
- Keep the shoulders flat on the ground during the stretch x 6 each side

### 2. Thoracic ext. mobility

- Place your foam roller on the floor and lie on your back with your knees bent and the foam roller at the level of your shoulder blades.
- With your arms behind your head, lower your head as close as you can to the floor until you feel a stretch behind your back.
- Move the foam roller from your lower back to mid back

### 3. Cat stretch

- On all fours simply exhale and allow your lower back to drop down and arch your back and inhale and round off your back to stretch – just like a cat stretching.
- Keep your hips behind your knees and hands in front of your shoulders. Repeat x 8

#### 4. Passive lumbar extension

- Lie on your stomach with your hands next to your face.
- Push up with your arms and lift gradually your head then your upper back all the way to your lower back keeping the glutes relaxed and your pelvis against the ground.
- Push up until you feel a small discomfort in the lower back, lower yourself and repeat x 10

#### 5. Single leg glute bridge

- Lift on leg off the floor and go up into a shoulder bridge bracing your tummy.
- Keeping the leg out straight and thigh in line with other the thigh, making sure your pelvis remains level at all times. Lower yourself on the ground and lift yourself back up. Hold for 5-10 secs each side and repeat 8-10 each leg.

#### 6. Prone lumbar extension holds

- Lie on your stomach with a pillow placed under the lumbar region.
- Perform a scapular retraction by squeezing together and lowering the shoulder blades, then lift the upper trunk off the floor.
- Do not extend the lumbar region.
- Hold for 5 secs and repeat x 6













## KNEE

### 1. Wall squat

- Stand up against a wall with your feet in front of you (when your thighs are parallel to the ground your knees should be at 90 degrees).
- Ensure your knees don't go over your ankles.
- Hold for 1 min+ x 5 reps (No knee pain to be felt)



## 2. Single leg wall squat

- Lean against a wall as above
- Slide down the wall with both legs and once you feel your quads working take one leg away. Your knee must be behind your ankle. Hold for 30 secs and repeat x 5 each side



## 3. Single leg squat

- Place the involved leg on the edge of a step.
- Adjust the height of the box to adjust the height of the squat. Bend the knee to lower the free foot to the ground, without putting any weight on it on the floor. To make sure you're not pushing with your free foot, raise the toes up when on the floor.
- Keep the kneecap in line with your 2nd toe. Ensure that you bend at the hip to allow for a lower squat.
- Straighten your leg and return to the starting position.
- Your heel should not lift.
- 3 x 15 each side (No knee pain)

## 4. Single leg Bosu stabilisation

• Stand on Bosu – gain balance on one leg and maintain this for 20+ secs (x 6-8 each side).





#### 5. Knee banded extension

- Sit up straight in a chair with an elastic tied around your ankles.
- Straighten one knee while bending the other so as to stretch the elastic apart.
- Return slowly to the initial position and then repeat in the opposite direction. Slow and controlled movement - increase the band to increase the resistance.
- 3 x 15+ reps (No knee pain)



## HIP

#### 1. Hip abduction with band

- Begin in side lying with a band around your ankles or knees.
- Your knees should be straight and your legs should be slightly behind your body (slight extension).
- Lift the top leg to abduct the hip, making sure you start the movement with the band already taut.
- Do not move your leg forward as you lift and do not rotate your foot up.
- Lower and repeat 3 x 15 reps aim to get to 25 reps

#### 2. Reverse Clam

- Lay on your side, knees together and flexed at about 90 degrees. Your head is aligned with your spine.
- Keeping your knees together, rotate internally your upper leg at the hip without allowing any movement in the trunk. 3 x 15 reps aiming for 25 reps

### 3. The Clam

- Lie on your side with a band around your thighs, just above your knees.
- Your hips should be flexed slightly and your head supported.
- Keep your feet together and open the top knee to externally rotate the hip. 3 x 15 reps aiming for 25 reps

#### 4. Side stepping with band

- Place a band just above the ankles and stand in an athletic stance with tension on the band.
- Take a step to one side with the leg, then follow with the other leg, maintaining tension on the band.
- Continue taking steps in that direction, then return to the starting point by taking steps to the other side.
- Walk 8-10metres in distance L side leading then R side. Repeat x 2

#### 5. Sweeping step outward

- Wrap a mini-band around your ankles and make forward steps with an outside sweeping motion.
- Walk 8-10metres in distance L side leading then R side. Repeat x 2

### 6. Walking lunges

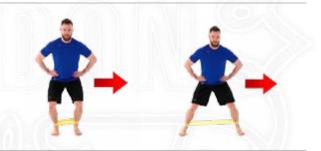
- Start by standing straight.
- Take a step forward and lower into a lunge with your knee over your front foot.
- Avoid compensating by rolling into an anterior pelvic tilt which will result in hyperextension in the lumbar spine.
- Walk 8-10m x 3

### 7. Hip flexion

- Fix one end of an elastic to a solid object at ankle level and loop the other end around the ankle of the working leg.
- Stand facing away from the elastic, then flex the hip, keeping your knee straight, hips level and pelvis solid.
- Return to the starting position and repeat













## CORE

#### 1. The dead bug

- On your back, bring your hip to 90 degrees one after the other and lift your arms up.
- Under control, with your tummy braced (tensed) lower the right leg and right arm toward the floor and lift back up.
- Keep the pelvis still and stabilised at all time. Do not allow your back to come away from the floor at any time.
- Repeat alternate sides x 8-10 each side

#### 2. Stabilisation plank 2.

- Put your head and shoulders on a ball and put yourself into a plank position. Your knees are bent, your back must be straight, but not arched and your chin must be tucked in. Brace/tense your tummy.
- Maintain a steady abdominal breathing while you straighten one leg, keeping your pelvis from dropping or rotating.
- Lower your foot and repeat with the other leg. Repeat x 8-10 each leg x 2

#### 3. **Abdominal plank**

- Start in all fours, then prop yourself up on your forearms and toes, with your chin tucked in.
- Lift up your body, creating a straight line with your body.
- Maintain the position without arching the lower back. Hold for 10 secs x 10 reps

#### 4. Lateral plank

- Lie on your side with your legs straight and in line with your body.
- With your upper body supported on your elbow, make sure the elbow is directly under the shoulder.
- Lift your pelvis and hold your body on a straight line. 10 secs x 10 reps

#### Swiss ball pike 5.

- Put your shins on the ball and roll onto the ball into a plank position. Your back must be straight, not arched and your chin must be tucked in.
- With your feet on the ball pull the ball toward you flexing your hip, lifting your buttock towards the ceiling and keeping your legs straight. Your back must stay straight and stable at all times.
- Return to initial position and repeat (3 x 10-12 reps)









## ANKLE

#### 1. Resisted banded eversion

- Wrap a band around the affected foot just below the toes and use the other foot as a lever while you hold the band in your hands.
- Start with the sole of the foot facing inward, then bring the foot up and out so the sole is facing outside. 3 x 15 reps – ideally increase the reps to 25 as able

#### 2. Single leg straight leg calf raise

- Stand up on a step on your tiptoes.
- Lift the good foot off the step and lower the heel of the weak leg slowly.
- and push back up using the same leg and repeat 3 x 15 aiming to increase to 25 reps

## 3. Single leg bent knee calf raise

- Stand on one foot and place only your forefeet on a step.
- Bend knee and lift yourself up onto your toes as high as you can, keeping knee bent throughout. Lower and repeat 3 x 15 reps aiming to increase to 25 reps

#### 4. Single leg balance - eyes shut

- Stand in front of a wall or sturdy surface if needed to maintain balance.
- Lift one leg off the ground so as to stand on the affected leg without losing your balance.
- When in balance, close your eyes.
- Hold for 30 secs x 6-8

## 5. Ankle stabilisation, Bosu

- Stand up on one leg on the rounded part of a Bosu.
- Move the opposite leg in a half circle motion to challenge your balance.
- Maintain the body straight and stand on the leg for 20 secs (x 6-8)

#### 6. Single leg tip toe balance

- Standing on one leg, go up on your top toes of the effected side and balance for 20secs.
- Repeat x 6 ideally without touching down



## ABDUCTOR

#### Hip isometric adduction 1.

- Lie on your back with a ball between your ankles.
- Squeeze your legs together (with no pain) and hold for 10 secs.
- Relax and repeat x 10

#### 2. Hip isometric adduction

- Lie on your back with your knees bent. .
- Place a ball between your knees. ٠
- Squeeze as hard as you can without any pain for • 10secs.
- Relax and repeat x 10

#### Hip adduction elastic 3.

- Attach an elastic to a secure object at the ankle level.
- Keeping your knee straight.
- Pull in, moving your leg inward.
- Keep your hips leveled and pelvis solid.
- Return to the starting position. 3 x15 reps

#### 4. Adduction isometric plank - short lever

- Start on on elbow/forearm with the top leg on a chair, knee bent at 90 degrees, and the bottom leg on the ground as shown in the picture.
- Hold the position with the top leg (do not let the hips drop) and lift the bottom leg up to meet the top leg and either hold this position for 10 secs x 5 each side.
- Do not rotate your pelvis or over arch your lower back











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