

# RETURN TO SPORT PROTOCOL

CO.RE



# WHO CAN USE THIS PROGRAM

This protocol is designed as a return to sport program following anterior cruciate ligament reconstruction but applies equally well to rehabilitation following any serious knee injury or surgery.

If you are returning to sport after anterior cruciate ligament reconstruction, it is suggested that the program should run for 2 months, months 10 and 11 post surgery. This is prior to return to competitive sport which can occur at approximately 11 months post surgery.

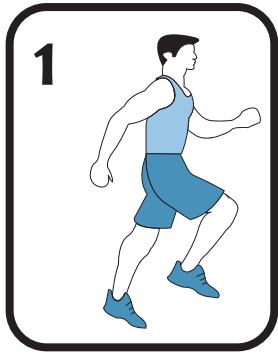
## ***HOW OFTEN***

Ideally the program should be undertaken at least 3 times a week.

It will take approximately 30 minutes to complete.

The only equipment required is 10 low cones or a bulk pack of 300ml water bottles to set up the field placement.

# WARM UP



- Jog 400m

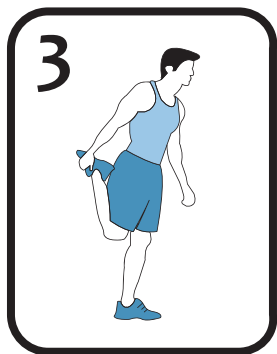
# STRETCH

- Don't stretch a cold muscle, warm up first
- Stretch gradually and hold position for 10 seconds
- Do two or three reps of each stretch on each leg



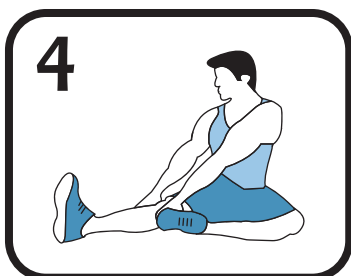
## 2. Calf stretch

Facing forward with your hands on a tree, pole or on your front thigh, put the leg to be stretched behind you. The heels are flat on the ground and toes pointed straight forward. Press your hips forward until you feel the stretch in your calf.



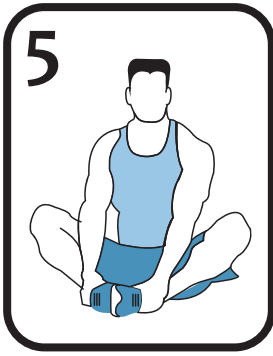
## 3. Quadriceps stretch

Reach behind with your right hand to grasp the right ankle. Pull your heel to your buttock. Use your left hand to balance against a tree or pole if required. Keep the knee pointing towards the ground and next to your left knee. Face forward pushing the hips forward, do not bend at the hips or twist.



## 4. Hamstring stretch (figure four)

Sit on the ground with your right leg extended out in front of you. Bend the left knee and rest the foot on your right inner thigh. Keep your back straight and bend at the waist to bring your chest towards your knee. Reach towards your toes and hold.



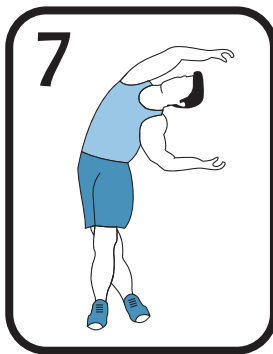
### 5. Hip adductor stretch (seated butterfly stretch)

Sit on the ground. Bring the soles of your feet together and slide them towards your body. Keep your back straight. Bending at the waist, lean forward until you feel the stretch in the inner thigh.



### 6. Hip flexor stretch

Take up a lunging position with your right leg forward and left knee on the ground. Put your hands on the top of your right thigh. Hips and shoulders remain square, facing forward. Push the hips forward and ensure that your body remains upright. Technique is critical here. If you lean forward at the waist, the stretch will be lost. You should feel the stretch through the front of the thigh and in the groin.

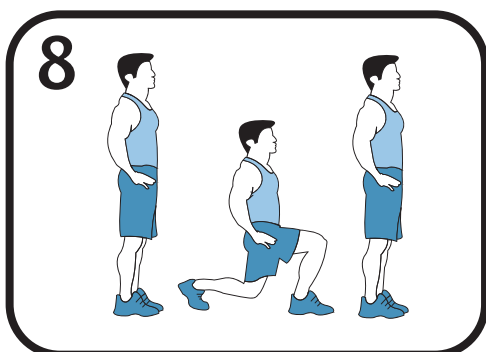


### 7. ITB stretch

This exercise can be done standing or in a doorway if you find it difficult to balance. The leg to be stretched goes behind the good leg. Both feet are facing forward. Bend sideways as far as possible to feel the stretch on the outer thigh and running all the way down to the knee. Stretch and hold for ten seconds. Repeat 3 times.

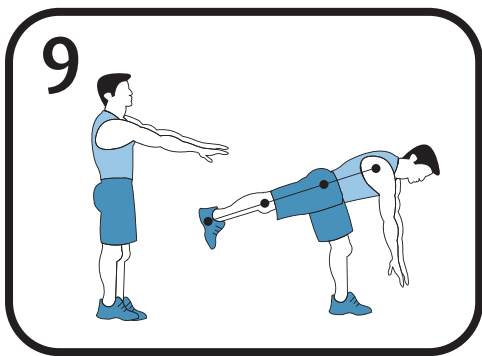
## **STRENGTHEN**

These exercises target the hamstrings, quadriceps, gluteus medius and calves. Focus on technique, keep the body straight. All of these exercises can be progressed to a more difficult level.



### 8. Walking lunges

Lunge forward with the right leg and drop the left knee down to lightly touch the ground. Keep the hip, knee and ankle aligned, the front knee should come out over the top of your toes or ankle. Push forward coming onto the left leg and dropping the right knee to the ground. Repeat this full cycle for 10 reps. Do 2 to 3 sets. Progression: Bulgarian split squats.



### 9. Romanian deadlift

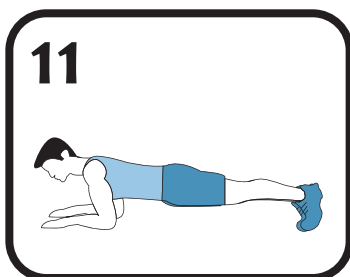
This is one of my all time favourite exercises for rehab. It builds strength in hamstrings and gluteals, at the same time promoting balance and core stability.

Stand on one leg, hinge at the waist. Both arms go forward, back and rear leg remains aligned. Hold for five seconds then stand and change to other leg. 10 reps. Do 2 to 3 sets each leg.



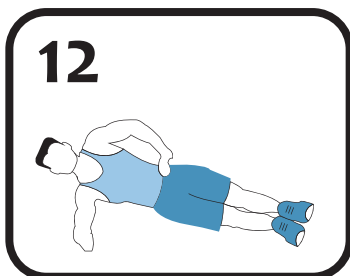
### 10. Single leg heel raise

Stand on one leg, rise up slowly on your toes lifting your heel. Pause for one second at the top and lower. You may need to hold something for balance. Repeat until the calf fatigues. Do 2 to 3 sets each leg.



### 11. Bench

Lying on your front, support your weight on your forearms and toes. Your body forms a straight line from head to foot. Hold for 30 seconds. Do 2 to 3 reps.



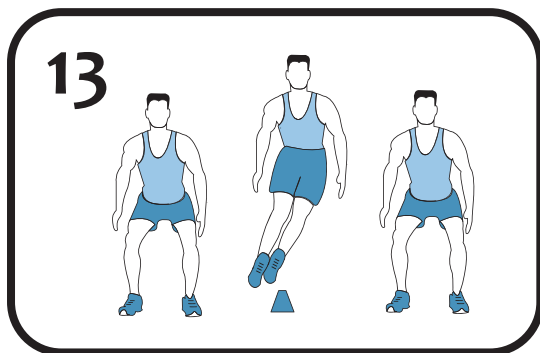
### 12. Side plank

Lay on your side with both legs straight. Support your weight on the outer side of your foot and your forearm. Hold for 30 seconds. Do 2 to 3 reps each side

# PLYOMETRICS

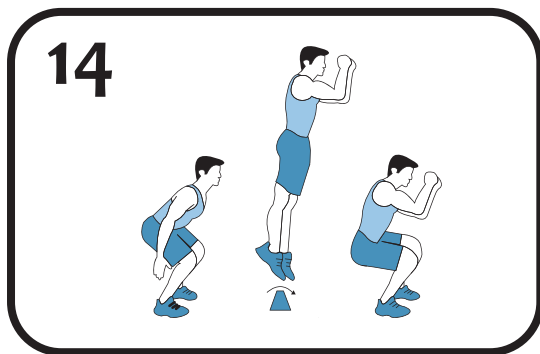
Plyometrics are explosive compound exercises that improve speed, agility and reaction time while building strength. They use body weight only and maximum force. For that reason they are usually done with low reps. They are a cardio exercise and also promote weight loss.

The key to plyometrics is the **landing**. Jump with bent knees and land softly with bent knees. The weight comes down on the balls of your feet and gradually rolls back onto the heel. Think ninja!



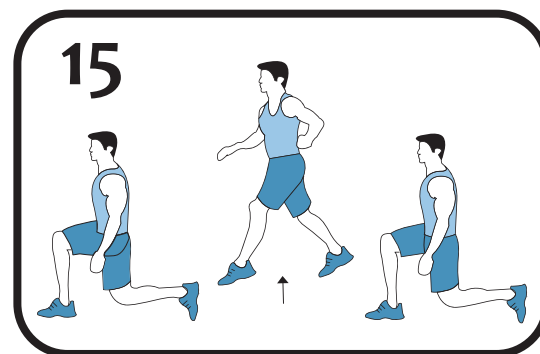
## 13. Side jumps

Use a small cone or water bottle. Jump left over the cone landing softly with bent knees. Jump back to the right. Do 10 reps, 2 sets.



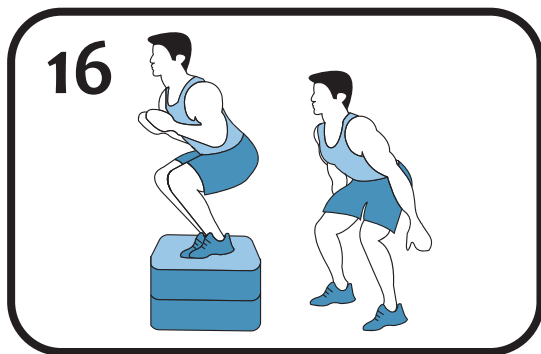
## 14. Forward backward jumps

With both feet together, bend at the knees and jump forward over a low cone. Land on bent knees gently. Jump backwards over the cone to complete the exercise. Do 10 reps, 2 sets.



## 15. Scissor jumps

Assume a lunge position with your forward knee over the ankle and rear knee touching the ground. Push off into a vertical jump switching leg position in the air. Land in the lunge position now with the opposite leg forward. Repeat to return to the start position. Do 10 reps, 2 sets.  
Progression: Increase reps.



## 16. Box jumps

Ideally done with a box or park bench. Stand with feet together and bend at the knees. Swing the arms forwards as you jump. Again the landing is critical. Ensure that you land on both feet taking the weight on the balls of your feet with the knees slightly bent and roll back on the heels. Step down. Do 10 reps, 2 sets.

If no box or bench is available, do a vertical jump with a similar technique.

Progression: higher box.

# ***RUNNING***

The objectives here are to focus on running technique and improve dynamic stability to reduce the risk of injury.

Set up ten cones or small water bottles as per the attached field diagram. The sides of the square should be approximately 40m long (40 large steps). Cones are placed at the corners of the square and at the mid points of each side. Two additional cones are placed outside the square for the diagonal running drill.

### **1. Forward backward running**

On the first side of the square, run to the mid point forwards and then run backward to the start. Run forward to the far corner then backward to mid cone, then forward to complete that side of the square.

### **2. Diagonal running**

Run around the cones being sure to pivot off the outside leg. Keep the outside leg bent and do not let it collapse inwards.

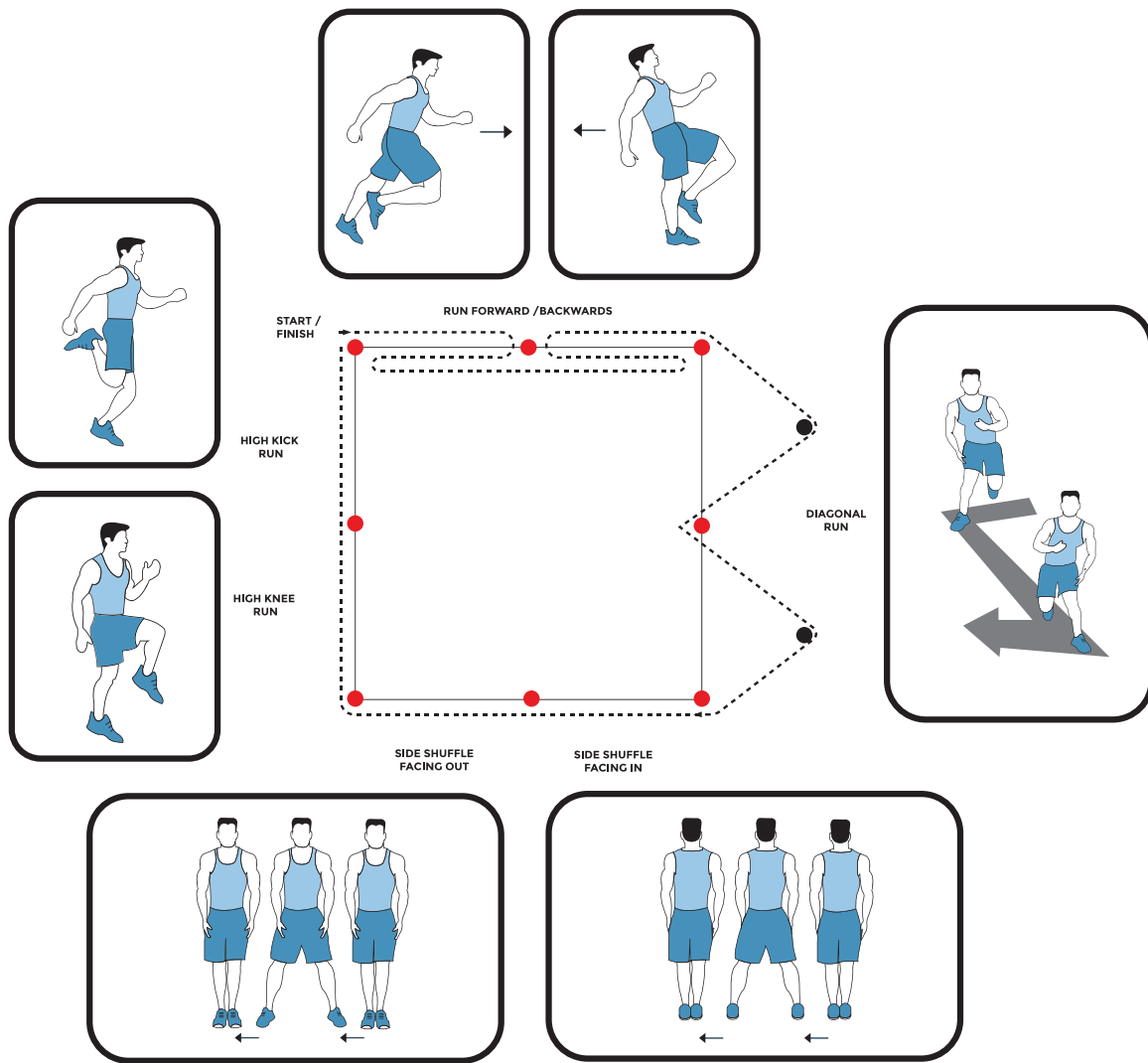
### **3. Side shuttles**

Run the first 20m facing outwards and the second 20m facing inwards. Keep a slight bend in the knee. Legs do not cross over.

### **4. High knee run and high kick run**

These are excellent running technique drills which increase hip flexion and extension strength and promote acceleration.

Run the full circuit 3 to 6 times as time and fitness permits.



## **WARM DOWN**

- Jog or Walk 400m

## **SPORT-SPECIFIC DRILLS**

### **1. Football/Rugby**

Dodging drills, running and kicking drills (all directions), defense tackling drills.

### **2. Soccer**

Dribble around cones, shooting drills, defense drills, lateral shuttle runs while kicking ball off wall, tackling drills.

### **3. Basketball/Netball**

Lay-up drills, lateral shuttle runs while throwing/catching ball off wall, run-pivot-vertical jump, dodging drills, defense drills (running/jumping backwards).