Return to running programme

Before starting this program, you must fulfill the following criteria:

- Have clearance from your surgeon to run
  - Minimum of 12 weeks after hip arthroscopy
  - Minimum of 8 weeks after ACL reconstruction
  - Minimum of 4 months after meniscal repair
- Be able to walk for 2km, without a limp, and without any pain or swelling afterward.

There are 2 parts to this program; the first is focused on endurance athletes whose running is generally straight line and relatively constant pace. The second part is relating to speed and agility running, as required for pivoting sports including most ball sports. Most athletes will benefit from using aspects from both parts of the program.

General principles for endurance athletes

1. Walking/jogging should be done no more than every other day.
2. Use other modes of exercise (bike, elliptical, swimming) for aerobic conditioning while increasing your running distance.
3. The program should be performed step by step. Do not advance your program until you can successfully complete the initial step. Let pain and swelling be your guide. If the activity creates pain, swelling, or causes you to limp, go back to the previous step.
4. Before starting and after completion of the program, allow 15 minutes to perform stretching exercises.
5. Start on flat terrain, such as a treadmill or soft track, before moving to hard or uneven surfaces.
6. Ice the injured area for 20 minutes after exercise and cool-down.

Shoe wear:
Running shoes should be changed every 3 to 4 months due to the loss of the shoe's shock absorbing capacity. Proper fit and support is important in minimizing leg injury. Talk to your physiotherapist or podiatrist if you have questions regarding your shoe wear.
Progression:
In the initial phase, a maximum of 2km mix of running and walking, progressing to 2 km running in phase 2. After that, increase by no more than 500m per week. Once you have reached your training distance without any pain and have normal running form, you can gradually increase your speed.
You must use a mix of heavy – light – medium in terms of distance and effort with rest days in between to prevent over-training and subsequent injury.

Endurance running progression (3 x per week)

Below is an example of a return to running schedule for the first 8 weeks of the program. You can continue to slowly progress this program out past 8 weeks in the same manner as laid down here.

Activity	Day 1	Day 3	Day 5	Day 8	Day 10	Day 12
Week 1-2						
Walking	2 km	1.5 km	1.5 km	1 km	500 m	1 km
Jogging	✗	500 m	500 m	1 km	1.5 km	1.5 km
Week 3-4						
Walking	500 m	1 km	500 m	1 km	500 m	✗
Easy jogging	1.5 km	1.5 km	2 km	2 km	2.5 km	3 km
Week 5-6						
Easy jogging	3 km	2.5 km	3.5 km	3.5 km	3 km	4 km
Running	✗	500 m	✗	✗	500 m	✗
Week 7-8						
Easy jogging	4.5 km	3.5 km	3.5 km	4.5 km	3.5 km	5 km
Running	✗	500 m	✗	500 m	1 km	✗

Features:

Only 3 days / week are spent with running training.
Training starts as a mix of brisk walking and easy jogging, with a very gradual progression to higher intensity running after 4 weeks.
Distance in increased by a maximum of 500m per week.

You may think that this is not a particularly intense program. You are correct. It is not designed to fully restore your aerobic endurance and fitness. It is designed to safely reintroduce you to running after injury and/or surgery. Aerobic training should be done by cross-training either cycling, swimming or the like.

SPEED & AGILITY PROGRESSION (2 – 3 X WEEK)

Goals:

1. Safely recondition your knee for the demands of sport activity
2. Undertake a logical sequence of progressive drills to restore co-ordination and agility
3. Provide objective criteria for a safe return to sport

Prerequisites:

Before starting the speed and agility progression program you must have:

- A full range of motion
- Strength at least 80% of the uninjured leg
- Thigh girth within 1.5cm of the uninjured leg
- Symmetrical quads and hamstrings flexibility
- You must also pass the following functional tests:
    1. Hop forward on both legs at least 75cm
    2. Hop to either side at least 30cm
    3. Hop up and down on both feet 10 times
    4. Jog with no limp for 100 yards

Training phases and progression criteria:

The progression is divided into phases; straight ahead running phase, direction change running phase and unrestricted direction change and impact (or “yeehaa”) phase. Within each phase there are a number of steps. Do not progress to the next step until the present step is pain free, and you can perform with proper technique and without difficulty (muscle soreness or fatigue). Add only one new step in the progression per workout.

Warm-up, Stretch and Ice:

Be sure that you warm-up and stretch before and after workouts. Generally, you should do some walking, cycling or elliptical so that you break a sweat before starting the running program. You should stretch your hip and leg muscles (calf, groin, quads, hamstrings and hip flexors) before beginning the running drills.

Ice your knee for 20 minutes following workouts and repeat the stretches for all muscle groups as you are cooling down.

Phase 1: Straight ahead running

	Distance	Speed	Repetitions
Drill 1			
	100m	50%	10
Drill 2			
	100m	75%	10
Drill 3			
A	100m	50%	3
B	100m	75%	3
C	50m	100%	4
Drill 4			
A	100m	50%	3
B	100m	75%	3
C	50m	100%	4
D	Add one 50m, 100% speed run each workout until you can do 10 repetitions		

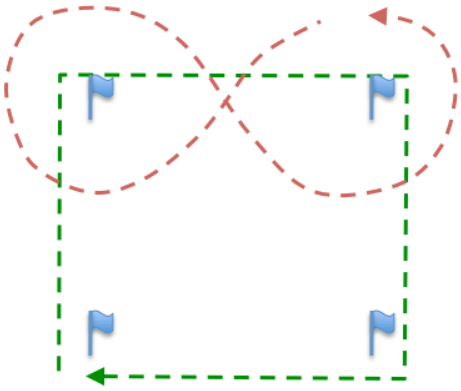
Phase 2: Basic change of direction running

Intensity:
Drills should be started at walking pace.
Once confident and feeling good, gradually increase to 50% then 75% then full-speed.
For square running, circle running and figure 8s,the intensity can be increased by decreasing the distance between changes of direction.

Continue drill 4 from above and progressively add each step below.

1. Squares

Start with 20 meter squares. Walk 5 circuits in one direction, then reverse direction. Decrease side length and increase speed



2. Backwards

Run backward for 20 meters come to a gradual stop. Run forwards back to the starting point. Do 5 repetitions

3. Circles

Start with 10 meter circles. Walk 3 circuits in one direction, then reverse direction. Increase speed and decrease diameter.

4. Figure 8s

Start with 20 meter long figure 8s. Walk 3 circuits in one direction, then reverse direction.
Increase speed and decrease diameter once confident

*5. Carioca runs**

50 meters going right, then reverse direction and return to the start point
Start a walking pace and increase as tolerated. Do 5 repetitions

* [www.youtube search "Tennis Conditioning: Dynamic Warm Up - Quick Carioca" for example]

Phase 3: Advanced speed and agility running

Intensity:
Drills should be started at walking pace. Once confident and feeling good, gradually increase to 50% then 75% then full-speed.
Continue all of the phase 2 exercises from above and progressively add each step below.

1. Cutting – uninjured side

Run forward to plant and cut off your uninjured side, 50% speed 5 repetitions

2. Cutting – injured side

Run forward to plant and cut off your injured side, 50% speed 5 repetitions

3. Zig zag drill

Place 10 cones about 3 meters apart. Run between them, with alternating leg plant and cut. 5 repetitions

4. Box drill

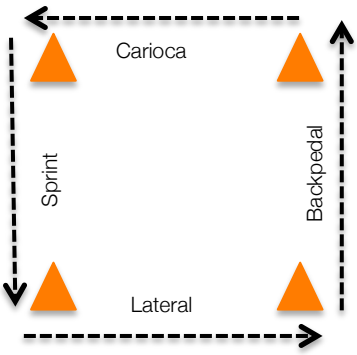
20 meter long square. Do 6 repetitions, alternating between clockwise and anti-clockwise.

5. Shuttle run

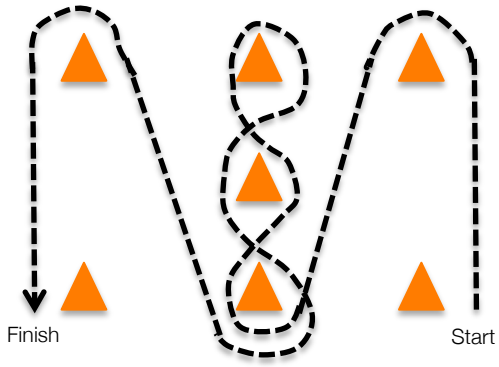
50 meters, change direction every 10 meters. Use opposite hands for lines on outward run and the start line

6. Agility run

Widen the box run square and place 3 extra cones within it. Run the course as shown. 6 repetitions, alternate starting side



Box Drill



Agility Drill

Once you are able to successfully complete phase 3 exercises and have received clearance from your surgeon, you may begin sport-specific training and return to sports practice.