

RUGBY UNION REFEREES PRESEASON FITNESS TRAINING PROGRAM

INTERMEDIATE LEVEL

‘Train hard ref easy’

By Ross Hanbury

Rugby Union Referee's Pre Season Fitness Program: Intermediate level

Welcome to the rugby union referees Intermediate level pre-season fitness program 2016-17. This program has been put together as a guide for those referees who have been following a fitness program but are now looking to step up their fitness level for the coming season. Referees who are looking to achieve level 14.8 or more on the YOYO test will also benefit from following this program. This program is 11 weeks long and requires the participant to complete between two and three training sessions each week, with each session lasting no more than 60 minutes in total.

Before starting this fitness training program though, it is imperative that if there are any medical or previous injury issues that you feel could impact or be made worse by a change in your physical activity levels; then you need to get in contact with your doctor, or myself on the e-mail below.

Ross.Hanbury@Virginactive.co.uk

In order to handle the physical demands of refereeing a game of rugby it is imperative that the modern day referee is physically fit. If a referee is unfit and not able to keep up with play; then it is unlikely that they will be in the right place at the right time to make the correct decision relating to the game.

‘Being fit allows you to focus on making the right decision and not how out of breath you are! ’

At this point in time it is actually very difficult to accurately quantify the physical demands of refereeing a game of rugby; however with the recent development of global positioning system (GPS) technologies, we are now starting to get a bit more of an understanding of the physical demands at the elite level. An IRB study run by Matt Blair between 2009 and 2013 used GPS technologies to look at trying to quantify some of the physical demands placed on referees across 360 top level games.

The study showed that:

1. Referees on average covered 6.8 kilometers in a game
 2. Of the 6.8 kilometers covered, 1.5 kilometers were covered at high* Intensity speeds
- *metres covered above 51% of each referees maximum speed.
3. Time spent running at high intensity speeds averaged 5.47 mins per game.
 4. Time spent above 80% of heart rate maximum (individualised to each referee) accounted for 43.43 mins in total.
 5. Referees on average performed 13 sprints a game ranging from 6 to 40 metres in distance.

Simplifying the IRB study findings we can say that the modern referee at any level of the game needs to have:

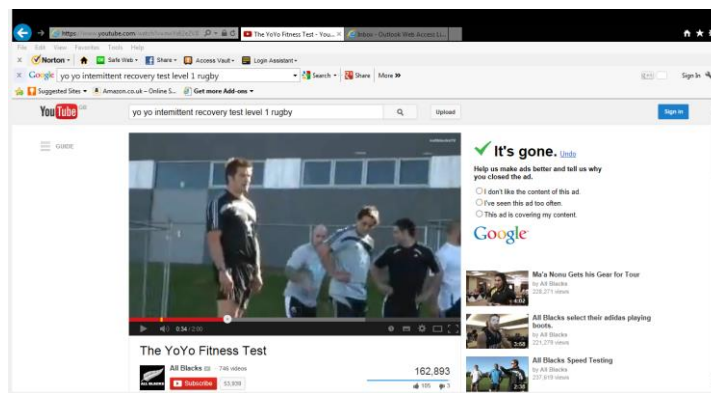
A high level of aerobic fitness/endurance

The ability to handle the high intensity running that occurs during the game

To fall in line with the International Rugby Board, Rugby Football Union and National Panels testing protocols, many societies use the YOYO intermittent recovery test level 1 (YYITRTL1), to assess the fitness levels of its members across all levels.



The YYITRTL1 is similar to the 'bleep test' requiring participants to run between two cones, each 20 metres apart. However the YYITRTL1 allows participants a 10 second rest after the second 20 metre run. The speed at which the 2 x 20 metre runs must be completed at increases progressively for the YYITRTL1, until the participant can no longer complete the runs or choose to stop. An example of some 'ok' players doing performing the YYITRTL1 can be seen in the video clip below:



<http://www.youtube.com/watch?v=nwYx62e2VJI>

The YYITRTL1 better reflects and assess the physical demands of refereeing as it is intermittent in nature (stop and start) which is similar to the activity profile of a referee during a game. The test also provides participants with a quantifiable insight as to how their fitness compares to other referees across the refereeing standards, all the way up to IRB (international) standard. With this information you can determine how much time you need to spend on extra fitness work, in accordance with their refereeing aspirations. One of the focuses of this program is to prepare you for the YO YO test.

For more information on the YYITRTL1 (YO YO Test) please feel free to get in touch with me via e-mail.

Ok so let's start to put the program together!

In order to get the most out of any training program there are three training principles that need to be adhered to during this program:

Specificity: So that your training has the desired effect and gets you fitter for refereeing, it is important that all the training sessions you do are 'referee specific'. We can design sessions that are referee specific by using the research on the physical demands of refereeing (such as that by Blair 2013, above) to guide our program design. A classic mistake which is often made, is when referees simply 'go for a run' in order to get fit to referee and don't consider the intensity they are working at. Now going for a run will keep you healthy, however it will not address and get the body used to handling the intermittent, high intensity nature of refereeing. An example of a session that would be more beneficial for a referee would be one that is done on grass and is interval based with multiple changes in direction (such as those found in the program below). This would then prepare and improve all the physical fitness qualities a referee needs during a match.

Overload: In order to get fitter, you are going to need to push your body and current fitness above what it is used to (within reason). When pushed beyond its current capacity, your body will adapt and make improvements, which means in the long run you will get fitter!

To assist with this process (overload), it is imperative that you consider a few things. The first of these is your pre and post diet.

Your diet should consist of:

Lean proteins: chicken, fish and eggs etc

Complex carbohydrates: brown rice, brown bread and sweet potatoes etc

Nutritious vegetables: broccoli, spinach and kale etc

Water: 2 litres every day, 3 litres on training days (includes fluids from teas, coffees and fruits)

For more information on the sorts of foods and meal plans please request the LSRFUR's Muscle Building or Weight Loss guides*

*drop me an e-mail if you would like a copy

Secondly as you are looking to step up your fitness levels it would be a good idea to consider doing some core stability (injury prevention/performance enhancement) work exercises in the gym. In order to assist you in this area I have put together two programs (found towards the end of this document: one which targets the muscles that will keep your body strong as you exercise (core stability program). Whilst the other program looks at some examples of stretches and foam rolling exercises that will help you stay injury free and recover faster between sessions.

Also during this pre-season program period, I will look to provide you with strength and conditioning exercises via my YOU TUBE channel. This will give you even more information on the sorts of exercises you should be doing, in and around your cardio sessions.

Progression: So that you keep improving your fitness levels, you need to keep pushing your fitness work along (by manipulating either the intensity or volume of the, day, week or training period etc). However it is important to note that progressing your program too quickly could potentially result in over training and injury. Whilst progressing your training too slowly could do the opposite and result in no improvements in training at all. Similar to overload, the programme below has suitable rates of progression to ensure that you achieve your goals safely.

Individuality: The fourth and probably most important principle of training (accompanying the other training principles above) is the principle of individuality. In order for a program to be successful and effective, it needs to work for you. It needs to fit into your life/work schedule and allow you to put as much energy into the training sessions as possible. Therefore, no two people's programs should be the same. This is where I come in; if you feel that the program below does not fit into your routine/lifestyle then let me know and we go look to change a few things around so that it does.

The following program has been put together so that you are in the optimum physical shape for the fitness testing sessions and the season.

For the preseason it is advised that you follow a session to rest ratio of 1:1, in other word you train 1 day and then rest the next day (1).

Page 7 onwards in this document will show you to develop and build your fitness levels in a progressive and safe way, however before looking at that it is important to explain how the charts in the program work.

The program is broken down into three key areas:

1. The program over view, like below. This shows an overview of the training week
2. The gym based sessions
3. The outdoor sessions (these are sessions that are very similar in terms of the areas of fitness worked on as the gym based sessions; but can be done outside).

In Season Training Program Overview							
Focus: Game specific aerobic capacity/endurance							
Day		WK NO	Intensity Level + Gym Session Codes		Intensity Level + Outdoor Session Codes		
Day 1	Monday	1	Light Week	Session 1	Light Week	Session 1	
Day 2	Tuesday			Session 3			
Day 3	Wednesday			OFF		OFF	
Day 4	Thursday			Session 2		Session 2	
Day 5	Friday			OFF		OFF	
Day 6	Saturday			GAME		GAME	
Day 7	Sunday			Regen: Light swim/bike		Regen: Light swim/bike	
EXTRA SESSION IF REQUIRED				Session 3		Session 3	

The program shows the day number, day of the week and week number.

This is the session code. Instructions for the session and how to carry it out can be found in the gym sessions document.

The weeks are titled light to hard, this indicates how tough the week will be, but fear not after a hard week comes a light week!

For those of you who do not have access to a gym, I have put together a parallel 'outdoor' program, which is a similar program that does not require you to work out in a gym.

The table below is an example of a session (session 1 on the program) break down that is found after the programme overview table in this doc. This is where the instructions for the training sessions can be found.

The session codes table shows the session number out of 10, how hard the session should be and what piece of kit you would ideally do the session on.

To help you plan and fit the session into your diary, there is an estimation of how long the session should take.

Session Plans (Gym Based)									
Session	RPE Intensity (10 Highest)	Modality	Session Content/Instructions	Work Res Ratio	Sets	Work (Mins,Secs or Metres)	Rep Rest Durations	Rest Duration btw Sets	Session Duration
1	6	Row	<div style="text-align: center;"> 1. Warm Up 2. Row 1KM 3. Rest 3 Mins/core work 4. Row 1KM 3. Rest 3 Mins/core work 6. Row 1 KM </div>	1 To 1	1	1KM, 1KM, 1KM	3 Mins	N/A	25-35 Mins

There is a detailed description of the session content, so that you know what you are doing step by step.

As for the rest of the info, don't worry too much about this, as and when you develop your fitness, these will become more important.

Finally, this document is designed as a guide, not as a comprehensive program of what every referee should do. As I said, the fourth and most important principle of training is the principle of individuality. In order for a program to be successful and effective, it needs to work for you. It needs to fit into your life/work schedule and allow you to put as much energy into the training sessions as possible. Therefore, no two people's programs should be the same. So as long as you follow a basic outline of this program and don't choose sessions outside their allocated weeks you will see and feel the improvements in refereeing fitness.

LSRFUR Pre Season Training Plan (Advanced)



8th August - 18th September



Focus: Aerobic Endurance, Aerobic Power and Lactic Acid Tolerance

Date	WK NO	Intensity Level + Gym Session Codes	Intensity Level + Outdoor Session Codes
Mon 08/08/2016	7	Light week if not testing, if testing then just do 20 min recovery session	Light week if not testing, if testing then just do 20 min recovery session
Tues 09/08/2016		Agility Session	Agility Session
Wed 10/08/2016		Testing @ Hampton School	Testing @ Hampton School
Thur 11/08/2016		Speed Session	Mixed Cross Session
Fri 12/08/2016			
Sat 13/08/2016		20 Min Recovery Session	20 Min Recovery Session
Sun 14/08/2016			
Mon 15/08/2016	8	Moderate week if not testing, if testing then just do 20 min recovery session	Moderate week if not testing, if testing then just do 20 min recovery session
Tues 16/08/2016		Session 8	Session 8 (Pyramid Session)
Wed 17/08/2016		Testing @ Black Prince	Testing @ Black Prince
Thur 18/08/2016		Session 10	Session 10 (Shuttle)
Fri 19/08/2016			
Sat 20/08/2016		Session 3	Session 3
Sun 21/08/2016			
Mon 22/08/2016	9	Hard week if not testing, if testing then just do 20 min recovery session	Hard week if not testing, if testing then just do 20 min recovery session
Tues 23/08/2016		Session 7	Curves Session
Wed 24/08/2016		Session 8	Session 11 (Criss Cross)
Thur 25/08/2016		Testing @ Black Prince	Testing @ Black Prince
Fri 26/08/2016		Session 9	Session 14 (Mixed Pyramid)
Sat 27/08/2016		Session 10	Session 11 (Triangles)
Sun 28/08/2016			
Mon 29/08/2016	10	Light week if not testing, if testing then just do 20 min recovery session	Light week if not testing, if testing then just do 20 min recovery session
Tues 30/08/2016		Agility Session	Agility Session
Wed 31/08/2016			
Thur 01/09/2016			
Fri 02/09/2016		Speed Session	Speed Session
Sat 03/09/2016			
Sun 04/09/2016		20 Min Recovery Session	20 Min Recovery Session
Mon 05/09/2016	11	Moderate week if not testing, if testing then just do 20 min recovery session	Moderate week if not testing, if testing then just do 20 min recovery session
Tues 06/09/2016		Session 12	Cross Step Session
Wed 07/09/2016		Session 13	Session 13 (Shuttle)
Thur 08/09/2016			
Fri 09/09/2016			
Sat 10/09/2016		Session 1	Session 1
Sun 11/09/2016			
Mon 12/09/2016			

Session Plans (Gym Based)

Code	Heart Rate	Modality	Session Content	Sets	Work (Secs or Metres)	Rep Rest Durations	Rest Duration btw Set	Session Duration
1	65-75% HR Max	Row	1. Warm Up	1	2KM, 2KM, 1KM	3 Mins	N/A	25-35 Mins
			2. Row 2KM					
			3. Rest 3 Mins or 3 mins core work					
			4. Row 2KM					
			5. Rest 3 Mins or 3 mins core work					
			6. Row 1 KM					
2	65-75% HR Max	Run	1. Warm Up	1	7KM OR 30 MINS Which Ever Comes First	N/A	N/A	25-30 Mins
			2. Set 3% Incline on treadmill					
			3. Run 30 Mins					
3	65-85% HR Max	Bike	1. Warm Up	3	15,10,5 (Mins)	5 Mins	5 Mins	50 Mins
			2. Cycle 15 Mins @ 65% +					
			3. Cycle 5 Mins (Easy)					
			4. Cycle 10 Mins @ 75% +					
			5. Cycle 5 Mins (Easy)					
			6. Cycle 5 Mins @ 85% +					
			7. Cycle 5 Mins (Easy)					
4	90% + HR Max	Bike	1. Warm Up	1	5 Mins	3 Mins	N/A	48 Mins
			2. Cycle 5 Mins Max Effort					
			3. 3 Mins Slow cycling					
			4. Repeat 6 Reps					
5	85% + HR Max	Run	1. Warm Up	1	60 Secs	60 Secs	N/A	25 Min
			2. 1 Min Max Effort Run					
			3.1 Min Rest (Jog) Between Reps					
			4. Repeat 12 Reps					

Session Plans (Gym Based)

Code	Training Stimulus	Modality	Session Content	Sets	Work	Rep Rest Durations	Rest btw Sets	Session Duration
6	Aerobic Power: 90% HR Max +	Run	1. Warm Up	1	4 Mins	3 Mins	N/A	40 Mins
			2. Run 4 Mins					
			3. Rest 3 Mins					
			4. Repeat 5 Times					
7	Endurance 65-85% HR Max	Run	1. Warm Up	1	1 Min - 30 secs	1 Min - 30 secs	N/A	40 Mins
			2. 5 x 1 Min run with 1 Min rest between					
			3. 10 x 30 sec run with 30 secs rest					
			4. 5 x 1 Min run with 1 min rest					
8	Aerobic Power: 90% HR Max +	X-Trainer	1. Warm Up	1	9 - 3 Mins	3 - 1 Mins	N/A	35 Mins
			2. 9 Mins quick run, 3 mins light running					
			3. 6 Mins quick run, 2 mins light running					
			4. 3 Mins quick run, 1 min light running					
			5. 6 Mins quick run, 2 mins light running					
			6. Stretch					
9	Aerobic Power: 90% HR Max +	X-Trainer	1. Warm Up	2	30 Secs	30 Secs	5 Mins	40 Mins
			2. 30 Secs Max Effort					
			3. 30 Secs Rest					
			4. Repeat 10 Reps					
			5. Rest 3 Mins					
			6. Complete 1 or 2 more sets					
10	Aerobic Power: 90% HR Max +	X-Trainer	1. Warm Up	2	15 Secs	15 Secs	5 Mins	40 Mins
			2. 15 Secs Max Effort					
			3. 15 Secs Rest					
			4. Repeat 10 Reps					
			5. Rest 5 Mins					
			5. Complete 1 or 2 more sets					

Session Plans (Gym Based)

Code	Training Stimulus	Modality	Session Content	Sets	Work	Rep Rest Durations	Rest btw Sets	Session Duration
11	Aerobic Power: 90% HR Max +	Treadmill	1. Warm Up	1	5-1 Mins	3-1 Mins	N/A	35 Mins
			2. 5 Mins max effort run, 3 mins rest					
			3. 2 4 Mins max effort run, 2 mins rest					
			4. 3 Mins max effort run, 1 min rest					
			5. 2 Mins max effort run, 1 min rest					
			6. 1 min max effort run, stretch to finish					
12	Aerobic Power: 90% HR Max +	Treadmill	1. Warm Up	4	15 to 45 secs	15 to 45 secs	4 Mins	40 Mins
			2. 15 Secs Max Effort					
			3. 15 Secs rest					
			4. 30 Secs Max Effort					
			5. 30 Secs Rest					
			6. 15 Secs Max Effort					
			7. 15 Secs Rest					
			8. 4 Mins Rest					
			5. Repeat for 2 to 4 more sets					
13	Aerobic Power: 90% HR Max +	Treadmill	1. Warm Up	3	30 Secs	2 Mins	N/A	35-40 Mins
			2. 5 x 3 min run (Incline 4% on treadmill)					
			3. Rest for 90 secs					
			4. 5 x 1 min run with 30 secs rest					
			5. Stretch					
14	Speed Endurance	Treadmill/X-Trainer	1. Warm Up	4	10 secs	30 secs	5 Mins	40-50 Mins
			2. 10 sec max sprint every 30 secs					
			10 sprints in total					
			4. 5 mins rest					
			5. Repeat circuit 1 to 3 times					

Sessions Plans (Outdoors)

Code	Heart Rate	Modality	Session Content	Work Res Ratio	Sets	Work (Secs or Metres)	Rep Rest Durations (Secs)	Rest Duration btw Sets	Session Duration
1	65-75% HR Max	Run	1. Warm Up	3 to 1	1	360 secs	120	N/A	30-35 Mins
			2. Run 6 Mins @ 65-75% HR Max						
			3. 2 Mins core work						
			3. Run 6 Mins @ 65-75% HR Max						
			5. 2 Mins core work						
			6. Run 6 Mins @ 65-75% HR Max						
2	65-75% HR Max	Run	1. Warm Up	N/A	1	30 MINS or 6KM Which ever comes first	N/A	N/A	30 Mins
			2. Run for 30 mins						
3	65-85% HR Max	Run or Cycle	1. Warm Up	N/A	3	15,10,5 (Mins)	N/A	5 Mins	50 Mins
			2. Cycle/Run 15 Mins @ 65% HR +						
			3. Cycle/Run 5 Mins (Easy)						
			4. Cycle/Run 10 Mins @ 75% HR +						
			5. Cycle/Run 5 Mins (Easy)						
			6. Cycle/Run 5 Mins @ 85% HR +						
			7. Cycle/Run 5 Mins (Easy)						
4	80% + HR Max	Run End to End Session. See Separate Sheet	1. Warm Up	N/A	3	15-20 Secs	10 Secs	2 Mins	30-40 Mins
			2. Run touch line						
			3. Jog try/goal line						
			3. Repeat 4 times						
			4. Rest 2 Mins						
			5. Perform 3 sets						
5	80% + HR Max	Run	1. Warm Up	1 to 1	1	60 Secs	60 Secs	N/A	35 Mins
			2. 1 Min Max Effort Run						
			3. 1 Min Rest Between Reps						
			4. Repeat 12 Reps						

Sessions Plans (Outdoors)



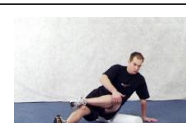

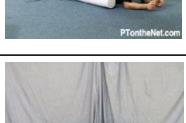


Code	Training Stimulus	Modality	Session Content	Work Res Ratio	Sets	Work (Secs or Metres)	Rep Rest Durations (Secs)	Rest Duration btw Sets	Session Duration
6	Aerobic Power: 90% HR Max +	Run	1. Warm Up	2 to 1.5	1	4 Mins	3 Mins	N/A	40 Mins
			2. Run 4 Mins						
			3. Rest 3 Mins						
			4. Repeat 5 Times						
7	Aerobic Power: 90% HR Max +	Run	1. Warm Up	2 to 1	1	4 Mins	2 Mins	N/A	40 Mins
			2. Run 4 Mins						
			3. Rest 2 Mins						
			4. Repeat 5 Times						
8	Aerobic Power: 90% HR Max +	Run Pyramid Session. See separate sheet	1. Warm Up - Start on try line	N/A	1	N/A	3 Mins	N/A	30 Mins
			2. Run to 5M Line and back						
			3. Run to 22M Line and back						
			4. Run to Half way line and back						
			5. Run to opposite 22M line and back						
			6. Run to opposite try line and back						
9	Aerobic Power: 90% HR Max +	Run Speed Endurance Twister See Separate Sheet	1. Warm Up	1 to 1	1	10 secs	10 Secs	N/A	30-40 Mins
			2. Run width of pitch						
			3. Jog 10 metres (along side of pitch)						
			4. Run width of pitch						
			5. Perform 10 runs for 1 rep						
			5. Rest 2 Mins after every reps						
10	Aerobic Power: 90% HR Max +	Run Anaerobic Shuttle. See separate sheet	1. Warm Up	3 to 1	2	240 secs	120 Secs	N/A	20-30 Mins
			2. 6 cones 5M apart						
			3. In 30 secs run to each cone and back						
			4. Rest 6 Mins - Repeat once more						

Sessions Plans (Outdoors)










Code	Training Stimulus	Modality	Session Content	Work Res Ratio	Sets	Work (Secs or Metres)	Rep Rest Durations (Secs)	Rest Duration btw Sets	Session Duration
11	65-85% HR Max	Body Weight Exercises Circuit - Outside	1. Warm Up	1 To 1	3	30 Secs	2 Mins	N/A	35-40 Mins
			2. Perform 45 secs of each exercise (see DVD)						
			3. Rest for 30 secs between each exercise						
			4. Rest for 3 mins after last exercise						
			5. Repeat circuit 3 times						
12	65-85% HR Max	Centre Circle session with 30 secs of an exercise followed by run to corner, repeat 4 runs (and 4 exercises for 1 rep)	1. Warm Up	2 To 1	4	60 Secs	3 Mins	N/A	35-40 Mins
			2. Perform 30 secs of each exercise (see DVD)						
			3. Then run to one of corners in pitch or perform 60 M sprint						
			4. Perform 4 exercises with run after each						
			5. Rest 30 secs after each run						
			6. Rest 3 Mins Between Sets						
			5. Repeat circuit 1 to 3 times						

RECOVERY/FLEXIBILITY SESSION

(DONE BEFORE AND/OR AFTER SESSIONS)

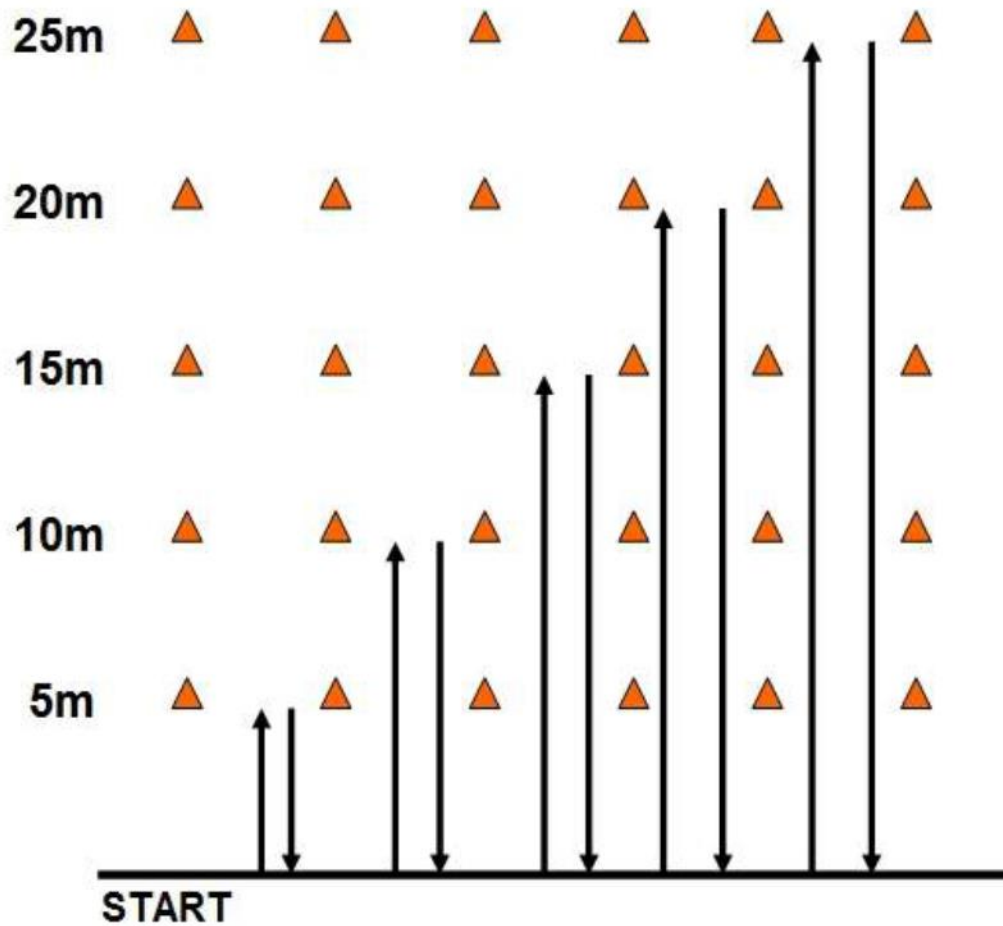
No	Name Of Exercise	Sets	Reps	Picture	Coaching Points
The aim of this session is to improve the condition of your muscles					
1	Foam Roll - Calf	1	6 times up and down foam roll		
2	Foam Roll - Leg	1	6 times up and down foam roll		
3	Foam Roll - Hip	1	6 times up and down foam roll		
4	Foam Roll - Groin	1	6 times up and down foam roll		
5	Foam Roll - Back	1	6 times up and down foam roll		
6	Stretch - Calf	1	20 Sec Hold		
7	www.hanburytraining.com Stretch - Hip	1	20 Sec Hold		theRUGBYREF.com

Core Training Session

No	Name Of Exercise	Sets	Reps		Picture	Coaching Points
The aim of this session is to improve RUNNING EFFICIENCY						
1	Shoulder Bridge	2	15	30 Secs		Lye on your back, with your knees bent, take your toes off the floor, push your hips up, activate glutes as you do. Repeat required number of sets and reps
2	Plank	2	1 x 60 Secs	30 Secs		Lye on your front, lift yourself up so that your elbows are beneath your shoulders, keep your hips and back in line, hold for required time.
3	Cobra	2	15	30 Secs		Lye on your front with your head down, take your arms off to your side so that they are in line with your chest. Squeeze shoulder blades together and lift arms off the floor, hold for 1 second in top position, slowly take arms back to start position.
4	Seated Twists	2	20 (10 each side)	30 Secs		Sit on hips, bend knees and take feet off the floor. Keep your balance. Take arms from side to side (touching floor) slowly.
5	Plank with leg lift	2	10 each leg	30 Secs		In the plank position, lift 1 leg an inch off the floor, hold, then return foot to floor, ensure that hips and back stay in line
6	Side Plank with leg lift	2	10 each leg	30 Secs		Start by lying on your side, elbow positioned beneath shoulder, position leg nearest floor at 90 degree angle. Lift body away from floor, hold in top position then return to floor, repeated required number of sets.
7	Superman	2	10 each side	30 Secs		On all fours, lift up your right arm and left leg, hold when arm and leg are parrell to floor, return to start position, then lift up left arm and right leg to same position. Repeat required number of reps each side.
8	Push Ups	2	15	30 Secs		
9	Single Leg Squats	2	10 each leg	30 Secs		Standing on one leg. Lean forward pushing hips back, bend knees to lowest position that you can balance in. Return to standing position. Repeat required number of reps.

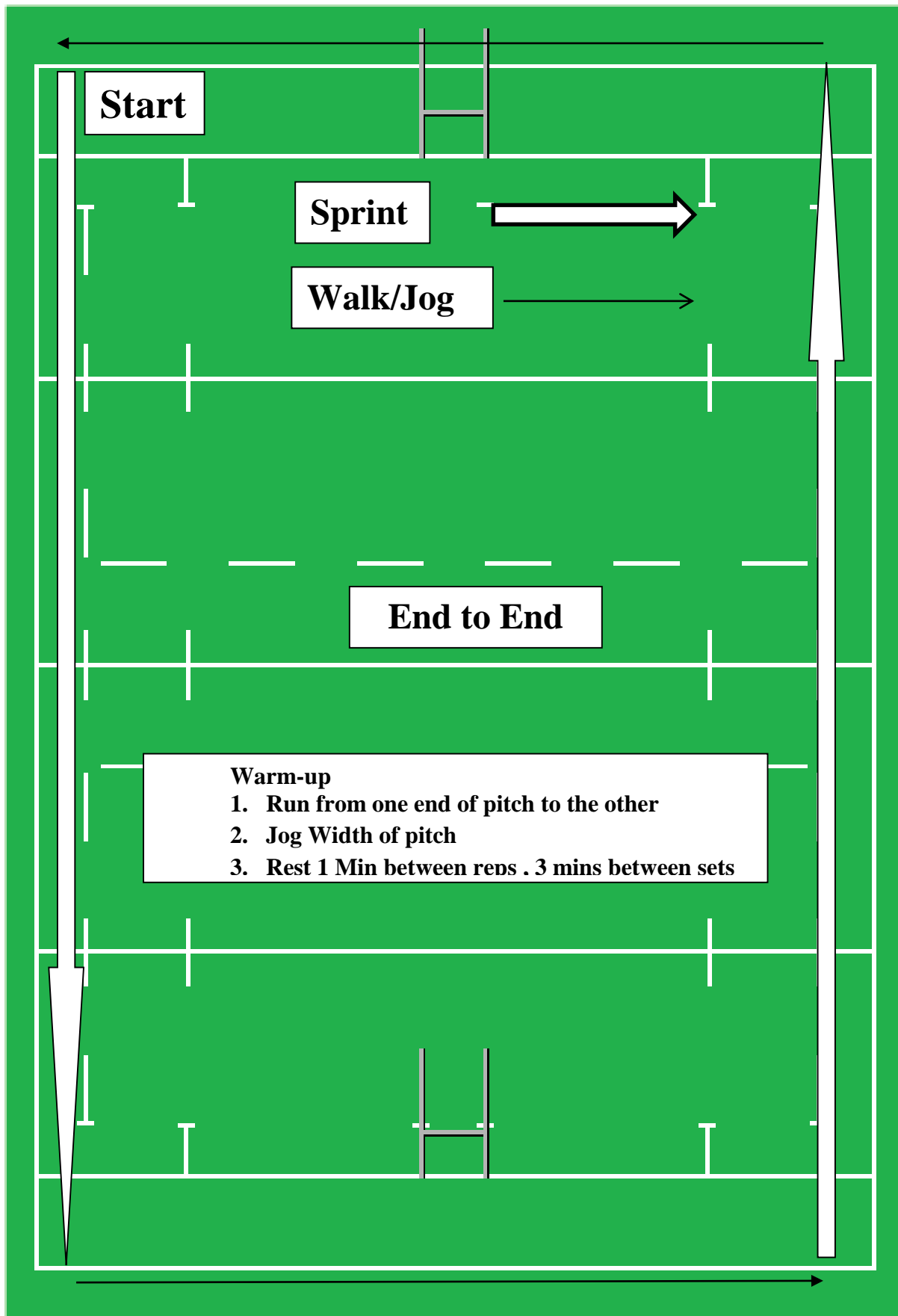
Pitch based sessions

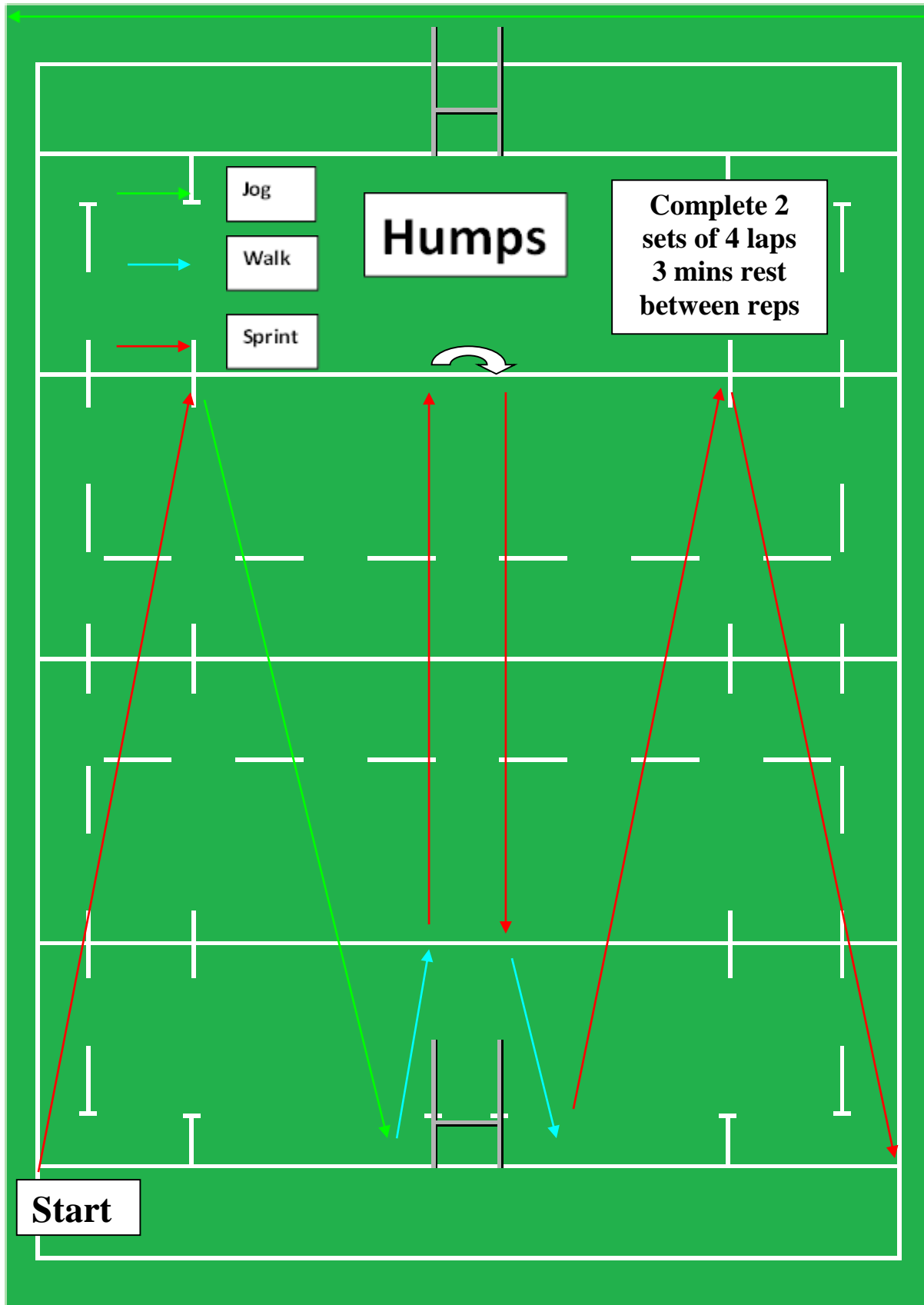
Shuttle Run

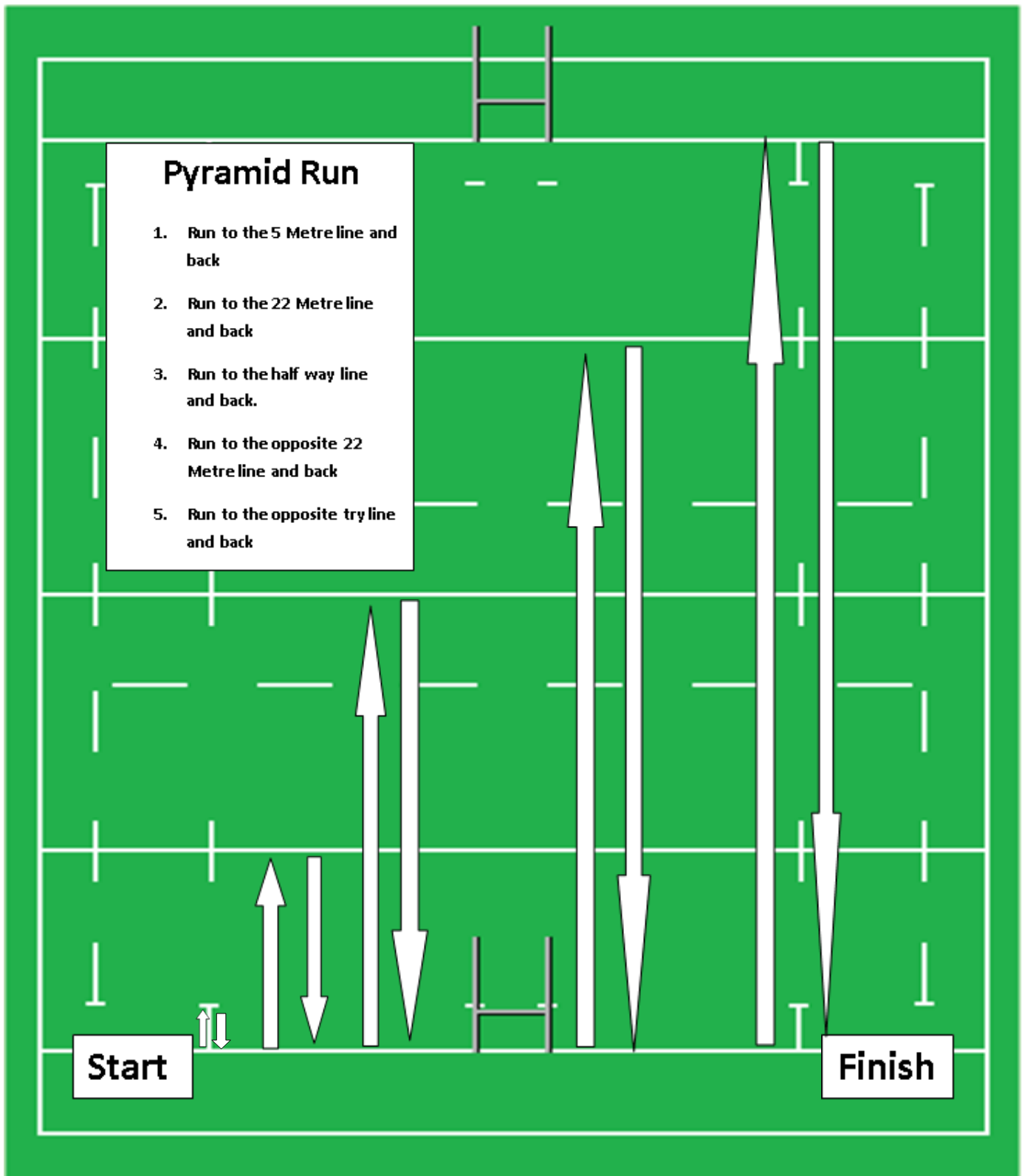


1. Place 6 cones out in a straight line 5 metres apart
2. Set iphone or stopwatch to 30 secs
3. Run to 5 m cone and back
4. Run to 10 m cone and back
5. Run to 15 m cone and back
6. Run to as many cones as you can and back in 30 secs
7. Rest 30 secs, repeat 6 more reps
8. Rest 5 mins and repeat required number of sets

Beginners 2 sets
Intermediate 3 sets
Advanced 3 to 4 sets

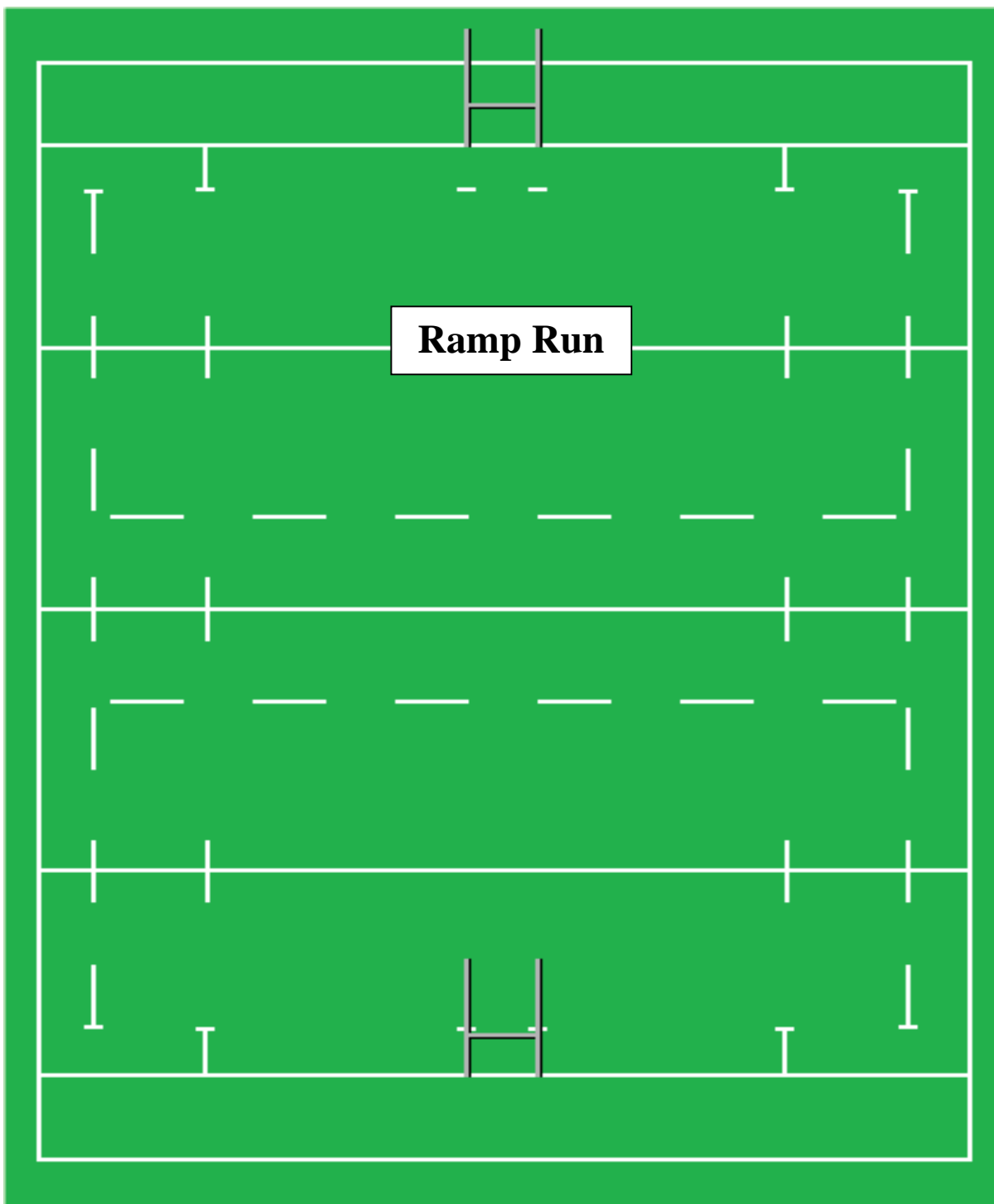
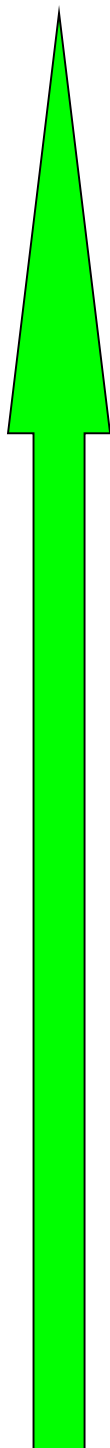
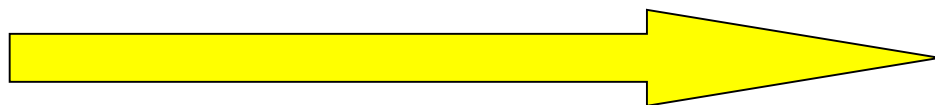






1. Warm-up: following protocol laid out in DVD
2. Perform sequence of runs (as shown above)

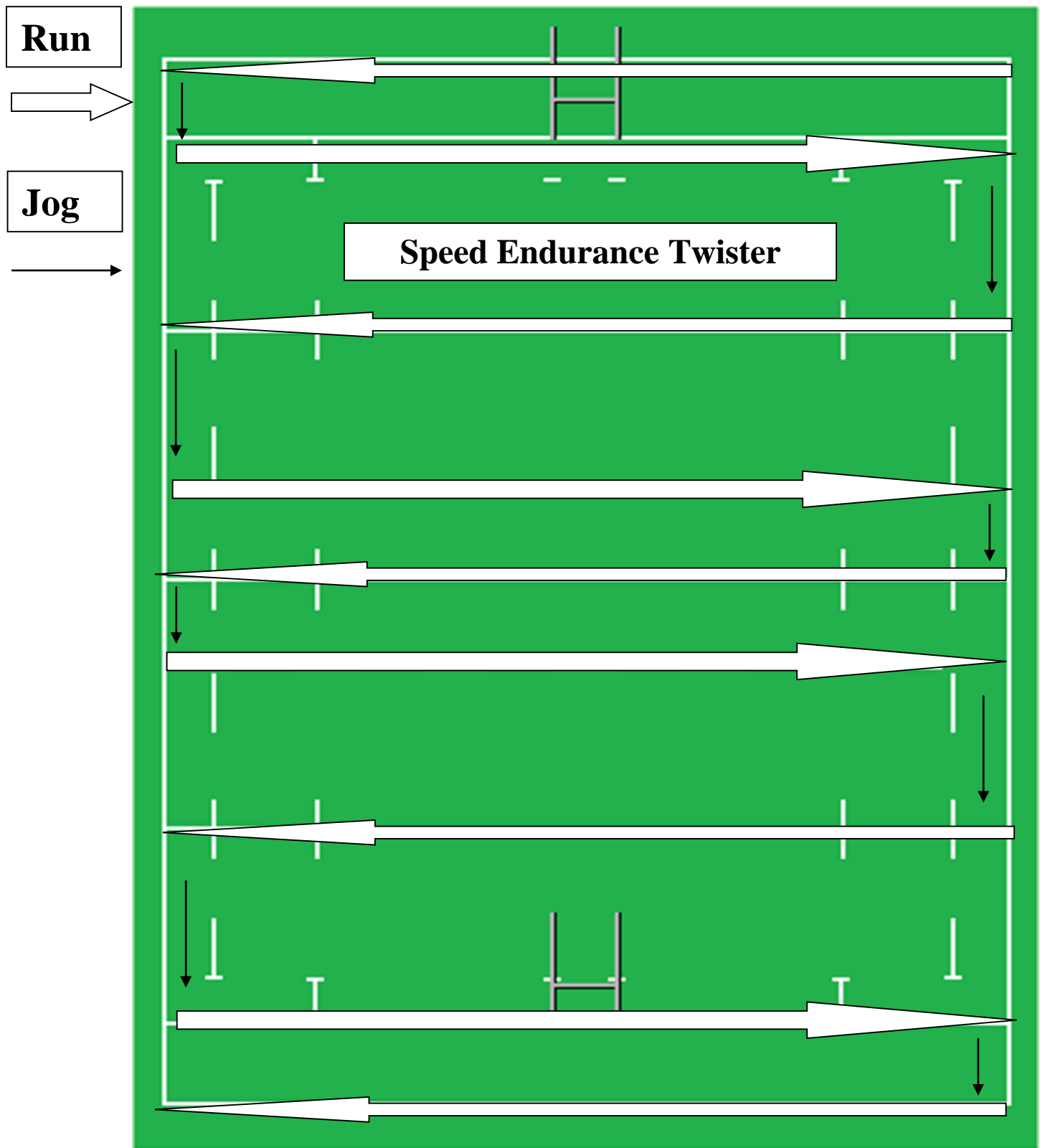
Beginners complete 4 reps with 3 mins rest between reps
Intermediate complete 6 reps with 2 mins rest between reps
Advanced/elite complete 8 reps with 2 mins rest between reps



Start

1. Ramp Run
2. 2 sets of 6 reps (laps) 4 mins recovery between sets
3. Green – Run at 50% of Max
4. Yellow – Run at 70% of Max
5. Red – Run at 90 % of Max
6. Blue – walk (60 secs recovery before beginning again)

Beginner 2 sets
Intermediate 3 to 4 sets
Advanced 4 to 5 sets



1. Warm-up: following protocol laid out in DVD
2. Perform sequence of runs (as shown above)

Beginners complete 4 reps with 3 mins rest between reps
Intermediate complete 6 reps with 2 mins rest between reps
Advanced/elite complete 8 reps with 2 mins rest between reps

