INTEGRATE SPORTS

COMPLETE HOCKEY CONDITIONING

Version 2.0

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FOUNDER OF INTEGRATE SPORTS

Hi there! I'm Henry, the founder of Integrate Sports. Our mission is to provide leading performance support services for aspiring hockey athletes.

In this e-book you'll find everything you need to know about maximising your conditioning and fitness for hockey.

I've implemented everything I've learned from working with some of the best hockey players in the world, to give you a scientific, actionable guide to get fitter and perform better.

CONTENTS

INTEGRATE SPORTS

INTEGRATE SPORTS

CHAPTER 1

RUNNING DEMANDS OF HOCKEY

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RUNNING DEMANDS OF HOCKEY

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Field Hockey can be categorised as an **intermittent running-based** team sport, characterised by repeated high-intensity actions such as accelerations, decelerations, and changes in direction at speed. We can also include shooting and defensive actions in this too, or any explosive movement that involves the alactic/phosphocreatine system. These actions are then interspersed with periods of low-intensity recovery, with the majority (around 80% of the game spent in low-intensity walking or jogging). (Spencer et al., 2004).

In terms of general demands, hockey players can expect to run 5-8km per game, with the level of performance and gender affecting the physical requirements. Ihsan et al. (2021) noted positional differences between defenders, midfielders and forwards.

Defenders typically accrue more total distance and high-intensity decelerations, whereas forwards typically perform higher volumes of high speed running (>15km/h) and perform a greater number of high-intensity actions. They also noted that total running distance drops every quarter, with high speed running distances remaining relatively consistent across the four quarters in international men's hockey. Unsurprisingly, there are greater running demands in international vs national level hockey performance (Jennings et al., 2012).

With this in mind, there are some key principles that we can follow to prepare for hockey performance. Firstly, the ability to produce high-intensity actions is vital, as is the ability to recover between these efforts.

We can approach this in one of two ways - prepare for the 'average' of the game, which in hockey terms means moderate-intensity work over prolonged periods, or we can prepare for those high-intensity moments.

If we prepare for the average, the medium, or the midpoint of anything we aren't going to be fully prepared for the moments that matter. We need to be prepared for the high-intensity actions, and the ability to recover between them.

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POSITIONAL DIFFERENCES

CENTRE BACKS

Likely to perform more total distance as they are on the pitch for longer, but less relative sprint distance

HALF BACKS

Typically perform a lot of relative sprint distance, and operate on rotations meaning high work rates

MIDFIELDERS

Often perform the most sprint distance in total of any position, due to the very high work rates needed in this position and large distances covered

FORWARDS

Will cover the most relative sprint distance per minute, as they are on for shorter rotations but work very hard when on the pitch

Jennings et al., 2012

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POSITIONAL DIFFERENCES - IMPLICATIONS

CENTRE BACKS
Focus more on longer aerobic intervals, and acceleration over shorter distances

HALF BACKS
Focus on shorter aerobic intervals and good top end speed, ensuring they can recover quickly

MIDFIELDERS
Big focus on top end speed, short aerobic intervals and acceleration speed to cope with running demands

FORWARDS
Should primarily focus on developing their speed and ability to perform repeated bouts of high intensity sprint efforts

Jennings et al., 2012

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MYTH

Long, slow runs are the best way to prepare for the demands of hockey.

On face value, it seems to be obvious that intervals would be better suited to hockey. And yet, players all around the world are using steady state training in pre season to get themselves ready. So, let's work out which is going to be better suited to you as a hockey player.

Firstly, it's important to recognise the key training principles: progressive overload, individualisation, and specificity.

Progressive overload means gradually increasing the demand placed on an athlete, above their habitual level (e.g. going from 2 sets to 3 sets from one week to the next). We can build out progressive training blocks that increase in their demand **much more easily with intervals** than with long, steady state work.

Individualisation means matching a training programme to the unique needs of the person (based on physical capability, injury history, and goals amongst other factors). **Intervals are much more likely to be based on an assessment**, such as a time trial (Bellenger et al., 2015) or 30-15IFT (Bucheit, 2010). This enables better individualisation.

Specificity means that training should be relevant to the physical demands of the sport. **Hockey is a repeat sprint based sport**. So that is what we are preparing for, not continuous steady state running.

Winner: Interval training (3-0)

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CHAPTER 2

HIERARCHY OF NEED

HIERARCHY OF NEED

REPEATABILITY

Enhance the ability of players to repeat high-intensity actions. Hockey is broadly speaking a repeat sprint sport, and so this is a much more specific physical quality. This is the final step in the hierarchy, underpinned by well-developed aerobic fitness and max sprint speed. This can be determined by using a 6 x 30m or 8 x 20m shuttle RSA test.

INTENSITY

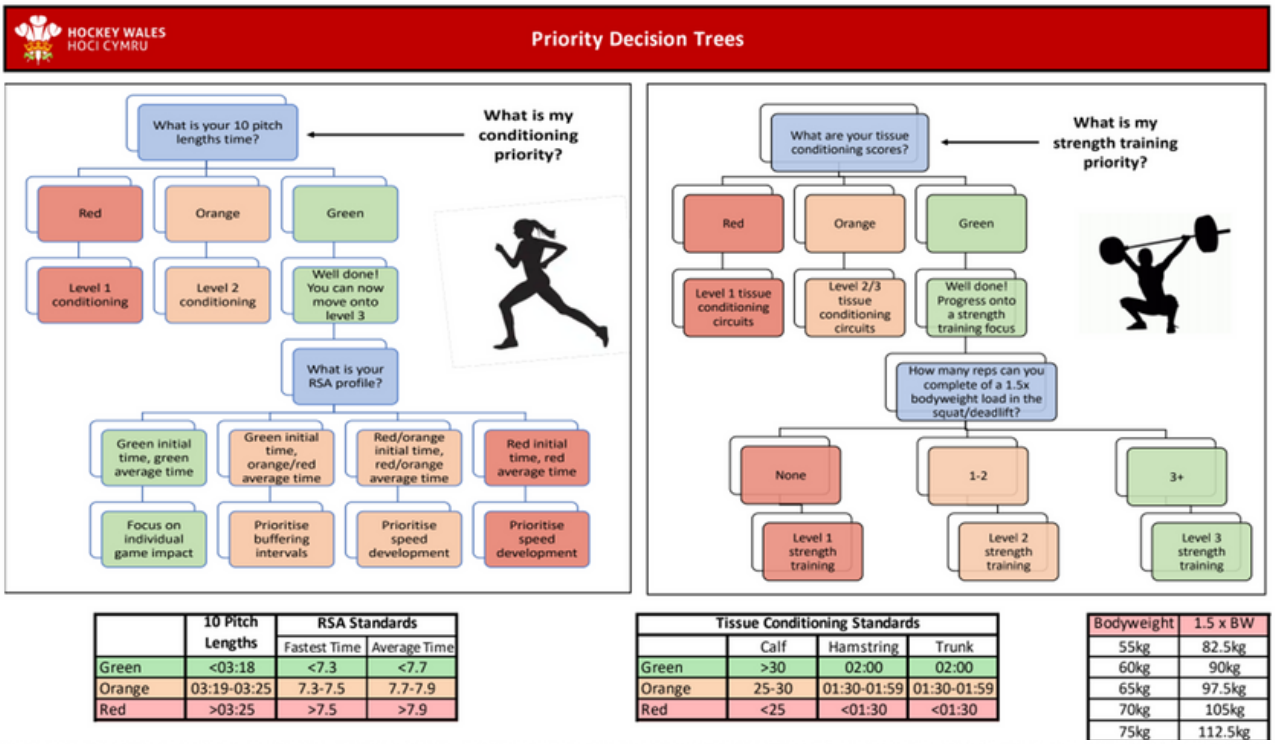
Increase maximal physical outputs of players, in order to increase performance potential. This relates to a player's maximal sprint speed, both in terms of acceleration and max velocity. Repeat sprint ability is strongly correlated with max sprint speed, so this provides a foundation for RSA, whilst also increasing our running economy. This can be determined by a 40m sprint, or a flying 10m sprint.

ROBUSTNESS

Maximise game time by minimising injury risk and maximising availability. It doesn't matter how fast you are if you're injured, so the first and most important priority should be ensuring that you are aerobically fit enough to tolerate the training week and match demands, enabling you to recover between sprints and between matches. This can be determined by a time trial assessment, or by using the 30-15 IFT or Yo-Yo test.

HIERARCHY OF NEED

What does this look like in practice? We can use flow charts or decision trees to determine where you are on the hierarchy. Below is an example from when I worked with Hockey Wales.



	10 Pitch Lengths	RSA Standards	
		Fastest Time	Average Time
Green	<03:18	<7.3	<7.7
Orange	03:19-03:25	7.3-7.5	7.7-7.9
Red	>03:25	>7.5	>7.9

Tissue Conditioning Standards			
	Calf	Hamstring	Trunk
Green	>30	02:00	02:00
Orange	25-30	01:30-01:59	01:30-01:59
Red	<25	<01:30	<01:30

Bodyweight	1.5 x BW
55kg	82.5kg
60kg	90kg
65kg	97.5kg
70kg	105kg
75kg	112.5kg

Players must 'earn the right' to progress through the system before they can move onto the next stage. This provides a simple programme that anyone can follow, and ensures that you know what your priority is at any given time.

HIERARCHY OF NEED

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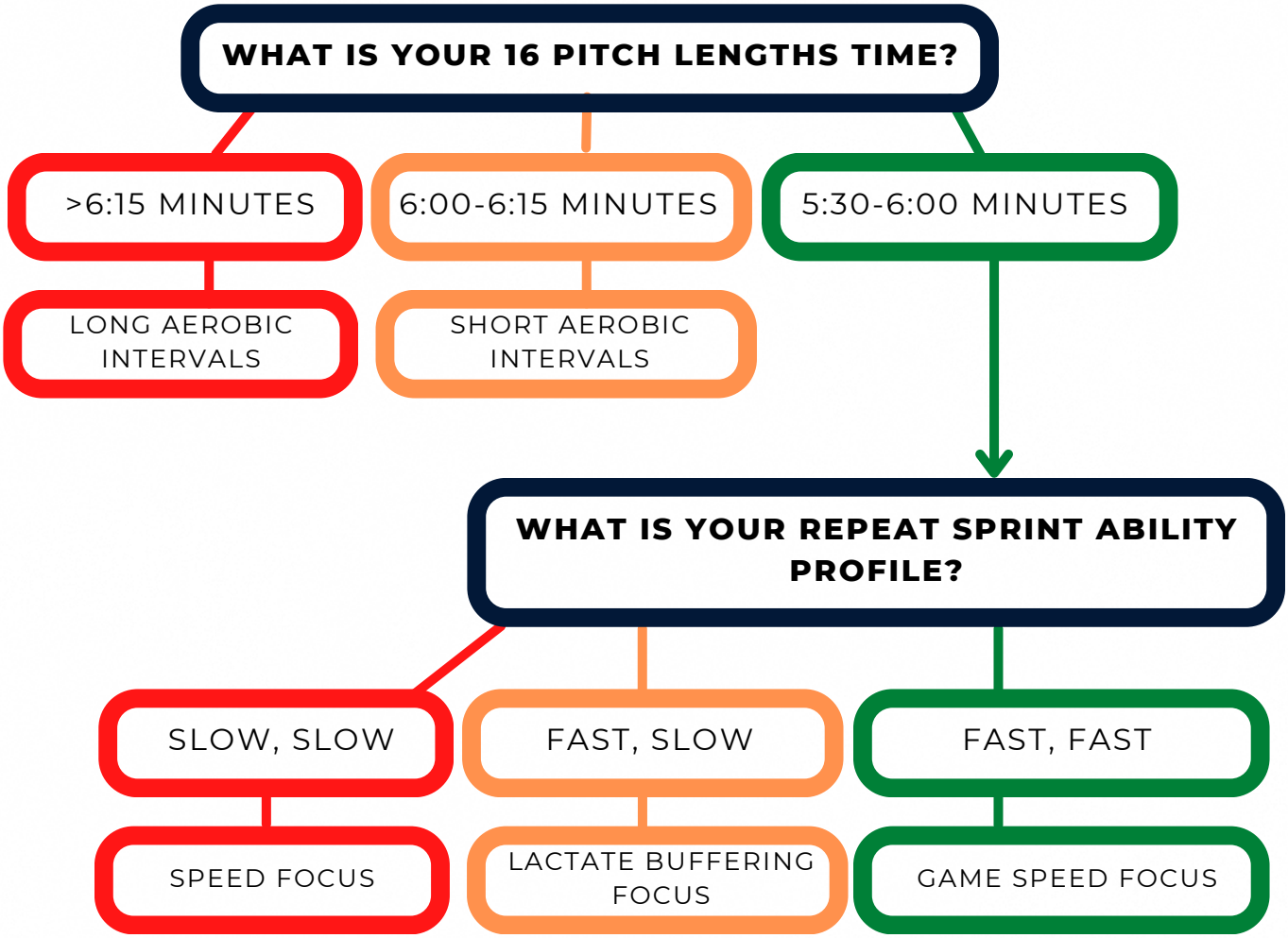
Here is an adapted, simplified version of this, based on a 16 pitch lengths assessment and RSA test (this will be explained in the next section).



RSA total time benchmark scores are as follows:

Men: Green = 7.0s, Amber = 7.3s, Red = >7.3s

Women: Green = 7.6s, Amber = 7.9s, Red = >7.9s

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CHAPTER 3

ASSESSING FITNESS

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ASSESSING MAS

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Maximal aerobic speed (MAS) is the lowest speed at which our VO2 max occurs and is a reliable measure of our aerobic fitness.

The simplest means of assessing MAS is a time trial such as a 16 pitch lengths (1600 yards or 1462m) run completed as fast as possible.

Run 16 pitch lengths in your best time possible, being careful to pace it so that you don't start too fast and burn out before the end of the test!

CALCULATING MAX AEROBIC SPEED

MAS = DISTANCE (M) ÷ TIME (S) [M/S]

FOR EXAMPLE:

1462 METRES ÷ 330 SECONDS = 4.43 M/S

NORMATIVE VALUES

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Normative values are a means of comparison, enabling us to determine how our performance stacks up against other athletes. In the case of MAS testing, we have scores taken from various research studies and sports. There isn't an enormous body of research available in hockey, however we can make inferences from other similar running based sports.

Table 2. Comparison of MAS scores between elite-level athletes from various sports.

Sport	MAS (m/s)	Test	Reference
Serie A Football	4.91	Rampinini	26
Australian Rules Football	5.03	2 km Time Trial	21
Rugby 7s (International)	4.26	Treadmill	28
Rugby League	4.36	MSFT -corrected	29
Gaelic Football	4.68	MSFT -corrected	30
International Hockey	4.79	MSFT -corrected	31
Middle Distance (1.5-3 km) runners	6.22	Montreal	32
Endurance Runners (10km)	5.79	Montreal	33

Source: scienceforsport.com

As you can see certain sports have extremely high scores, with middle distance and (unsurprisingly) endurance runners achieving world class levels of aerobic fitness.

International hockey players have been recorded as scoring around 4.79m/s which would be a time of 5:05 in the 16 pitch lengths test. This would be absolutely world-class, however, and a more realistic MAS score of **4.0-4.4m/s (5:30-6:00 in the 16 pitch lengths)** is a very good ballpark to aim for depending on your age and fitness levels.

REPEAT SPRINT ABILITY (RSA)

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Repeat sprint ability is defined as a sequence of a minimum of 3 sprints with an average rest of <21 s between sprints. This occurs frequently in Field Hockey owing to the nature of the sport, with forwards typically required to perform a higher relative workload of sprint distance when compared with other positions.

This quality is highly important in a game like Field Hockey where the ability to accelerate and decelerate repeatedly at high intensity is a key physical determinant. By gaining insight into an athlete's repeat sprint ability profile, we can provide specific interventions to target this quality. However, it is advisable to consider the athlete's overall running profile including maximal linear sprint speed, max aerobic speed (MAS), critical speed and change of direction ability too to further develop performance impacting insights.

A 6 x 30m sprint test is a reliable measure of repeat sprint ability, whereby athletes sprint 30m on a rolling clock every 25-30s. Once the first effort has been completed, the athlete has the remaining time on the rolling clock to recover before completing the next effort.

Time per effort (s), total time (s), mean time (s) and percentage decrement (%) are typically taken as metrics to provide insight into an athlete's sprint profile. Total time (s) is a reliable measure of repeat sprint ability (Bishop et al., 2003).

REPEAT SPRINT ABILITY (RSA)

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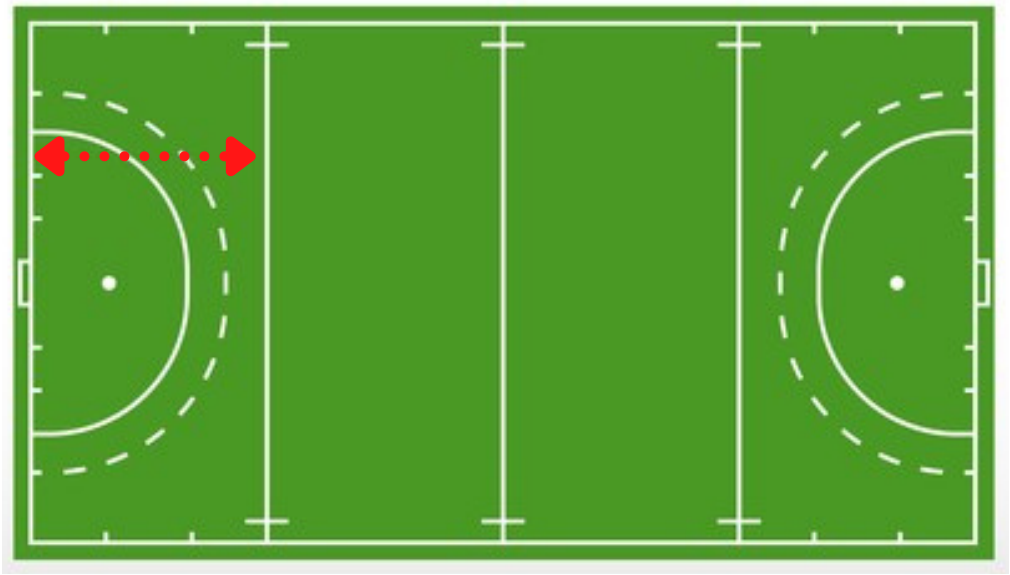
There are two options for assessing RSA. We can either use a 6 x 30m linear sprint or alternatively an 8 x 20m shuttle sprint. For the purpose of this example, I am going to use the **8 x 20m shuttle**, as the change of direction makes it a more relevant test. This is particularly the case if we video record the athlete doing this, and watch back for kinematic analysis (technique).



Format:

- You will need a set of timing gates to ensure the accuracy of this test, but you could alternatively record on an iPhone and pause the video at the time you cross the line on each, to take a note of the time achieved (this is far less accurate).
- On a rolling 30 second clock, sprint out to 20m before turning and sprinting back to the start line.
- You have the remainder of the 30 seconds for recovery e.g. if it takes 7 seconds, you have 23 seconds rest before the next effort.
- Complete 8 reps in succession, recording your sprint time on each.
- Record total time (all 8 sprints added up), average time per sprint, and fastest sprint time.

REPEAT SPRINT ABILITY (RSA)

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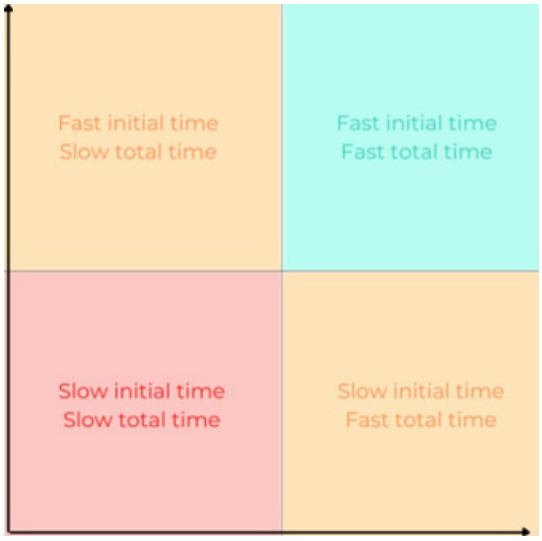
Based on the decision tree outlined in the previous section, and in line with the hierarchy of need philosophy, we can then categorise the RSA profile into one of four.

This helps us to know which conditioning sessions should be prioritised for the individual based on their needs.



Profile 1: fast initial time, fast total time
This athlete needs to focus on game-specific sprint patterns now (e.g. curved runs as a forward)

Profile 2: fast initial time, slow total time
This athlete is likely struggling to tolerate the anaerobic component of this test, so should prioritise buffering intervals such as 1 minute on, 30 seconds off

Profile 3: slow initial time, fast total time
This athlete can sustain their speed well, but the speed itself just isn't very fast! They need to focus on getting faster.

Profile 4: slow initial time, slow total time
This athlete again just needs to get quicker. They can't sprint fast enough fresh, let alone over repeated bouts.

YOUR LOCOMOTOR PROFILE

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Once you know your maximal aerobic speed (MAS) score, and you know what your top speed is (MSS), you'll have a locomotor profile.

This means that you can place yourself in one of three categories: **speed**, **hybrid** or **endurance**.

Each category has distinct conditioning types that suit their profile. Be sure to align your running sessions with these to get the most out of your training!

N.B. these often match up with playing lines (forwards = speed, midfield = hybrid, defenders = endurance (but not always).

1

SPEED PROFILE

Fast-twitch dominant athlete with a relatively low MAS score and a high maximal sprint speed. This means that they have a large ASR. They are suited to shorter, more intensive conditioning sessions.

2

HYBRID PROFILE

This is a blend of the two profiles, with a moderate MAS and maximal sprint speed score.

They suit a mixture of both speed and endurance focussed conditioning sessions.

3

ENDURANCE PROFILE

Slow-twitch dominant athlete with a relatively high MAS score and a low maximal sprint speed. This means that they have a small ASR. They are suited to longer, more extensive conditioning sessions.

Sandford et al. (2021)


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CHAPTER 4

INDIVIDUALISING YOUR TRAINING

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INDIVIDUALISING YOUR TRAINING

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Now that we've looked at the importance of decision making and assessment for conditioning prescription, we can also now look to individualise training in more detail.

There are a few ways that we can individualise training. These include by session type, interval time or distance, and by volume or intensity.

For example, if you've looked through the decision tree and have noticed that you're in the red zone for your aerobic fitness, then longer aerobic intervals are going to be your focus as this will help you to improve your score, hopefully putting you into the orange zone.

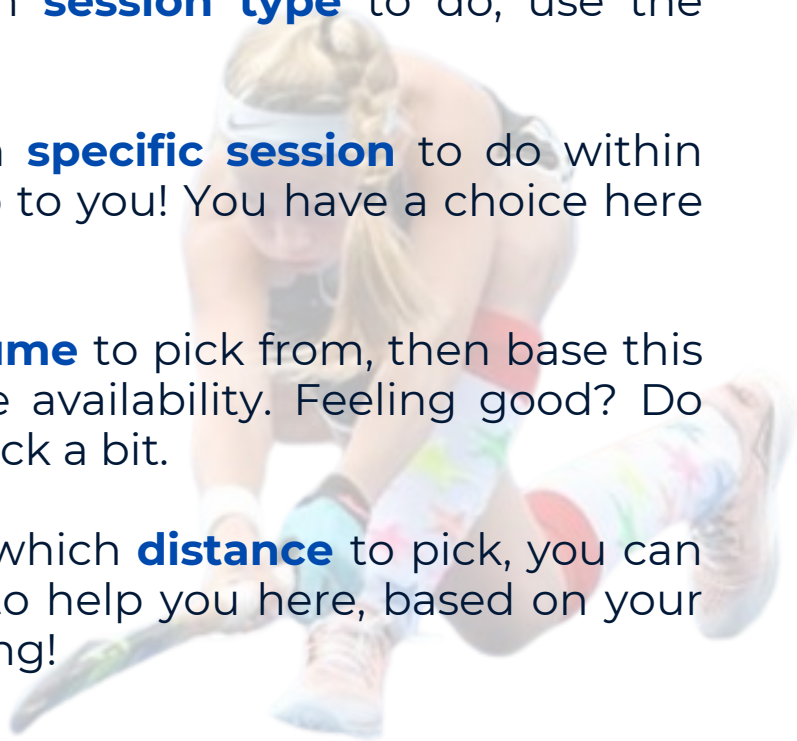
There are a few systems in-built into this programme which enable you to individualise your training based off a centralised model. This is the beauty of this approach, as it allows you the autonomy to take control of your own programme, using guidelines and systems to inform the session content.

If you need to know which **session type** to do, use the decision trees.

If you need to know which **specific session** to do within that category, well this is up to you! You have a choice here on which exact one to pick.

If you aren't sure which **volume** to pick from, then base this on your freshness and time availability. Feeling good? Do more! Feeling tired? Ease back a bit.

Lastly, if you need to know which **distance** to pick, you can use the running calculator to help you here, based on your 16 pitch lengths time. Winning!



INDIVIDUALISING YOUR TRAINING

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Step 1 - complete the 16 pitch lengths test, record your time and MAS score

Step 2 - use the decision tree to determine which session types you should be doing

Step 3 - decide which exact session from that session type you want to do

Step 4 - based on your freshness and time available, decide how much (volume to complete)

Step 5 - use the running conditioning calculator to determine which distance you should be aiming for

“

THE BEST ABILITY IS AVAILABILITY

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CHAPTER 5

THE TRAINING PROGRAMME

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GENERAL GUIDELINES

Now that we have addressed the key points around conditioning for field hockey, we can put together some simple guidelines to follow.

Aerobic capacity focus:

- 2 MAS sessions per week
- 20-40 minutes per session
- One long interval session (>1 min per rep) and one short interval session (<1min per rep) per week

Aim to gradually increase the volume (amount) of training that you do each week

Change the sessions you complete each week to avoid monotony

Complete a time trial such as the 16 pitch lengths test to prescribe accurate intensities

Max speed/repeat sprint ability focus:

- 2 speed/tempo conditioning exposures per week
- 20-40 minutes per session
- Incorporate sprint efforts into warm-ups to make yourself time efficient
- Progressively increase distances per week.

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LONG AEROBIC INTERVALS

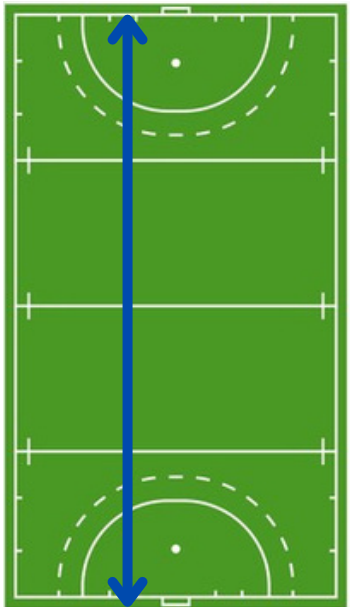
Long aerobic intervals are intervals of around **2-5 minutes** in length, which primarily target aerobic capacity adaptations.

They are performed at around **80-95% MAS** at relatively high volumes.

OPTION 1 - 1KM intervals (1000m or 11 pitch lengths

- Distance per set - 1km
- Rest per set - 4 minutes
- Running speed - 85% MAS
- Target time - *refer to calculator*
- Volume - 3 to 6 sets

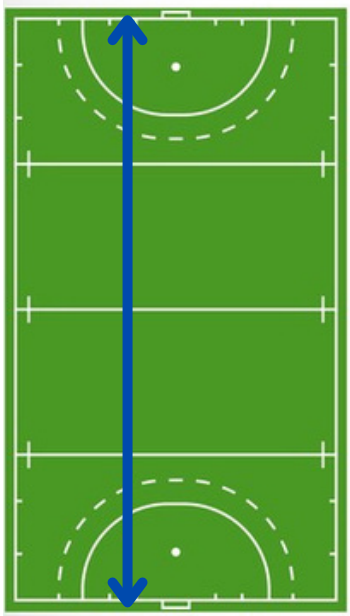
Run for 1km aiming to achieve the target time, before resting for 4 minutes. Repeat for up to 6 sets.



OPTION 2 - 3 minutes on, 3 minutes off

- Time per set - 3 minutes
- Rest per set - 3 minutes
- Running speed - 90% MAS
- Target distance - *refer to calculator*
- Volume - 4 to 8 sets

Run for 3 minutes aiming to achieve the target distance, before resting for 3 minutes. Repeat for up to 8 sets.



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SHORT AEROBIC INTERVALS

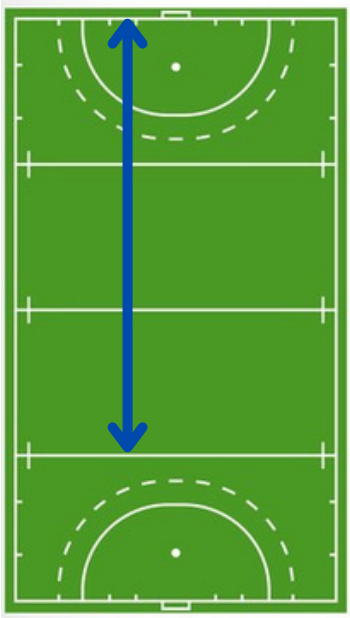
Short aerobic intervals are intervals of around **10-30 seconds** in length, which primarily target aerobic power adaptations.

They are performed at around **100-120% MAS** at relatively low volumes.

OPTION 1 - 15 seconds on, 15 seconds off

- Time per rep - 15 seconds
- Rest per rep - 15 seconds
- Rest per set - 3 minutes
- Running speed - 115% MAS
- Target distance - *refer to calculator*
- Volume - 3 to 4 sets of 8-10 reps

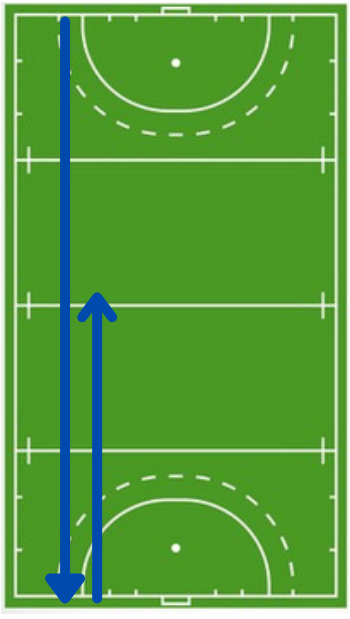
Run for 15 seconds aiming to achieve the target distance, before resting for 15 seconds. Repeat for up to 10 reps, rest for 3 minutes and repeat 2 or 3 more sets.



OPTION 2 - 30 seconds on, 15 seconds off

- Time per rep - 30 seconds
- Rest per rep - 15 seconds
- Rest per set - 3 minutes
- Running speed - 105% MAS
- Target distance - *refer to calculator*
- Volume - 3 to 4 sets of 5-8 reps

Run for 30 seconds aiming to achieve the target distance, before resting for 15 seconds. Repeat for up to 8 reps, rest for 3 minutes and repeat 2 or 3 more sets.



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LACTATE BUFFERING INTERVALS

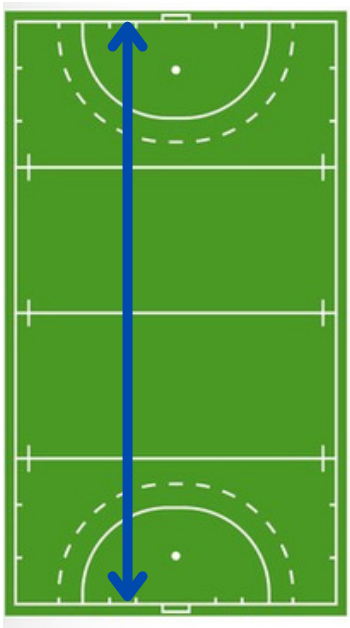
Lactate buffering intervals are intervals of around 1-2 minutes in length with a 2:1 work to rest ratio, which primarily target lactate capacity adaptations.

They are performed at around **95-100% MAS** at relatively low volumes.

OPTION 1 - 1 minute on, 30 seconds off

- Time per rep - 1 minute
- Rest per rep - 30 seconds
- Rest per set - 4 minutes
- Running speed - 95% MAS
- Target distance - *refer to calculator*
- Volume - 1 to 2 sets of 5 to 9 reps

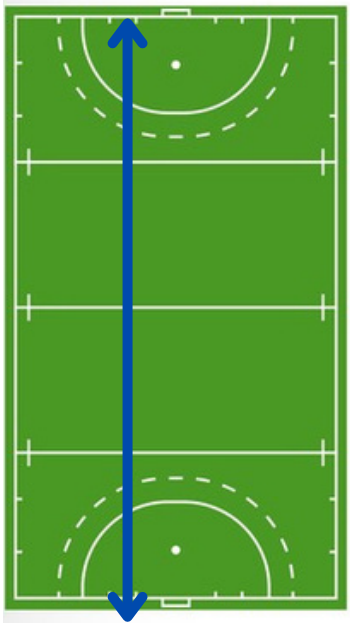
Run for 1 minute aiming to achieve the target distance, before resting for 30 seconds. Repeat for up to 9 reps, before resting for 4 minutes. Repeat up to one more set.



OPTION 2 - 2 minutes on, 1 minute off

- Time per set - 2 minutes
- Rest per set - 1 minute
- Running speed - 100% MAS
- Target distance - refer to calculator
- Volume - 5 to 10 sets

Run for 2 minutes aiming to achieve the target distance, before resting for 1 minute. Repeat for up to 10 sets.



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30-15IFT LONG INTERVALS

30-15IFT intervals are based on your performance in the 30-15IFT test. You can learn more about this test here: https://www.integratesports.com/blogs/hockey/30-15ift-test-for-team-sport-conditioning

Long intervals are performed at around **80-85% VIFT** at relatively high volumes.

	INTERVAL DURATION	SETS	REPS	INTENSITY	REST PER SET
OPTION 1	2 MINUTES	5 - 8	N/A	85% VIFT	2 MINUTES
OPTION 2	3 MINUTES	4 - 6	N/A	80% VIFT	3 MINUTES
OPTION 3	5 PITCH LENGTHS	5 - 8	N/A	85% VIFT	2 MINUTES
OPTION 4	8 PITCH LENGTHS	4 - 6	N/A	80% VIFT	3 MINUTES

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30-15IFT SHORT INTERVALS

30-15IFT intervals are based on your performance in the 30-15IFT test. You can learn more about this test here: https://www.integratesports.com/blogs/hockey/30-15ift-test-for-team-sport-conditioning

They are performed at around **90-100% VIFT** at relatively low volumes.

	INTERVAL DURATION	SETS	REPS	INTENSITY	REST PER SET
OPTION 1	10 SECONDS ON, 10 SECONDS OFF	2	8 - 12	95% VIFT	6 MINUTES
OPTION 2	15 SECONDS ON, 15 SECONDS OFF	2 - 3	8 - 12	95% VIFT	6 MINUTES
OPTION 3	20 SECONDS ON, 20 SECONDS OFF	2 - 3	8 - 12	90% VIFT	6 MINUTES
OPTION 4	30 SECONDS ON, 30 SECONDS OFF	2 - 3	6 - 10	90% VIFT	3 MINUTES

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REPEAT SPRINT INTERVALS

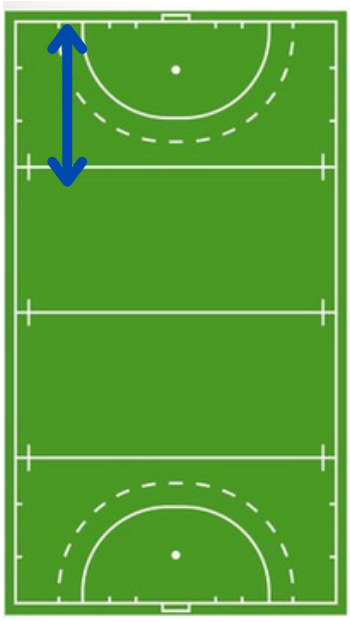
RSA intervals are super high-intensity intervals that are capable of achieving higher outputs than you will experience during a match. This is why they should only be completed once a solid base of conditioning has been achieved first.

They are performed at above 13**0% MAS** (max sprint speed).

OPTION 1 - 5 seconds on, 25 seconds off

- Time per rep - 5 seconds
- Rest per rep - 25 seconds
- Rest per set - 5 minutes
- Running speed - *Max speed*
- Target distance - *refer to calculator*
- Volume - 2 to 3 sets of 6 to 8 reps

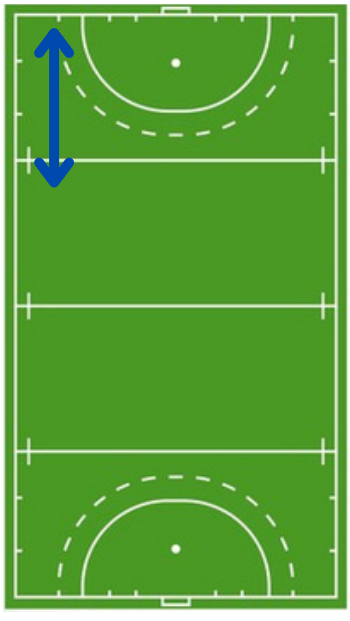
Sprint maximally for 5 seconds, aiming to achieve the target distance, before resting for 25 seconds. Repeat for up to 8 reps, before resting for 5 minutes. Repeat 1 or 2 more sets.



OPTION 2 - 20m shuttle sprints

- Distance per rep - 20m shuttle (40m total)
- Rest per rep - 30 seconds
- Rest per set - 5 minutes
- Running speed - *Max speed*
- Target time - *best effort*
- Volume - 2 to 3 sets of 6 to 8 reps

Sprint maximally out and back over 20m, before resting for 30 seconds. Repeat for up to 8 reps, before resting for 5 minutes. Repeat 1 or 2 more sets.



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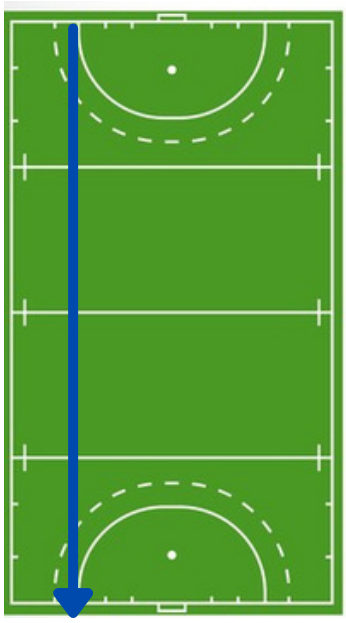
TEMPO INTERVALS

This method of interval training is designed to complement a speed focus. This is because they are high quality, with plenty of rest so that although you are running fast it is not overly intensive at the cost of technique and the ability to recover.

If speed is your focus, then complement this with some tempo intervals as below.

Pitch length tempo intervals

- Distance per rep - 91.4m (100 yards)
- Rest per rep - 60 seconds
- Rest per set - 3 minutes
- Running speed - *70% best effort*
- Target time - *see below*
- Volume - 3 sets of 4 to 8 reps



Run a pitch length at 70% of your best effort speed (see below for guidelines). Rest 60 seconds once completed, completing up to 8 reps in one set. Rest 3 minutes between sets and complete 1 or 2 more sets in total.

TO WORK OUT 70% OF YOUR BEST EFFORT, FIRST RUN A PITCH LENGTH AT MAX EFFORT.

BEST EFFORT - 15 SECONDS (6.1M/S)
70% EFFORT - 21 SECONDS (4.3M/S)

VOLUME PRESCRIPTIONS

LOW - 3 SETS OF 4 REPS
MODERATE - 3 SETS OF 6 REPS
HIGH - 3 SETS OF 8 REPS

INTEGRATE SPORTS

ANAEROBIC SPEED RESERVE (ASR) INTERVALS

These intervals are based on % of your ASR. You can learn more here: https://www.integratesports.com/blogs/hockey/anaerobic-speed-reserve-field-hockey-fitness

These are performed at around **10-50% ASR** at relatively low volumes.

	INTERVAL DURATION	SETS	REPS	INTENSITY	REST PER SET
OPTION 1	15 SECONDS ON, 15 SECONDS OFF	2 - 3	8 - 12	20% ASR	3 MINUTES
OPTION 2	30 SECONDS ON, 30 SECONDS OFF	2 - 3	8 - 12	10% ASR	3 MINUTES
OPTION 3	15 SECONDS ON, 30 SECONDS OFF	2	8 - 12	25% ASR	4 MINUTES
OPTION 4	15 SECONDS ON, 45 SECONDS OFF	2	6 - 10	50% ASR	6 MINUTES

MAX SPEED EFFORTS

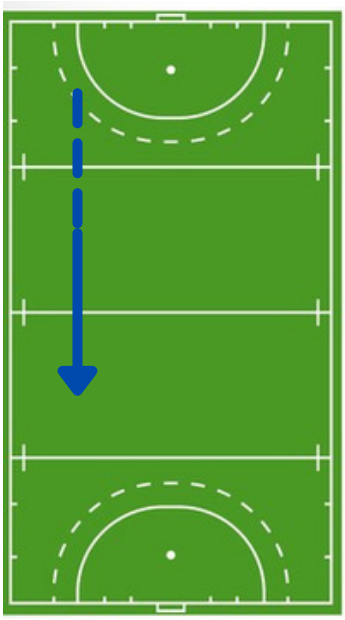
Max speed work should be completed as fast as possible, as fresh as possible to ensure high quality. If you don't rest enough between efforts this will turn into a conditioning session which is not the adaptations that we are after.

This is high quality speed work to get you faster.

OPTION 1 - rolling 20m sprints

- Distance per rep - 20m
- Rest per rep - 2 minutes
- Running speed - *Max speed*
- Target time - *best effort*
- Volume - 6 to 8 reps

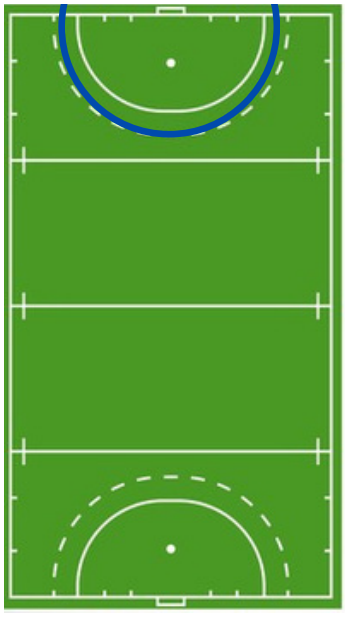
From a rolling start (over 10-20m), sprint maximally over a 20m area. Try to relax and hit your absolute top speed, before resting for 2 minutes. Complete up to 8 reps.



OPTION 2 - curved sprints

- Distance per rep - 1 curve of the D
- Rest per rep - 2 minutes
- Running speed - Max speed
- Target time - best effort
- Volume - 6 to 8 reps

Sprint maximally around the arc of a D, sprinting at your top speed possible. This is to develop the ability to run on an angle which often occurs during both attack and defence. Rest 2 minutes between reps and complete up to 8 reps.



INTEGRATE SPORTS

CONDITIONING CALCULATOR

In order to determine the correct distances to aim for, here is a simple calculator which gives you the target times and distances to aim for, based on the sessions contained within the training programme.

Running Conditioning Calculator

Test Distance (m)		1462	Time Based Intervals (seconds)						Distance Based Intervals (metres)					
Time Trial Time (mins and secs)		MAS (m/s)	Interval Length >>	15	20	30	60	120	180	100	150	200	400	800	1000
			MAS % >>	120%	115%	110%	105%	100%	95%	120%	110%	100%	90%	85%	80%
5	0	4.87		88	112	161	307	585	833	0:17	0:27	0:41	1:31	3:13	4:16
5	10	4.72		85	108	156	297	566	806	0:17	0:28	0:42	1:34	3:19	4:25
5	20	4.57		82	105	151	288	548	781	0:18	0:29	0:43	1:37	3:26	4:33
5	30	4.43		80	102	146	279	532	758	0:18	0:30	0:45	1:40	3:32	4:42
5	40	4.30		77	99	142	271	516	735	0:19	0:31	0:46	1:43	3:38	4:50
5	50	4.18		75	96	138	263	501	714	0:19	0:32	0:47	1:46	3:45	4:59
6	0	4.06		73	93	134	256	487	694	0:20	0:33	0:49	1:49	3:51	5:07
6	10	3.95		71	91	130	249	474	676	0:21	0:34	0:50	1:52	3:58	5:16
6	20	3.85		69	88	127	242	462	658	0:21	0:35	0:51	1:55	4:04	5:24
6	30	3.75		67	86	124	236	450	641	0:22	0:36	0:53	1:58	4:11	5:33
6	40	3.66		66	84	121	230	439	625	0:22	0:37	0:54	2:01	4:17	5:41
6	50	3.57		64	82	118	225	428	610	0:23	0:38	0:56	2:04	4:23	5:50
7	0	3.48		63	80	115	219	418	595	0:23	0:39	0:57	2:07	4:30	5:59
7	10	3.40		61	78	112	214	408	581	0:24	0:40	0:58	2:10	4:36	6:07
7	20	3.32		60	76	110	209	399	568	0:25	0:41	1:00	2:13	4:43	6:16
7	30	3.25		58	75	107	205	390	556	0:25	0:41	1:01	2:16	4:49	6:24
7	40	3.18		57	73	105	200	381	543	0:26	0:42	1:02	2:19	4:56	6:33
7	50	3.11		56	72	103	196	373	532	0:26	0:43	1:04	2:22	5:02	6:41
8	0	3.05		55	70	101	192	366	521	0:27	0:44	1:05	2:25	5:09	6:50
8	10	2.98		54	69	98	188	358	510	0:27	0:45	1:07	2:28	5:15	6:58
8	20	2.92		53	67	96	184	351	500	0:28	0:46	1:08	2:31	5:21	7:07
8	30	2.87		52	66	95	181	344	490	0:29	0:47	1:09	2:35	5:28	7:16
8	40	2.81		51	65	93	177	337	481	0:29	0:48	1:11	2:38	5:34	7:24
8	50	2.76		50	63	91	174	331	472	0:30	0:49	1:12	2:41	5:41	7:33
9	0	2.71		49	62	89	171	325	463	0:30	0:50	1:13	2:44	5:47	7:41

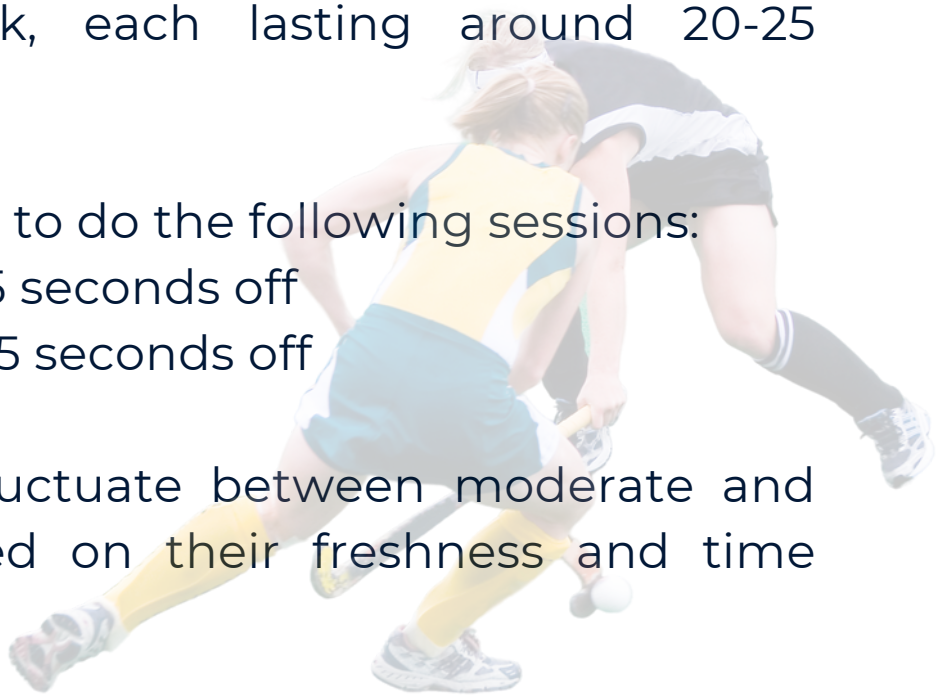
Start by finding your 16 pitch lengths time on the left hand side, and then move across the columns until you find the right column for the session that you want to complete.

The distance (or time) provided is the target for each individual rep of that session.

EXAMPLE

Player A runs a 16 pitch lengths time of 6:05, and therefore has a MAS score of 4.0 m/s, so needs to prioritise short aerobic intervals.

They are going to complete 2 aerobic conditioning sessions per week, each lasting around 20-25 minutes.



The athlete decides to do the following sessions:

- 15 seconds on, 15 seconds off
- 30 seconds on, 15 seconds off

Each week they fluctuate between moderate and high volume, based on their freshness and time available.

For the 15:15 session, their target distance is 62m.

For 30:15 session, their target distance is 114m.

They re-assess their aerobic fitness 6 week later and it is now 5:50, which puts them into the orange zone. They re-evaluate and are now ready to do the RSA test after which they'll know what to focus on next.

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