

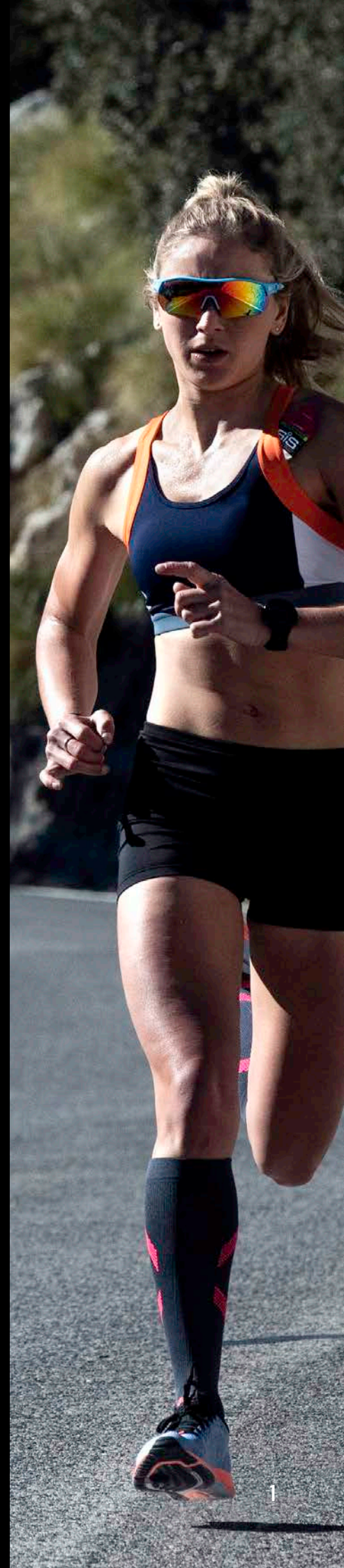


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IN SPORT

HALF MARATHON GUIDE

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INTRODUCTION TO RUNNING

GETTING STARTED

First & foremost, running should be something you do because you enjoy it. Many people run for different reasons - to improve their mental health, to challenge themselves or simply to just be more active & lead a healthier lifestyle.

More people are running now than ever before, event participation is increasing year on year, and it is showing no signs of slowing down. With that in mind, more people are also looking to get help to achieve their running goals; by either joining a running club, getting a coach or following a training plan.

The training plan in this guide is a 12-week plan designed to get you ready for your half-marathon, along with some useful hints & tips to help you along the way!

It is important to note that if you are injured, have any pre-existing medical conditions or experience any serious pain or discomfort whilst following the plan you seek advice from a medical professional.

DESCRIPTION OF SESSIONS

WARM UP

The warm-up is an essential part of any session and shouldn't be something you skip. It is especially important before you are doing any form of speed work or interval training. Ideally your warm-up should be a short easy paced jog, followed by drills and dynamic stretching, this will help to gradually increase your heart rate, which helps blood flow and get your muscles ready for some faster running.

COOL DOWN

The cool down is just as important as your warm-up, as it will help to gradually decrease your heart rate and get your body to a more relaxed state after a session. Again, this just needs to be a short easy paced jog, and you can also include some static stretches.

EASY RUNS

This pace should feel really comfortable, you should be able to hold a full conversation and not be short of breath, but slightly more effort than your warm-up pace. Ideally you should not be looking at your watch or worrying about pace

on these runs. The pace of these runs will vary day by day, and week by week. It will depend on what you did the day before, how well you slept, the weather and so many other factors! Just think of these runs as a way to build distance, your effort should be saved for your sessions and race day.

HILL SESSIONS

This is another session where it is just best to ignore your watch & work solely on effort levels. Ideally you should aim to work at around 80% of your maximum effort, or if you are using the RPE scale, an 8 out of 10. Hill sessions are always hard work and a great session to really push yourself, it's one where you will feel the benefit when it comes to race day.

INTERVAL SESSIONS

These sessions can vary in many ways - intensity, structure & duration. Depending on the session I will sometimes set guide paces for what you should be aiming for, but other times similar to hill sessions, it is best to work on you own personal effort levels. Ideally you should aim to work

DESCRIPTION OF SESSIONS

at around 80% of your maximum effort, or if you are using the RPE scale, an 8 out of 10. These sessions are again a really great session to push yourself, and it will definitely pay off on race day.

TEMPO RUNS

This run is what I would describe as 'comfortably hard', it can also be referred to as a 'Threshold Run'. It should feel harder than your easy pace, but a pace you feel like you could sustain for an hour during a race, so still a moderate effort, but not a flat-out sprint. You should still be able to say the odd sentence, but not hold a full conversation.

STRIDES

Strides are short bursts of running, approx. 20-30 seconds at around 90-95% effort, with walking recoveries between each one. Strides help to improve running form, increase stride length and leg turnover and benefit running economy.

STRENGTH & CONDITIONING

Strength & Conditioning can sometimes be something that is overlooked when training for a half-marathon, but there are so many benefits. I really believe it is something that every runner, no matter what level, should include in their weekly training schedule. Regular Strength & Conditioning can help to lower the risk of injury, increase bone density and improve your overall power, speed & strength which will only benefit you on race day!

STRETCHING

Regular stretching is a great way to help you recover in between your sessions. Stretching can help to reduce your risk of injury, improve your flexibility and range of motion and can help to ease post exercise aches & pains. Adding a Yoga or Pilates class to your weekly schedule can be a great way to ensure you stretch regularly.

INTRODUCTION TO NUTRITION

AIMS & OBJECTIVES

Training and nutrition are two key variables that interact to determine overall performance. In this way, nutrition strategies are arguably just as important as time spent in the running shoes and should be periodised to match the demands of training.

Through the manipulation of nutrients across the training weeks and around individual sessions, sport nutrition has roles to play in:

1. Fuelling and recovery
2. Promoting training adaptations
3. Facilitating changes in body composition

This section of the guide will cover the fundamentals of nutrition, hydration and supplements. Linking back to the specific run sessions and how to tailor your intake around these, providing a detailed nutrition strategy alongside the training programme at the end of the guide.

Like many topics, nutrition is very individual. Although the advice in this section will apply to the vast majority of people, do not feel you have to follow it if you have certain dietary requirements or preferences.



NUTRIENTS, HYDRATION, SUPPLEMENTS

CARBOHYDRATE

As one of the three dietary macronutrients, carbohydrate comprises of sugars, starches and fibre. They act as the primary energy source in the body and provide a source of stored energy in the form of liver and muscle glycogen.

When it comes to exercise, carbohydrate yields more energy per litre of oxygen consumed and is a more efficient fuel than fat, providing energy quickly to be used by the working muscles. As a result, carbohydrate can be thought of as the preferred fuel for performance.

In this way, interval sessions, pick-up runs and weekend long runs should all be undertaken with high carbohydrate availability. Whereas, easy or recovery runs can be fuelled using our own body fat stores. This periodised approach to carbohydrate intake, known as fuel for the work required, promotes performance in the hard sessions and training adaptations or desired changes in body composition in the easy runs.

PROTEIN

Proteins function in a number of different ways within the body, contractile proteins are responsible for making our muscles produce force, structural proteins provide structure to our muscles and the enzymatic proteins help provide the action molecules that can break down carbohydrate and fat to produce energy.

Protein is a central nutrient for the endurance athlete and daily protein intake should not be compromised. As it relates to run performance, protein supports both training adaptations and muscle repair. The stress of endurance exercise creates a metabolic signal to instruct our muscles to make new proteins involved in aerobic metabolism e.g. mitochondrial enzymes. Exercise also causes our muscle fibres to actually break down (referred to as protein degradation), a process that can of course be detrimental to training adaptation.

In the presence of adequate protein feeding, the combined effects of exercise and protein ingestion results in the formation of new proteins (referred to as protein synthesis). It is these repeated changes, in response to every single training session, that forms the basis of how our muscles adapt and recondition to the demands of training.

FAT

Fats play a role in both health and performance. A small amount of fat is essential in a balanced intake, providing essential fatty acids and aiding in the absorption of fat-soluble vitamins. Fat is also metabolised during exercise to contribute towards overall energy production. However, this is a relatively slow and inefficient process compared to carbohydrate, meaning that fat contribution to high-intensity running or racing is minimal.

HYDRATION

During exercise your body heats up. To keep body temperature at an optimal level, water is drawn from blood plasma and secreted from pores in the skin, as sweat. While this mechanism aids thermoregulation, excess fluid and electrolyte loss can have a negative impact on exercise performance.

As fluid losses increase and the water content of blood decreases, the body reduces the peripheral blood flow to the skin surface to preserve the blood supply to the muscles and vital organs. This reduces the body's capability to dissipate heat, and with a drop in blood volume, heart rate increases to meet the demands to sustain the same level of exercise. This ultimately leads to feelings of fatigue and premature exhaustion.

SUPPLEMENTS

Although there isn't a universal definition for supplements or a comprehensive list as such, individuals may use nutritional supplements for performance or health reasons. These include those providing energy and macronutrients (i.e. carbohydrate gels, recovery shakes, protein bars), micronutrients (i.e. multivitamins, fish oils, vitamin D3) or single compounds (i.e. caffeine, beta alanine, tart cherry).

MICRONUTRIENTS

While the three aforementioned macronutrients will contribute the majority of daily intake, micronutrients are required in comparatively small amounts. The term micronutrient describes a range of vitamins and minerals essential in the diet, as our body cannot produce these. Further, any deficiencies are likely to have negative consequences.

Micronutrients support day-to-day health, physiological functions, growth, maintenance and exercise associated wellness. Through eating a balanced diet rich in fruits and vegetables, including a range of colours throughout the day and not excluding food groups, individuals can meet their recommended daily allowance for micronutrient intake.

However, large volumes of endurance training, excluding individual nutrients or complete food groups, periods of energy restriction, allergies and dietary preferences can all result in micronutrient deficiencies. In these situations, supplementing with vitamins and minerals may be advised.

NUTRITION FOR PERFORMANCE

HYDRATION

The duration, intensity and goals of each training run will impact daily and session nutrition requirements. Carbohydrate can often change day-to-day, depending on the workload of that day, whereas daily protein intake should never be compromised.

EASY RUN

The duration and intensity of this run lends itself to a train-low approach, deliberately restricting carbohydrate feeding around the session. Easy runs can still include a protein feeding before, and caffeine can be used to lower the perception of effort. In this way, a pre-run WHEY20 and black coffee would be the supporting nutrition.

PICK-UP, THRESHOLD OR INTERVAL RUN

These key sessions in the training week are designed to be tough, requiring increased levels of effort and quality running. High-carbohydrate availability around the session is key, providing the fuel to perform. Additionally, the duration and intensity of some of these runs may call for GO Isotonic Energy Gel usage in session.

SUNDAY LONG RUN

It is important to have a nutrition plan going into your half-marathon and testing

this out on long run day is essential. This allows the body to adapt to the challenges of carbohydrate loading and taking on carbohydrate while running, training the gut to tolerate this. Everything from the day(s) leading into a half, pre-race breakfast, in-race fuelling and post-race recovery should be practiced. How this comes together in a race-day plan is in the following section and this plan should be mirrored for each Sunday long run in training.

NUTRITION FOR HALF-MARATHON DAY

Carbohydrate stored in the body, in the form of liver and muscle glycogen, is metabolised quickly for energy production and is the preferred fuel for high-intensity running. However, our body has limited capacity to store glycogen. To maintain performance throughout the half-marathon, it is important to maximise carbohydrate availability through pre-race and in-race nutrition strategies.

PRE-RACE

Carbohydrate intake can be increased in the 24-hours before race-day, often referred to as carbohydrate-loading, aim for 8-10 g of carbohydrate per kilo body mass per day, from simple carbohydrates. Food options can include pasta, bread, rice, cereals, potatoes, jelly sweets and fruit, with the additions of GO Energy Bars and Beta Fuel to conveniently meet overall needs. The goal of this is to load the muscles and liver with glycogen, while minimising fat and fibre on these days can prevent excess full or bloated feelings.

Breakfast then acts as a key meal on the day of your half-marathon. Travel, race-day stress and logistics can cause other distractions on race day, so knowing what you're going to eat and being comfortable with this is going to get you to the start line in the best shape. Your breakfast should reflect this and include normal breakfast foods providing 2-3 grams of carbohydrate per kilo body mass (i.e. 140-210 grams for a 70 kg runner), 1-3 hours before the start to allow for full digestion, minimising chances of gastrointestinal distress while running. High-carbohydrate sports drinks such as Beta Fuel can be used to meet both carbohydrate and hydration needs on race morning.





IN - RACE

Energy: Aim to take in 30-60 g of carbohydrate per hour of running. Fuelling should start in the first hour – if you wait until you are tired or hungry to start eating this is often too late. Alongside fluid intake, an hour of energy could be 2-3x GO Isotonic Energy Gels. GO Energy + Caffeine Gels can also be used in race to provide energy, while caffeine acts as a central stimulant, reducing the perception of effort and feelings of fatigue.

Hydration: Personal fluid requirements will vary, aim not to lose greater than 2-3% body mass as a result of sweat loss. This usually means consuming 500 ml of fluid per hour depending on sweat rate, temperature and humidity – drinking additional fluids as needed. Optimising hydration in race requires both fluids and electrolytes, taking little and often from each water station is advisable versus waiting until you are thirsty and having large volumes of fluid. GO Energy + Electrolyte gels can then be used to meet energy demands and deliver additional sodium.

RECOVERY

Half-marathon running depletes muscle glycogen stores, causes muscle damage and results in fluid loss. Your recovery nutrition should therefore focus on both carbohydrate and protein intake to replenish muscle glycogen and repair muscle damage. Fluid and electrolytes should be provided to aid rehydration. REGO Rapid Recovery Plus can be used within 30 minutes of finishing a race to meet these needs and kick-start the recovery process.

TRAINING PLANS

NUTRITION

Session	Example Session	Pre-Run Nutrition	In-Run Nutrition	Post-Run Recovery
Easy Run Withhold CHO before a morning run or after an evening run. Protein and caffeine can be used before the session to support muscle recovery and lower the perception of effort during the run.	8 km run	GO Energy + Caffeine Gel	n/a	Breakfast as normal or a low-CHO evening meal
Interval Session Ensure high CHO availability for the session. Caffeine pre-run can lower the perception of effort, meaning you can maintain high performance output through the intervals. Include both CHO and protein in the recovery window, to replenish muscle glycogen and repair muscle damage.	1.6 km warmup 5 x 3 mins - 2 mins rest 5 x 2 mins - 1min rest 5 x 1 min - 30 sec rest 1.6 km cool down	1 x GO Energy + Caffeine Gel 15-30 minutes before the session	1 x Hydro tablet in 500 ml of water to sip as required	1x REGO Rapid Recovery Plus
Pick-Up Run Ensure high CHO availability for the session, through pre-run and in-run nutrition choices. Include both CHO and protein in the recovery window, to replenish muscle glycogen and repair muscle damage.	3.2 km easy 3.1 km @ HMP 1.6 km @ 10KP 1.6 km easy	1 x GO Energy Bar or banana 60-90 minutes before the session	1x GO Isotonic Energy Gel after the first 30-45 minutes, to fuel the latter stages of the run when fatigue is likely to be highest	1x REGO Rapid Recovery Plus
Long Run CHO will be the preferred fuel for performance on half-marathon day. Ensure high CHO availability for the long run, through pre-run and in-run nutrition choices. Hydration needs will be very individual, with the goal of preventing 2-3 % body mass loss through sweat loss.	19.3 km run	High CHO breakfast 1-3 hours pre-session	30-60 grams of carbohydrate per hour 2-3 x GO Isotonic Energy Gels per hour	1x REGO Rapid Recovery Plus
		Key	CHO = carbohydrate	

HALF MARATHON PLAN: 12 WEEKS

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 1	8 km Easy Run	Rest Day OR Active Recovery	Intervals WU - 2 km Easy 1.5 km @ HM Pace 5 Minute Easy Repeat x 2 CD - 2 km Easy	Strength & Conditioning	Rest Day	8 km Easy Run + 4 x 30 Second Strides	10 km Easy Run
Week 2	8 km Easy Run	Rest Day OR Active Recovery	Intervals WU - 3 km Easy 10 x 1 Minute on/1 Minute off Aim for the 1 minute efforts to be approx 15 seconds quicker than your 5k pace, walk/light jog during the 1 minute off. CD - 3 km Easy	Strength & Conditioning	Rest Day	Progression Run 2 km Easy 2 km @ HM Pace 2 km @ 10k Pace 2 km Easy	13 km Easy Run
Week 3	8 km Easy Run	Rest Day OR Active Recovery	Intervals WU - 2 km Easy 2 km @ HM Pace 5 Minute Easy Repeat x 2 CD - 2 km Easy	Strength & Conditioning	Rest Day	Progression Run 2 km Easy 3 km @ HM Pace 3 km @ 10k Pace 2 km Easy	13 km Easy Run
Week 4	8 km Easy Run	Rest Day OR Active Recovery	Intervals WU - 3 km Easy 10 x 1 Minute on/1 Minute off Aim for the 1 minute efforts to be approx 15 seconds quicker than your 5k pace, walk/light jog during the 1 minute off. CD - 3 km Easy	Strength & Conditioning	Rest Day	10k Tempo Run 2 km Easy 5 km @ 10k Pace 2 km Easy	16 km easy run
Week 5	8 km Easy Run	Rest Day OR Active Recovery	Hill Training WU - 3 km Easy 10 x 30 second hill effort. Jog/ Walk recovery back down CD - 3 km Easy	Strength & Conditioning	Rest Day	8 km Easy Run + 4 x 30 Second Strides	5 km Easy, 5 km HM Pace, 5 km Easy
Week 6	9 km Easy Run	Rest Day OR Active Recovery	Intervals WU - 3 km Easy 3 km @ HM pace 5 Minute Easy Running Repeat x 3 CD - 3 km Easy	Strength & Conditioning	Rest Day	10k Tempo Run 2 km Easy 5 km @ 10k Pace 2 km Easy	16 km Easy Run

Continued on next page...

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 7	8 km Easy Run	Rest Day OR Active Recovery	<p>Intervals</p> <p>WU - 3 km Easy</p> <p>12 x 1 Minute on/1 Minute off</p> <p>Aim for the 1 minute efforts to be approx 15 seconds quicker than your 5k pace, walk/light jog during the 1 minute off.</p> <p>CD - 3 km Easy</p>	Strength & Conditioning	Rest Day	8 km Easy Run + 4 x 30 Second Strides	5 km Easy, 8 km HM Pace, 5 km Easy
Week 8	9 km Easy Run	Rest Day OR Active Recovery	<p>Intervals</p> <p>WU - 3 km Easy</p> <p>3 km @ HM pace</p> <p>5 Minute Easy Running</p> <p>Repeat x 3</p> <p>CD - 3 km Easy</p>	Strength & Conditioning	Rest Day	<p>Progression Run</p> <p>10 Min Easy</p> <p>12 Min @ HM Pace</p> <p>12 Min @ 10k Pace</p> <p>10 Min Easy</p>	18 km Easy Run
Week 9	9 km Easy Run	Rest Day OR Active Recovery	<p>Hill Training</p> <p>WU - 3 km Easy</p> <p>12 x 30 second hill effort</p> <p>Jog/Walk recovery back down</p> <p>CD - 3 km Easy</p>	Strength & Conditioning	Rest Day	8 km Easy Run + 4 x 30 Second Strides	14 km Easy Run + 5 km @ HM Pace
Week 10	9 km Easy Run	Rest Day OR Active Recovery	<p>Intervals</p> <p>WU - 2 km Easy</p> <p>3 km @ HM Pace</p> <p>5 Minute Easy</p> <p>Repeat x 2</p> <p>CD - 2 km Easy</p>	Strength & Conditioning	Rest Day	8 km Easy Run + 4 x 30 Second Strides	5 km Easy, 5 km HM Pace, 5 km Easy
Week 11	9 km Easy Run	Rest Day OR Active Recovery	<p>Intervals</p> <p>WU - 3 km Easy</p> <p>12 x 1 Minute on/1 Minute off</p> <p>Aim for the 1 minute efforts to be approx 15 seconds quicker than your 5k pace, walk/light jog during the 1 minute off.</p> <p>CD - 3 km Easy</p>	Strength & Conditioning	Rest Day	<p>HM Tempo Run</p> <p>2 km Easy</p> <p>5 km @ HM Pace</p> <p>2 km Easy</p>	13 km Easy Run
Week 12	8 km Easy Run	Rest Day	<p>2. km Easy Running</p> <p>3 km @ HM Pace</p> <p>2 km Easy Running</p>	Strength & Conditioning	Rest Day	3 km Easy Run + 4 x 30 Second Strides	RACE DAY

KEY NOTES

- Easy runs are based on feel - should be minimal effort.
- HM Pace - Half Marathon Pace.
- Long Runs are the perfect time to practice race day fuelling, again the majority of these are at easy effort.
- Interval sessions ideally to be completed on the track or road.



ACTIVE RECOVERY IDEAS

Whilst rest days are crucial for any training plan, active recovery can also help to speed up the recovery process & also gives you the chance to include other methods of training in your plan, which can help to keep you motivated throughout the 12 weeks. It is important though that these sessions are low impact & working at a low effort. Here are some ideas you can do as part of your active recovery:

- 30 Minute Swim
- 30 Minute Easy Cycle
- Yoga
- Pilates

Goal Time	Mins per KM
2 Hours 30 Minutes	7:08
2 Hours 15 Minutes	6:25
2 Hours	5:43
1 Hour 45 Minutes	5.00

FEATURED PRODUCTS

<p>GO Isotonic Energy Gel</p> <ul style="list-style-type: none"> • 22 grams of carbohydrate in an isotonic gel • Convenient format to fuel run performance • Used during longer runs, practicing race-day nutrition strategies and on race-day to fuel the half-marathon 	
<p>GO Energy + Caffeine Gel</p> <ul style="list-style-type: none"> • 22 grams of carbohydrate and either 75 or 150 mg caffeine • Carbohydrate provides energy for performance and caffeine acts as a central stimulant • Used before an interval session and during the half-marathon 	
<p>Hydro Tablets</p> <ul style="list-style-type: none"> • Virtually calorie free effervescent tablet with key electrolytes • 360 mg sodium to promote hydration • Meets day-to-day and in-session hydration needs 	
<p>Beta Fuel</p> <ul style="list-style-type: none"> • High carbohydrate sports drink • Providing 80 grams of carbohydrate in 500 ml water, while maintaining an isotonic profile • Used as part of a carbohydrate loading strategy the day before a race and throughout the morning of the half to meet energy and hydration needs 	
<p>GO Energy Bar</p> <ul style="list-style-type: none"> • 26 grams of carbohydrate in a convenient 40-gram bar • Natural base of oats, fruit juice concentrates and dried fruits • Used 1-2 hours before a pick-up or tempo run to ensure high carbohydrate availability for the session 	
<p>REGO Rapid Recovery Plus</p> <ul style="list-style-type: none"> • Complete recovery product with carbohydrate, protein, electrolytes, vitamins and minerals • Used after long runs, high-intensity sessions and racing 	

AUTHORS

The training advice and 12 Week plan has been created by Jordan Foster; Science in Sport Ambassador, Endurance Athlete & Head Coach of PMGCoaching.

Jordan is a decorated marathon & ultra-marathon runner, with her greatest achievements being a PB of 2.58.37 at the Swiss City Marathon in 2018 and winning her first multi-stage 250km ultra-marathon in the Wadi Rum desert in 2019.

Jordan is also the head coach and owner of PMGCoaching, providing online running training for all levels of athletes, whether they are looking to run their first 5k or get a marathon PB!

You can find out more about Jordan & PMGCoaching on Instagram @projectmarathongirl & @pmgcoaching or head to www.projectmarathongirl.com.

The nutrition section and supplementary nutrition plan in the guide has been created by Ben Samuels.

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Jordan Foster