

BLACKMORES®



Blackmores Sydney Marathon

NUTRITION GUIDE



Blackmores Sydney Marathon Nutrition Guide

Welcome to the Blackmores Sydney Marathon nutrition guide.

This guide has been created by sports nutritionist Kira Sutherland to assist you in the weeks leading up to your marathon, including race day.

Getting your nutrition and hydration right is vital to ensuring you maximise your efforts during training and have a safe journey. This information can be used by anyone participating in a marathon, from first timers to regular marathoners and professionals.

Look out for our four-part running nutrition video series at bsrf.com.au where Kira will show you what fuel you need, and when, to help take your run further.

Well Beings Keep Running!

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General Sports Nutrition for training weeks

What to eat **before** training

Training session of 1 hour or less

- Eating before training depends on the length of the session.
- Training of less than 1 hour only needs a small snack such as: a piece of toast, a banana, a few dates or a small glass of juice. Alternatively, training on an empty stomach first thing in the morning is okay as long as your body is comfortable with it.
- If training in the afternoon, a small snack 1 hour before training will help with the session. Snacks considerations: muesli bars, fruit, toast with avocado, or a small handful of raw seeds, nuts and dried fruit.

Training of 1.5 hours or longer

- If training first thing in the morning, a small carbohydrate snack is great. If it feels okay you can train without eating first because you can fuel whilst training instead.
- Training longer than 1.5 hours should be fuelled by foods consumed during training.
- Athletes need to consume between 30-60 grams of carbohydrate (CHO) per hour for longer sessions. This will also give you a chance to practice consuming foods, carbohydrate gels or fluids (water and sports drink) which you will need to do on race day.
- As highlighted above, it is vital to practice your race nutrition during training to make sure your chosen plan agrees with your body.
- On a two hour run you could try consuming one gel at about the one hour mark with adequate water, or have a few hundred millilitres of a sports drink or a banana. Always consume food or gels with an adequate amount of water (approximately 250-300ml).
- NEVER consume food or gels with sports drink as this makes the carbohydrate solution in your stomach very slow to digest which means you are getting very little fuel or fluid into your system.
- As race day gets closer it is good to practice your exact race nutrition to make sure you have the right plan and that your digestive system can handle it.

Post training eating – this is THE MOST VITAL TIME TO EAT!

Carbohydrates

- After all training sessions it is important to have a meal or snack as soon as possible to help your body replenish its carbohydrate (glycogen) stores.
- It is optimum to eat within a 30-45 minutes window post training in a ratio of 4 parts carbohydrate to 1 part protein. This 4:1 ratio is optimum for muscle recovery and will help to replenish your glycogen stores for your next training session. Some people may prefer a 3:1 ratio and that's okay too, as long as you are consuming adequate carbohydrates.
- Consume approximately 30 -60 grams of carbohydrate and 10 to 20 grams of protein at this time depending on if you are having a meal or a snack.
- Carbohydrates that are great to eat post training include the following: fruit, vegetables, bread, rice, pasta, oats, cereals and other grains.
- This is not the time of day to be 'carbohydrate phobic'. Your body needs carbohydrates to replace the glycogen you have used during training. It is actually the best time of day to be eating them.
- Protein choices can be from all sources such as: meat, fish, chicken, eggs, dairy, seeds and nuts, beans, soy and protein powders can be useful at this time too.
- Please see attached tables for carbohydrate and protein amounts. Alternatively you can search the web for almost any food to see what it contains. Nutritiondata.self.com is a very useful website.

What does **30 grams** of carbohydrate look like? (approximately)

Bread	2 slices
Bread roll or pita	1 roll
Crumpet	1.5
Weet-Bix	3
Cereal (avg)	½ cup (read label)
Rice cakes	4
Yoghurt – Greek	300gm
Milk	600ml
Sustagen sport	2 scoops
Choc muesli bar	2
Pancakes	2 average
Fruit juice	300ml
Gels	20-30grams (depends on brand)
Jam	2 tablespoons
Fruit salad	1 cup
Dried figs	4 medium
Banana	1 med/ large
Sultanas / raisins	1/3 cup (45 grams)
Dates	6 small
Dates	3 (large / fresh)
Kiwi	3
Pineapple	1.5 cups
Rockmelon	2.2 cups
White potato (no skin)	180-200 grams
Carrots	300 grams
Pumpkin	500 grams

Pasta – cooked	¾ cup
Rice - cooked	½ cup
Hot cross bun	1 average
Untoasted muesli	½ cup
Cooked oats	1 cup
Sports bars	Read label
Fruit yoghurt	200gm
Honey	2 Tablespoons
Up and Go (regular)	350ml / 1 pack
Muesli bar	2 (read label)
Crisp bread	6 biscuits
Sports drink (IsoWhey Sports Electrolyte Formula)	3 scoops (approximately)
GU (gel)	25 grams carb
Jelly beans	10 (read label)
Orange/apple/pear	2 medium
Grapes	1 cup (12-14)
Dried apricots	10 halves
Watermelon	3 cups
Blueberries	1.5 cups
Strawberries	3 cups
Raspberries	2 cups
Mango	1 medium
Nectarine	2
Sweet potato	150 grams
Beetroot	300 grams
Lettuce	1 kilo (not a good source)

Protein

- Protein intake between 10 to 20 grams in the recovery meal helps with tissue repair and creation of new proteins including muscle.
- Good sources of protein include: meats, fish, dairy, legumes, eggs and protein powders.
- Protein intake for a person training for a marathon should be between 1.2-1.5 grams/kg (of body weight per) day. Thus a 60 kilogram athlete aiming for 1.4 grams per kilo of body weight would be aiming for 84 grams of protein per day in total.
- Be aware these are pure protein amounts and you need to read food labels to see how much protein they contain. You may also refer to the list provided. For example; 120 grams of chicken contains approximately 20-25 grams of pure protein.

To look up foods not included in these lists go to nutritiondata.self.com or other similar websites.



Protein amounts in food (approximately)

FOOD	PROTEIN (grams)
Protein powders	Read labels
Anchovies (5) 20g	5.8
Chicken breast 100g cooked	20-25
Lean Beef or Lamb 120grams	25
Chicken sausage 100g	18
Fish 120g	20
Snapper / Swordfish 85g	21
Salmon 100g	25
Oysters 50g (raw)	6
Tuna 100g (canned)	25
1 egg 50g (raw)	5-6
2 egg whites 70 g (raw)	7-8
Cottage cheese 100g	15-18
Ricotta cheese (246 g)	28
Yoghurt (plain-lowfat) 1/c	11.9
Yoghurt (fruit-lowfat) 1/c	13
Milk 250ml lowfat 2%	11
Soymilk 250ml	7
Feta cheese 28g	4
Feta reduced fat 28g	8
Mozzarella 28g	5.5
Mozzarella (skim) 28g	6.9
Cheese reduced fat 21g	4
Edam cheese 30g	8

FOOD	PROTEIN (grams)
Haloumi cheese 30g	6
Tofu 100 grams	12
Almonds 33g / Nuts	6.6
Cashews 25g (raw)	4
Sunflower seeds 33g	7.6
Baked beans 220g	20
Kidney beans 175g	6.7
Nutella spread 1 Tbs	1
Peanut butter 1 Tbs	5-7
Pine Nuts 33 g	4.3
Sports bars	Read the label
Soy and linseed bread 2 slices	11.5
Breads 2 slices	2-6
Quinoa 85g (dry)	12
Brown rice 1/2 cup cooked	2.3
White rice 1/2 cup cooked	2.1
French bread 100g	9
Potato gnocchi 100g	4
Pasta 100g	12
Bagel 71g	7.1
Muesli (not toasted) 100g	11
Muesli (toasted) 100g	9
Rolled oats 100g	11-14
Wheat bran 25g	3-4

Fluids

- The body needs approximately 600 ml - 1 litre for every hour of exercise, depending on your sweat rate, the air temperature, humidity, gender, body size etc. You must add this on top of your normal daily fluid needs.
- Rehydration of fluids and electrolytes lost in training should also be a focus. Aim to consume 150% of fluids lost from training over the next 2-4 hours. Having fluids and foods containing sodium will help to retain fluids consumed.

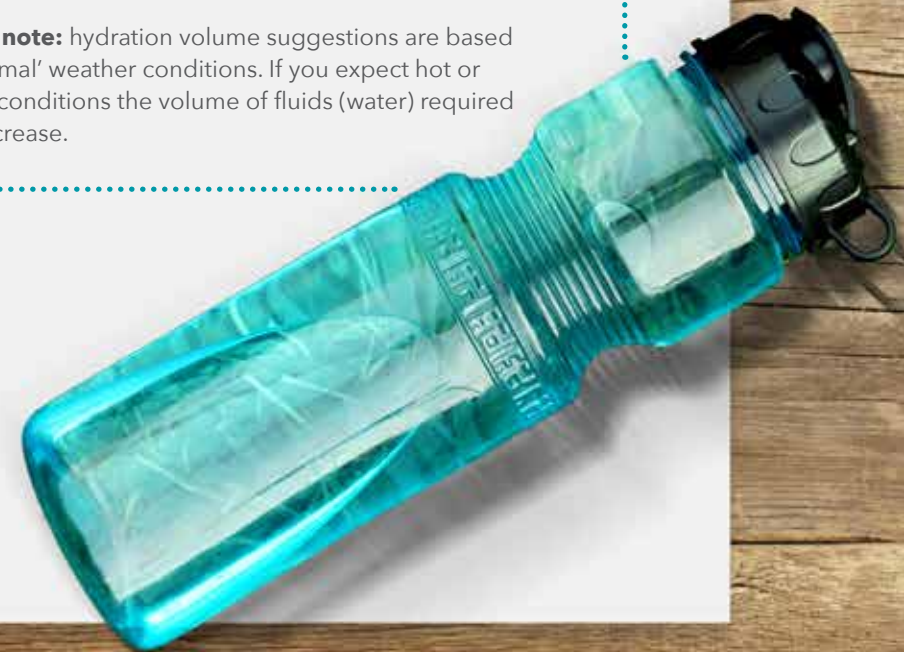
Calculate your approximate sweat rate

- It is best to calculate your own sweat rate rather than guessing your loss.
- Weigh yourself pre and post a 1 hour run (at your approximate race pace) to see how much weight you have lost. A 1 kilogram loss is equal to about 1 litre of fluid loss.
- It is good to test this seasonally, as it can vary by quite a lot depending on the outside temperature. Australia can be very different between seasons so be sure to know your rates for 20-30 degrees, as it can vary greatly on race day.
- Once you know your loss you should aim to replace up to the amount lost, but never over this amount. You do not need to replace the whole amount while training as you can make up for a lot of the fluid loss throughout your day.
- It is also dangerous to over consume fluids, so be sure to figure out what your sweat rates are.

Dehydration

- In sports, dehydration can lead to increased body temperature which will shunt blood to the skin for cooling and leave the muscles and the brain short of blood flow. Dehydration affects mental functioning (concentration and skill) as well as increasing the risk of gastrointestinal discomfort and reducing stomach emptying rates.
- It is wise to trial the available sports drink and gel well before race day as to be aware of tolerance and taste. Consuming fluids during running sessions is a great way to 'train' your body to intake while running. Practice is vital!

Please note: hydration volume suggestions are based on 'normal' weather conditions. If you expect hot or humid conditions the volume of fluids (water) required may increase.

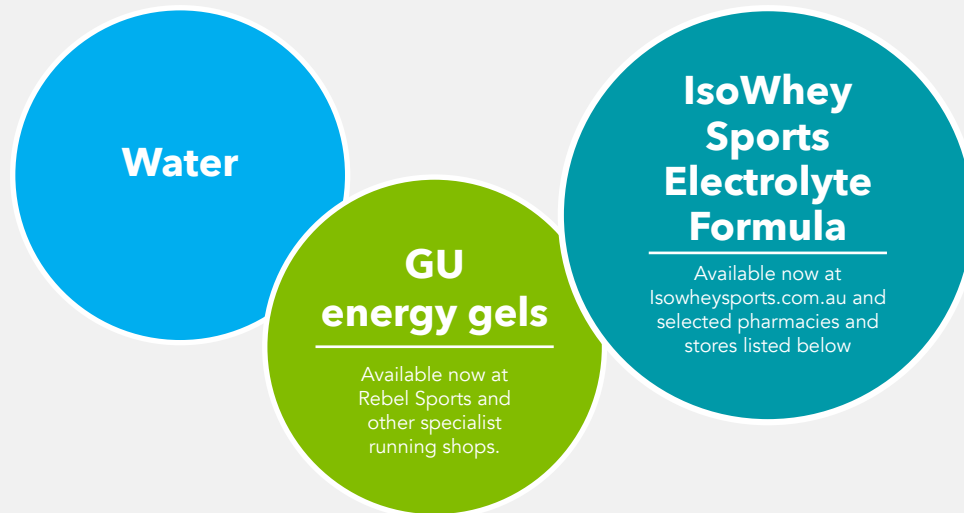


Sports drinks and carbohydrate gels

Hydration for training

Please be sure you familiarise yourself with the Blackmores Sydney Marathon course plans so you can note when and where to find hydration and nutrition.

Nutrients on Blackmores Sydney Marathon course include;



GU - the carbohydrate gel on course contains 25 grams of carbohydrate per packet.

IsoWhey Sports Electrolyte Formula - the sports drink on course contains 3.6 grams of carbohydrate per 100ml. Two scoops containing 21.5 grams of carbohydrate is mixed with 600ml of water.

IsoWhey Sports Electrolyte Formula available at - isowheysports.com.au and selected stores and pharmacies, Giant Chemist (Gold Coast) Go Vita, Great Earth (Victoria), Mr Vitamins, Pharmacy 4 Less, Performance Sports, Vitamin King. Pharmacy Express Mt Annan, Harrington Park Pharmacy, Bowral Guardian, The Heritage Pharmacy.

- Sports drinks generally supply 30-60 grams of carbohydrate per hour where 600ml - 1 litre of sports drink is consumed depending on the strength of the drink.
- IsoWhey Sports Electrolyte Formula supplies 3.6 grams of carbohydrate per 100ml (when 2 scoops is mixed with 600ml of water). Thus 300ml of drink will contain 10.8 grams of carbohydrate.
- Sports gels such as GU supply 25 grams of concentrated carbohydrate and adequate water must be consumed when ingesting them (250-300ml).
- During prolonged exercise (1.5 hour plus) you should consider using a sports drink. This will supply the water, electrolytes and carbohydrates that the body needs to keep exercising. Alternatively you could use water and a carbohydrate gel.
- You could also use solid foods if this is to your liking and your stomachs tolerance. Foods that are easily digested during racing and training include; bananas, sultanas, dates, honey, white bread or even jelly snakes.
- You must still aim for the right amount of carbohydrate per hour when consuming solid foods and always trial foods in training before using on race day.

Race week nutrition

The focus on nutrition in the week leading up to a marathon is of great importance so as to arrive on the start line with optimal hydration and carbohydrate (glycogen) stores.

Carbohydrate intake / loading

- Carbohydrate (CHO) intake should be slowly increased during the week leading up to a marathon. You want to get your body ready for your long race and it is important to get your stored carbohydrates (glycogen) levels up.
- The old style of carbohydrate loading is not used any longer and a more simple approach can be applied.
- Take your carbohydrate intake to 50% of your daily calories for days 7, 6 and 5 before the race. For days 3, 2 and 1 pre-race take your carbohydrates up to 70% of total daily intake.
- When you increase carbohydrates in the diet you automatically need to decrease your protein and fat so as not to be over eating.
- Many people prefer to decrease fibre intake at this time as well to limit the chances of gastrointestinal upset during the race. Thus you eat more white rice and pasta than whole grains etc, just for the last day or two. This change in your eating will increase your bodies stores of glycogen which will give you added fuel to use on race day.
- CHO loading is not about over eating it is about increasing CHO for optimum liver and muscle glycogen stores for race day.
- Great forms of CHO at this time include: high GI breads and cereals, rice, pasta, flavoured milk, fruit and fruit juices, sports drinks, smoothies, honey, jam, meal replacement drinks and sports bars.
- Perfect healthy eating is not the main goal at this time and can be focused on after the race. Learn to read labels and obtain a CHO and calorie counting book if you are unsure.
- For every gram of glycogen the body will hold 2.5 to 3 grams of water and thus an athlete can experience weight gain of up to 2 kilos when well CHO loaded. Your body will use this extra water during the race too!
- CHO loading has been shown to enhance endurance and postpone fatigue in endurance exercise at a steady state. However, it does not help increase ones speed.
- This is not the time to be dieting or calorie restricting as it will leave you short of fuel for race day.

Race morning nutrition

The morning of a race can be a nervous time. It is best to consume tried and tested foods and fluids and to never eat or drink anything new on race day no matter how much someone talks up a product.

Foods



- The goal is to replenish liver glycogen stores from the overnight fasting state and timing of your pre-race meal will depend on the start time of your event. The Blackmores Sydney Marathon starts at 7:15 am so one should aim to eat 2-3 hours before race start if possible.
- Don't sacrifice sleep for an earlier, larger meal as eating CHO during the race will compensate for a smaller meal eaten here. A light meal of mainly carbohydrate is best at this time.
- Aim for 1-2 grams of carbohydrate per kilogram of body weight. Thus if you weigh 70 kilos have a light meal of approximately 70 to 140 grams of carb. Eat at the smaller end of this scale if you only have a short window before the race; use the larger end of the scale if you have a few hours.
- The meal/snack should be high CHO with low fibre, fat and protein to decrease the chance of gastrointestinal upset. Meal replacement drinks, sports bars and sports drinks can be useful when nerves or time are a factor.
- Great food choices can be; white bread, crumpets, honey, jam, bananas and smoothies. Often whatever you eat before a long run is the best thing to eat on race morning as well, as long as it's not too high in fibre.
- Be aware, oats are very healthy but some people find they contain too much fibre for them on 'race morning' and result in gastrointestinal issues during the race.

Fluids



- It is important to start the race with adequate fluid levels. Hopefully this has been a focus in the few days before the race, making sure that you are not starting the race dehydrated.
- Do not go overboard consuming fluids, too much can be as dangerous as not enough. In the few days before race day consume your normal fluid amounts; you do not need to 'load up'.
- Race morning you need around 400-500 ml with the pre-race meal and a further 300-400 mls 15 to 20 minutes before race start.
- It is okay to consume sports drink, juice and other carbohydrate containing fluids with the pre-race meal but DO NOT sip on sports drink in the hour before the race. This would lead to a blood sugar high and then a rebound low. Sip water in the hour before the race!
- Many athletes consume a carbohydrate gel with 250-300ml water or 300-400ml of sports drink 15 minutes before race start so that they have a 'top up' of carbohydrate in their blood when the race gets underway. Consuming carbohydrate so close to the race should not cause issues with blood sugars as you will be underway in the race before this makes it through your digestive system.

Fuelling During the Event

Race day nutrition should be calculated and practiced well in advance of race day to determine amounts of carbohydrate (CHO), types of CHO and fluids that an athlete needs and can tolerate per hour.

- The recommended amount of CHO to consume per hour in a marathon is between 30-60 grams. This amount is known to reduce fatigue, and to be rapidly absorbed.
- Fluid should be consumed at a rate as close as possible to ones sweat rate but never over. If this amount is not possible an athlete should consume as much as is tolerable to their digestive system while running. Most athletes will be fine with between 600-800ml per hour.
- You should have calculated your sweat rate and be comfortable knowing how much you plan to consume, making adjustments if the race day is unusually cold or hot in ambient temperature.
- Start consuming your fluids early and on a regular basis to limit dehydration and to assist gastric emptying rates by keeping stomach volume high.
- Over consuming fluids (weight gain during an event) can lead to hyponatraemia (low blood sodium) which is a dangerous state to your performance and your health.
- Be aware if consuming food or gels to consume them with a good quantity of water. Consuming them with sports drink will greatly inhibit gastric emptying and decrease their delivery to your working muscles.

Example race plan

- The intake of carbohydrate per hour should be between 30-60 grams.
- If you are choosing to consume 50 grams an hour this means you will need to consume two gels per hour (GU = 25 grams of carb) plus adequate water.
- Alternatively if you are wanting to consume sports drink (IsoWhey Sports Electrolyte Formula) you will need to consume approximately 600ml of sports drink (= 21.5 grams carbohydrate) plus one gel will equate to 46.5 grams per hour.
- IsoWhey Sports Electrolyte Formula contains 3.6 grams of carbohydrate per 100ml of fluid.
- If choosing to consume both sports drink and gels please remember not to have them at the same time. You must alternate their intake so as not to inhibit your gastric emptying rate. Always consume gels with water!
- Ultimately your race nutrition needs to suit you and your digestive system. Some athletes will feel great at only 30 grams per hour while others will need 60 grams of carbohydrate.
- The slower you are going the less fuel you will be burning and the less you will be sweating. Make sure to adjust your intake accordingly.

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I hope you have a fantastic race and wonderful time training. The more focused you are with your training nutrition the more energy you will have, the better you will recover day to day and the more likely you will be to arrive on race day fuelled and ready for a great marathon.

Getting your race nutrition right can make a huge difference for having a fun and enjoyable race! Please remember to practice your fuelling/ fluid needs so that come race day it will be second nature to you!

Best of wishes for a great race!

Sincerely,

Kira Sutherland

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Kira Sutherland is a Nutritionist & Naturopath that specialises in Sports Nutrition. With over 20 years of clinical experience Kira is passionate about working with athletes of all levels. She is the previous Head of Nutrition Department at Nature Care College in Sydney and has lectured in Natural Medicine for well over 15 years both within Australia and overseas. As a health educator, Kira has worked / consulted with an array of clients including: private colleges, health conferences, corporates, sports teams, individual athletes and the media. In her spare time Kira is undertaking her Masters of Sports Nutrition, competes in Ironman triathlon and practices what she preaches.

IsoWhey Sports Electrolyte Formula Stockists
isowheysports.com.au

Giant Chemist (Gold Coast) Go Vita, Great Earth (Victoria), Mr Vitamins, Pharmacy 4 Less, Performance Sports, Vitamin King. Pharmacy Express Mt Annan, Harrington Park Pharmacy, Bowral Guardian, The Heritage Pharmacy
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