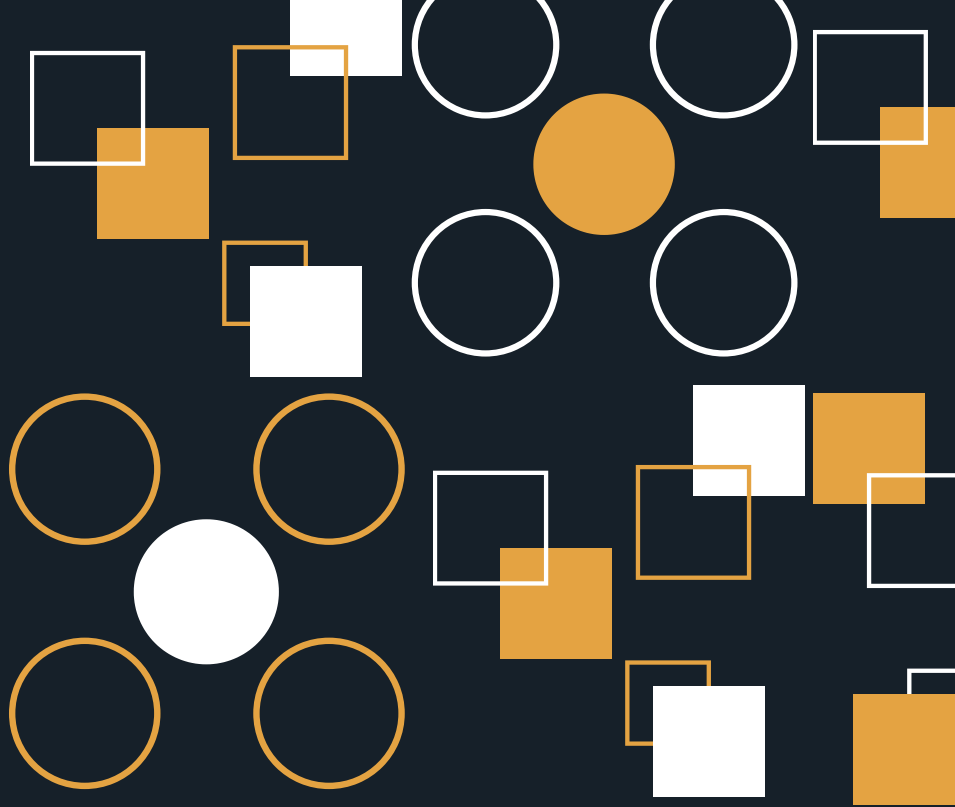




NUTRITION

REPORT



HEALTH UNDERPINS PERFORMANCE

Firstly, before giving specific advice based on your nutritional analysis, I'd like to go over some key basic principles of nutrition for endurance sport.

A healthy athlete can train consistently without losing time to illness and injury – consistency of training is by far the most important factor in endurance sport performance. A simple way of remembering what a healthy diet consists of is summarised in just seven words

REAL FOOD, MOSTLY PLANTS, NOT TOO MUCH.

Let's go through these in turn:

REAL FOOD



Much of our food today is highly processed – this means the original food has been broken down into its constituent parts, refined and re-constructed, often involving the addition of many chemicals, as well as salt and sugar. Apart from some of these chemicals being harmful for us, this changes the way that food interacts with the body.

Food in its original form still has its 'food matrix' intact – generally this takes longer to digest and is healthier for the body. For example, eating full-fat yoghurt or cheese (food matrix intact) results in much lower rises in blood lipids (fats) than butter with the same amount of fat (food matrix disrupted). Similarly eating porridge made with course-ground oats will result in a lower rise in blood sugar levels than the same amount of finely ground (processed) oats. Regular spikes in blood sugar can lead to inflammation and have negative health consequences.



So whenever possible, seek foods that are still in their original form, such as cooking your own meals from basic ingredients, or snacking on fruit and nuts rather than chocolates and cakes – keep these as an occasional treat, rather than a regular part of your diet.

MOSTLY PLANTS

GF

There is no need to go vegan (unless you want to of course) however the bulk of your diet should be made up of plant-based foods – fruit, vegetables, nuts, grains, pulses, seeds, herbs, etc. Plants are very nutrient-dense and can contain vitamins, minerals, fibre, protein, healthy fats and carbohydrates. They also contain polyphenols which are biologically active molecules that, along with fibre, seem to feed our gut bacteria (pre-biotic) and improve our microbiome. A healthy microbiome can positively influence our immune system, reduce inflammation and enhance mood, as well as helping us to gain more nutrients from the food we eat. Polyphenols are also antioxidants, which help to reduce the oxidative stress caused by training.



The more variety in type and colour of plants you can eat the better – attempting to ‘eat the rainbow’ is a good challenge. An ideal target to aim for might be to attempt to eat 30 different plants per week (remember this includes herbs and spices!). Fruit is healthy but can be quite high in sugar, so having a couple of portions a day is good, but try to get the rest from other plant sources. Research shows that those who eat more plants tend to live longer and have a lower overall risk of disease.

NOT TOO MUCH

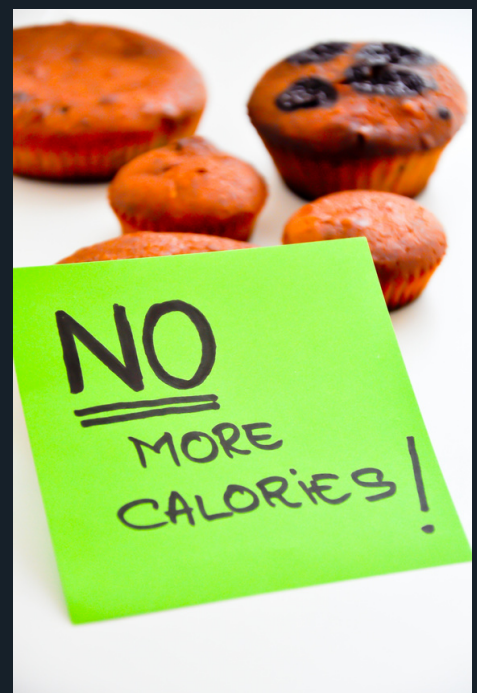
GF

The rising levels of obesity in the population is a clear sign that people are generally struggling with this one! Sticking to the first two points will really help with this – ultra-processed foods have been chemically engineered to be extremely tasty and to contain a combination of fat and sugar that we have not evolved to be able to cope with, meaning we overeat.

If the bulk of your diet is plant-based food in its original food matrix then it will not be as energy dense as ultra-processed food and will take longer to break down and digest meaning it is likely to keep you full for longer. It will also not cause spikes in blood glucose and insulin, which then result in a crash and cravings for sugary food. Keeping your blood sugars more stable throughout the day tends to result in consuming fewer total calories, as well as reducing inflammation.

Protein generally keeps you feeling full for longer, and the body uses more energy in the digestion of protein, so ensuring your meals contain protein can prevent overeating.

Avoiding sugary drinks is another key point here – it is very easy to consume a few hundred calories in a drink and yet still be hungry and eat your usual diet – over time this can add up to significant weight gain.





Remember, your body has evolved to be able to self-regulate its energy intake and expenditure to keep within a normal range of body fat levels, and is generally very good at doing this, as long as you do not confuse it by feeding it food that it has not evolved to deal with. If the majority of your diet is real food, mainly plants, you will find that you do not need to think too much about quantities, and that your hunger and satiety systems work just fine.

There is nothing wrong with enjoying treat meals and snacks – eating is one of life's great pleasures, but keep it in moderation. I find trying to stick to the rules on weekdays then allowing some treats on a weekend can work well. Chocolate is now something I savour and enjoy on a weekend, rather than something I eat every day without even noticing it as I used to.





TRAINING V COMPETING

Nutrition for training is different to nutrition for racing

Much of the advice that is written about sports nutrition is aimed at maximising performance during a race, but this does not apply to every training session. You need to remember what it is that you are trying to do when you train – you are deliberately imposing stress on the body in order to create signals that will result in the body adapting. Doing this consistently over time will result in improvements in performance (hopefully!).



Sometimes, not optimising your nutrition for performance can result in beneficial signalling that can enhance the training effect. For example, doing low intensity sessions with low carbohydrate availability (training low) can actually increase the training adaptations from that session. So sometimes, having a gel, carb drink or bar can actually reduce the benefits you get from a session.



TRAINING V COMPETING

Using race nutrition strategies for every training session can also result in you consuming a lot of calories during your sessions, which might actually result in you gaining body fat even though you are training hard.

Elite athletes tend to now follow a 'periodized nutrition' strategy, often labelled 'fuelling for the work required'. This means you think each day about what sessions you are doing, and fuel accordingly. This can be quite complex, but here are a few general suggestions:

- Sessions of up to 60 minutes do not need any specific sports nutrition, other than maybe fluid (water/electrolyte drink).
- Low intensity sessions (Zone 1 & 2) of 2-3 hours can also be fuelled off a normal diet with just fluid during the session.
- If you have a high intensity session planned, make sure to consume sufficient carbohydrates (1.2 g/kg/hr) beforehand to top up glycogen stores.
- Hard sessions lasting longer than 60 mins will need some carbohydrate consumed during the session (60-90g/hr) – these can be a good opportunity to practice your race-day fuelling strategy.
- Low intensity early morning sessions (Z1 & Z2) can be performed without breakfast to upregulate fat oxidation pathways (black coffee beforehand is ok).
- Moderate-high intensity early morning sessions (Z3+) should be preceded by a carbohydrate rich breakfast to top up glycogen stores.
- On hard training days (particularly running) or days with resistance training, ensure sufficient protein consumption (1.4 g/kg) ideally evenly spread across the day.
- Consume carbs (1.2 g/kg/hr) after training if you have another high intensity session that day/the following morning. If not, delaying carb intake for a few hours can enhance the metabolic signalling and enhance adaptation.



ATHLETE PLATES

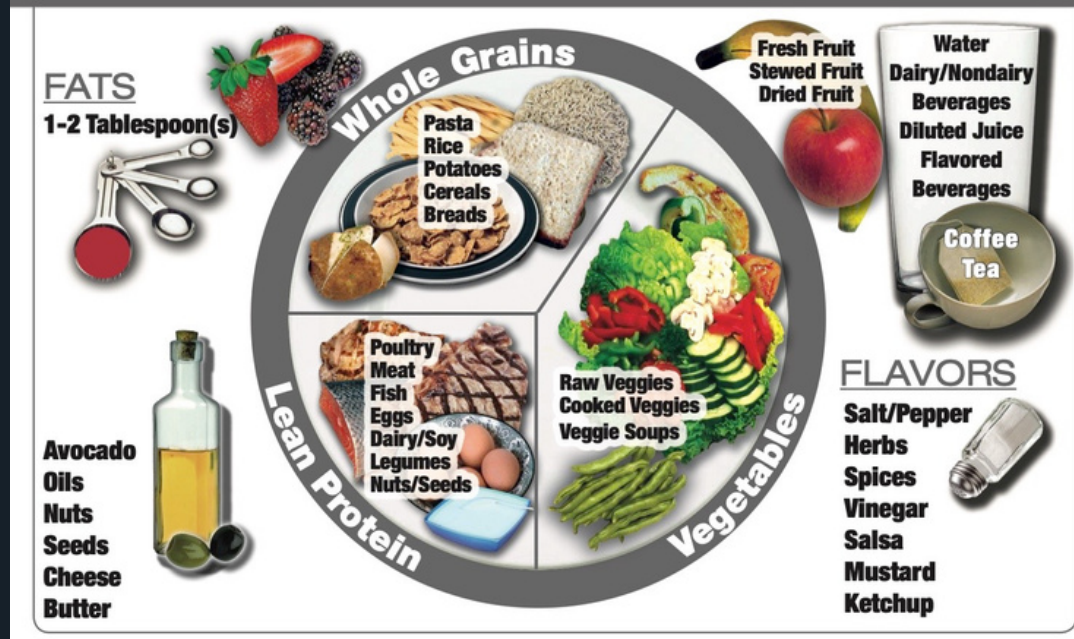
Obviously on high volume/intensity days you need to ensure you consume more total calories to fuel the work being done, but the aim is to tailor your consumption to the sessions being done that day, to get the most out of your training. The following 'The Athlete's Plate®' images are a useful visual guide as to how you might tailor your diet depending on whether it is an easy, moderate or hard day:



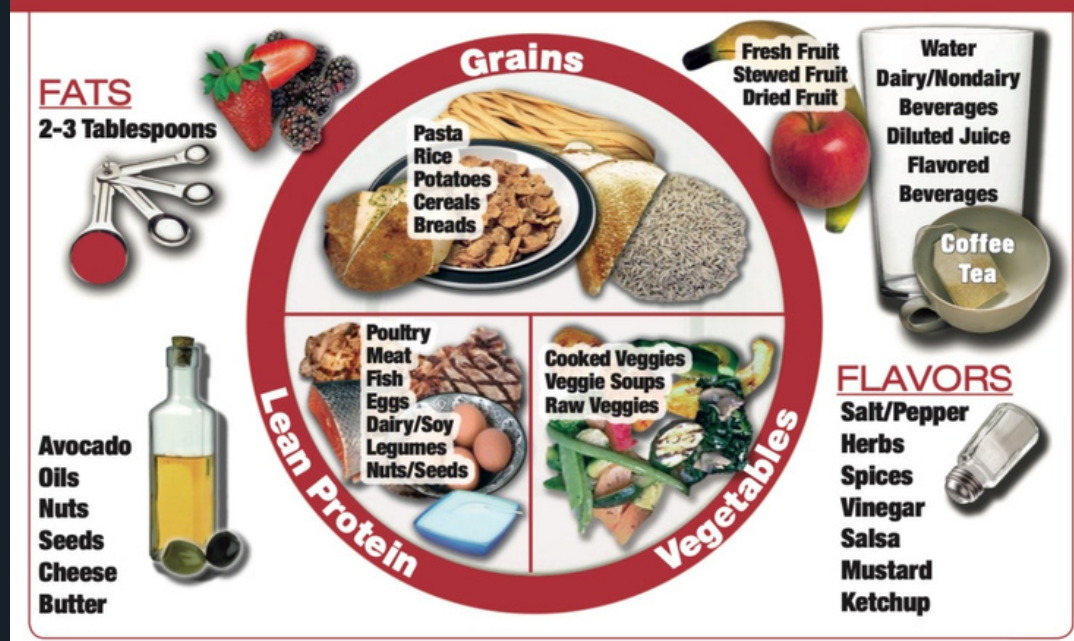
ATHLETE PLATES



MODERATE TRAINING:



HARD TRAINING:





RACE DAY NUTRITION



If you want to maximise performance on race day, then the principles of healthy eating we have discussed so far might need to be put on hold, and you might want to treat your body like a hire car for the day!

To get the most out of your body, you need to be able to consume as much carbohydrate and fluid as your body can absorb, and minimise anything that will slow down that absorption. This means that you will want minimal fibre, protein or fat – simple, refined carbohydrates are the order of the day.

If you are doing a long event like an Ironman you might even restrict fibre and protein for a day or two before in order to clear out your gut in increase the speed with which carbohydrates are absorbed.



RACE DAY NUTRITION

Suggested Nutrition Plan for a long endurance event such as Ironman or Cycle Sportif:

- 2-3 days prior to event – increase carb intake to 10-12 g/kg to load up glycogen stores, decrease fibre and protein. Plenty of fluid.
- 2-3 hours pre-event – pre-event meal containing 2-3 g/kg refined carbohydrate, plenty of fluid (containing some sodium).
- Less than 1 hour pre-event – fluid only to reduce likelihood of rebound-hypoglycaemia (although gel can be taken if <10 mins from race start)
- During event
 - Event lasting up to 3 hours – 60 g/hr carb, plus fluid-electrolyte drink
 - Event lasting more than 3 hours – up to 90g/hr of glucose/fructose mix (2:1) plus fluid-electrolyte drink.
- Post event – 1.2 g/kg/hr carb, 30g protein, fluid.

It is important to practice these strategies in training to make sure that the products you use agree with your system – numerous athletes suffer from gastro-intestinal issues during events either because they have not practiced their nutrition in training, or because they have consumed more than their digestive system can cope with (90g/hr of carbs).



NUTRITIONAL ANALYSIS



Firstly here are some general observations based on my analysis of your 1 week food log, then I have modified the log you created with what it might look like if you implemented some of the suggestions that I have made.

- Your timing is good - you ensure you fuel and recover appropriately across the day.
 - Quite a high proportion of processed foods - not a great deal of fruit, veg, nuts or pulses.
 - High amount of sugary snacks and high Glycaemic Index foods (bagels, chocolates, cakes, energy bars) - these cause blood sugar spikes. Try to consume more whole grains, nuts, vegetables and legumes.
 - Simple changes like coarse ground or steel cut oats instead of super fast oats, wholemeal bagel instead of white, can improve blood sugar response and add fibre.
 - Nearly 1/3 of your calories come from snacks & supplements - try to rely more on real, whole foods.
 - You are over-fuelling your training - nearly every session involves some form of sport nutrition product before/during/after - only needed for particularly long/hard sessions.
 - Omega 3, iron, zinc and selenium levels are low in your diet - consuming more leafy greens, nuts and seeds will help with this.
 - You consume plenty of protein, but it is mainly coming from processed meat and sports nutrition products - try to get more from lean meat, eggs, whole dairy, nuts, seeds, pulses, etc.
 - Adding some eggs will help get protein from whole food and increase vitamin A and iodine levels which are low.
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AMMENDED FOOD LOG

This is not intended to be a 'perfect diet' but is a suggestion as to how you might make some relatively simple and achievable changes to your current diet in order to lose some body fat and improve your health and performance.

Day	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday		
	Food	Training	Food	Training	Food	Training	Food	Training	Food	Training	Food	Training	Food	Training	
AM	Coffee w/sk milk		70g Course Ground Oats, Semi Skimmed Milk, Protein Powder, Golden Syrup & Raspberries		Coffee w/sk milk, 2 x toast		Coffee w/sk milk		Coffee w/sk milk / 2 x Toast w. Nutella		100g Course Ground Oats, Semi Skimmed Milk, Protein Powder, Golden Syrup & Strawberries. Coffee w/sk milk		6am 70g Course Ground Oats, Semi Skimmed Milk, Protein Powder, Golden Syrup & Raspberries. Coffee w/sk milk		
	70g Course Ground Oats, Semi Skimmed Milk, Protein Powder, Golden Syrup & Blueberries			Light Run - 54mins - 8:18mile avg - 141bpm - 811 kJals - 141bpm	70g Course Ground Oats, Semi Skimmed Milk, Protein Powder, Golden Syrup & Blueberries		70g Course Ground Oats, Semi Skimmed Milk, Protein Powder, Golden Syrup & Raspberries		70g Course Ground Oats, Semi Skimmed Milk, Protein Powder, Golden Syrup & Raspberries	Swim - 8:30am - 3000m - 1:27m per 100 - 672kcal - 131bpm			During - Bottle with electrolyte	Swim - 7am - 3000m - Pyramid - 672 kJals - 126bpm 1:33/100m - No energy today	
	1 x Latte		2 x poached Egg on Wholemeal Toast								During - 2 x Bottles with 2 scoops Tailwind. 2x Beta Fuel chews		Bike Ride 9am - 3hrs - 49miles - 2871ft - 2151kcal - 144bpm	2 crumpets with nutella.	
		S+C - Session 1 Wk 7 - 11am - 51min - 413kcal - 109bpm				Apple, Banana, Almonds				2 x Latte		After - 2 x scoops tailwind recovery		After - Protein Yoghurt	Run - 11:50am - Light - 53mins - 6.25miles - 792 kJals - 139bpm
Lunch	Wholemeal Bagel, mixed baby leaf, tomato, cheese, mayonnaise, sriracha sauce, nut & raisin mix, strawberries		Bagel, 2 x chicken sausages, mixed baby leaf, mayo, sriracha chilli sauce. Grapes		Wholemeal Bagel, mixed baby leaf, tomato, cheese, mayonnaise, sriracha sauce, nut & raisin mix, strawberries		Wholemeal Bagel, 2 x chicken sausages, mixed baby leaf, mayo, sriracha chilli sauce. Grapes, Rice cakes		Wholemeal Bagel, mixed baby leaf, tomato, cheese, mayonnaise, sriracha sauce, nut & raisin mix, strawberries		1/2 tin of beans on 2 pieces of 50/50 toast and cheese.		Tiger Baguette w/ham, cheese, coleslaw and saracha sauce. Kinder mini bar, energy drink		
PM			Apple & Almonds								2 x Rice Cakes				
	Banana, Energy Bar	Track Session 3:30pm - 53min - 852kcal - 155bpm	2 x water bottle with electrolyte tab	Road Bike - 1hr 28 - 25.62 miles - 17.5mph - 245w - 1144kcal - 139bpm		16:00 - Light Run - 54mins - 8:18mile avg - 141bpm - 811 kJals - 141bpm		S+C - Session 2 Week 7 - 2pm - 46mins - 437 KJals - 119bpm			1 x Kinder Bar Mini		Bottle of water and vitamin C tablet - handful of quality street chocolates		
							Post - Protein Shake, Banana, flapjack						2 x Latte		
Dinner	Veggie Chilli, Wholegrain Rice, Guacamole		Chicken Kiev, beans, chips.		Chicken and Cheese Tortelloni, chicken breast, mixed salad		Wholegrain Rice, Chilli and mixed leafe salad, chohcolate biscuits		Chicken Fajitas, with peppers, guacamole and salsa		Spaghetti Bolognese		Chicken and Sausage dinner. Short bread biscuits.		
Evening					Before - SIS bar										
					During - Precision Hydration 1500 tablet		Wattbike - 7pm - 60mins - 3 x 7min FTP efforts - 238 avg power - 822 kJals - 153bpm		Run Club - 6pm - 48mins - 5.54 miles - Intervals - 717 kJals - 140bpm			Bottle of water with vitamin C tablet		1 x Latte	
		HIIT - Core Session - 7:30pm - 20min - 116kcal - 90bpm		Swim Session - 8:15pm - 2400m - 1:26/100m - 550kcal - 127bpm			2 x boiled egg & toast			Wattbike HIIT - 30min - 437 KJals - 252watts - No HR			1 x Apple		
	2 boiled eggs and toast		Banana & 2 x honey on toast		1 x Latte / 3 piece of toast with peanut butter		1 x Latte		2 x toast and Peanut butter						



THANK YOU

AND GOOD LUCK

If you have any question you can get in touch with me at:

g.forster@uwtsd.ac.uk

