

PROACTIVE FUEL AND ENERGY: NUTRITION BEFORE, DURING & AFTER THE QUEENSTOWN MARATHON



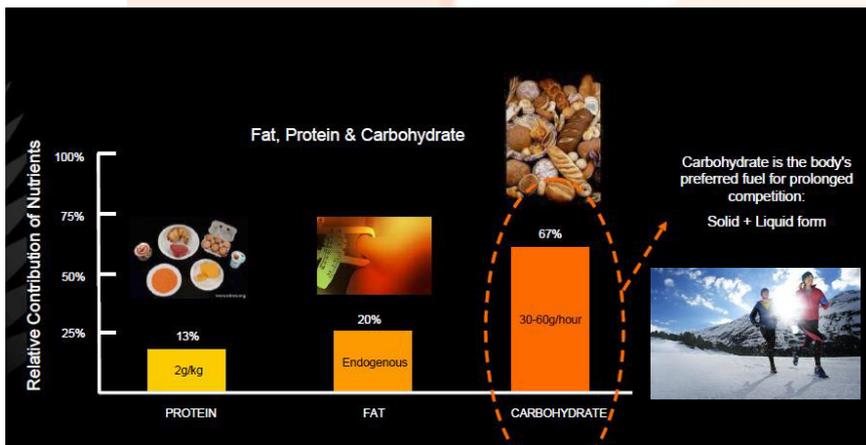
Proactive Physio with Paula Ratcliffe at the London Marathon

How do you manage nutrition for a marathon?

Common mistakes:

- Dehydration
- Not enough electrolytes
- Not enough or too many carbs
- New food on race day
- Training without a nutrition plan!

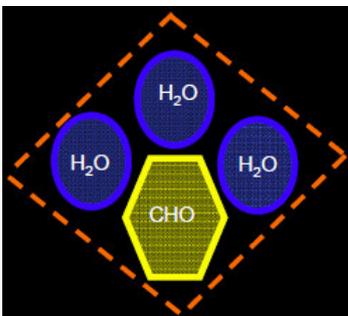
What fuel does the body use?



Carbohydrates are the body's preferred fuel for prolonged competition and exercise.



Did you know...?



- Generally we need more carbs (CHO) than anything in a long distance run.
- For very gram of CHO the body needs 3 parts water (H₂O) to digest.
- If carb-loading pre race to store 500g the body should put on 2kg of weight.
- If you are taking 40g of carbs per hour you need 120ml of water for carbs to fuel the body.
- Carbohydrates can be consumed during a race in solid or liquid form.

Not all carbs are created equal! Foods that are low on the glycaemic index (low-GI) provide sustained energy over time whereas foods with a high glycaemic index (high-GI) provide an energy peak and then a crash. You may be surprised what foods are high-GI and low-GI. Plan your snacks and meals accordingly!



PROACTIVE FUEL AND ENERGY: AVOID DEHYDRATION!

Water + Electrolytes is the key to avoiding dehydration.

Side effects of dehydration:

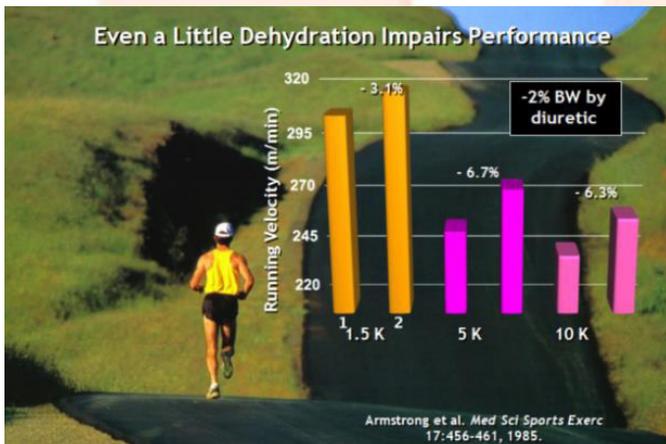
- Tiredness
- Can't process carbs
- Cramp
- Heat stress/exhaustion
- Increased heart rate

Sweat fluid loss depends on:

- Weather
- Intensity
- Clothing
- Humidity
- The individual

You can sweat from 2L to .5L per hour depending on the factors above!
Start with 1L of water per hour, then increase to 1.5L if the weather is > 25°.
Check the weather and drink more if it's hot and dry in Queenstown on the day.

EVEN MILD DEHYDRATION HAS CONSEQUENCES...



Fluids - Liquid Carbohydrate During Exercise

Sports Drink Warning
Weaker is better!

■ Concentrated = Hypertonic
■ Neutral = Isotonic
■ Dilute = Hypotonic

Isotonic Beverages: Isotonic has the same H₂O level as the blood which means it is not drawing any extra H₂O from the bloodstream.

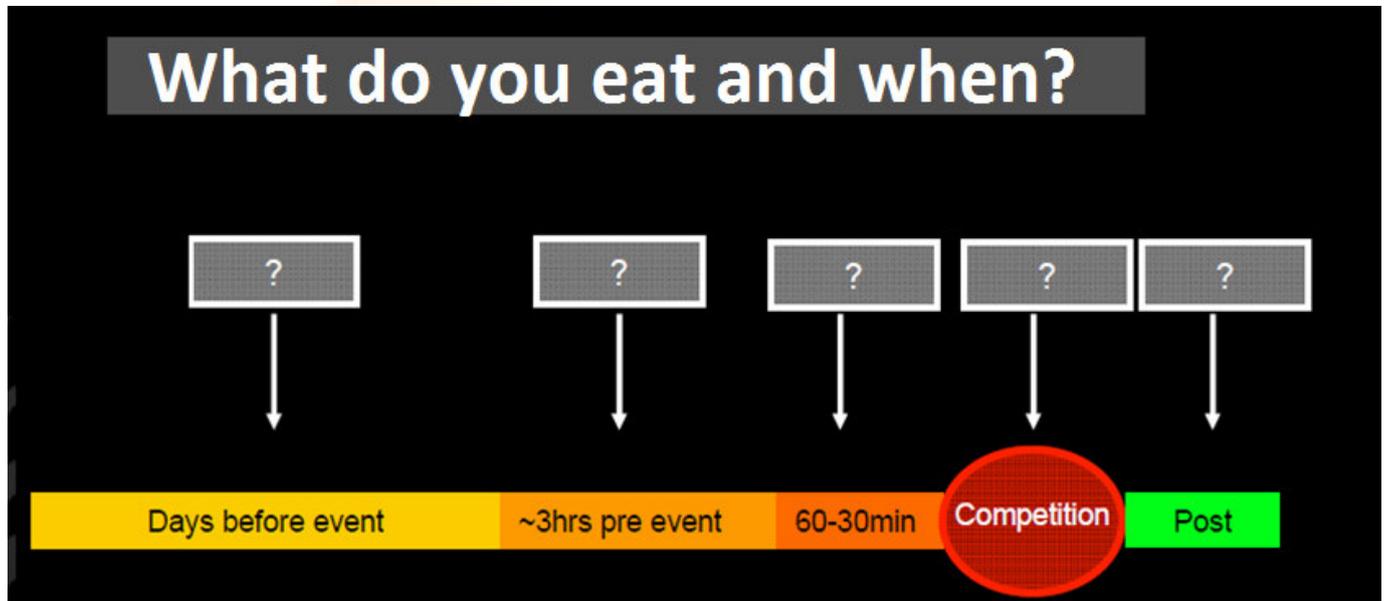
Hypotonic Beverages: During exercise we need H₂O to replace what we are losing so isotonic drink is not enough. You want a diluted or hypotonic beverage. Weaker is better!

What are electrolytes? How do you maintain electrolyte levels?:

- Minerals needed for the body to process energy
- Lost through sweat when exercising
- Found in sports drinks, foods
- Hard to keep the level of electrolytes up with only sports drink due to the volume required.
- Electrolyte tablets / capsules

WHAT TO EAT/DRINK AND WHEN TO EAT/DRINK IT

Putting it all together – a plan before and after your race.



5 days before the event: Carbohydrate (CHO) loading tops up the body CHO stores so it can be readily available to use as fuel in exercise. This doesn't mean big volumes of food, but a higher % of your meals should be CHO.

The morning of the event: Pre-event breakfast 2-3 hours prior. Low-GI foods. 100-140g CHO

Example of a pre event meal:

1 cup of muesli -35gCHO

1 Yoghurt -25gCHO

100 g Berries – 20g CHO

2 slices vogels - 29 g CHO

250 ml orange Juice – 24 g CHO

60-30 mins before event:

Low-GI snack, this slowly increases Blood Glucose pre event

Example: 2 slices vogels – (29g) with 1 Tsp peanut butter/Nutella (2g)

Total: 31g CHO

During the event:

Nothing new!

High GI food every 45 ish min, can be liquid, gel or solid

Must be taken with H₂O

30 – 60 g per hour – depending on intensity

Remember: body can't digest more than 60g per hour!

Electrolytes – frequently + H₂O (see hydration section)

After the event:

Immediately: High-GI carbs + 300-500ml of fluid – cool not ice cold

(Recovery)

And 20-30g protein

1-2 hours: 30-70g carbs

4 hours post-race: 80-90g CHO per hour and some fats

The quicker you eat the right things afterward, the faster you recover! Remember to drink lots of fluids and wear compression gear!