

## White Rose Ultra 2016

### NUTRITION – FUELLING YOUR EPIC ADVENTURE

GOLDEN RULE: Never try something new on race day!

Just over one month to go....

At this stage your physical preparation should almost be at a peak.

Your thoughts should now turn to race day preparation.

You're probably thinking about kit but it's also a key point in training to be fine tuning your nutritional strategies.

One of the biggest differences between road marathons and trail ultras is the duration. This increases the need to stay on top of nutrition. 100k can take several hours longer than your marathon PR, so while you might be able to get by with an energy gel and a few jelly babies during a marathon, you will need a lot more fuel during an ultra.

Here's a few things to bear in mind;

#### Key Points

- The energy cost of running is elevated during ultra-distance trail races compared to normal running conditions.
- This elevated energy cost results in a ~12% increase in energy expenditure across the distance.

Here's the Science Bit.

- Despite a lower relative intensity, the energy cost of running is increased on the rough terrain typical of ultra-distance trail running races, compared to level running however, nutrient intake during ultra-distance races has been found to be far below the estimated energy cost (Dumke, et al. 2006).
- This energy cost should be met through regular intake of carbohydrates, which are the primary fuel of choice for muscle contraction. As carbohydrates are only stored in tiny amounts in the body, in the liver and the muscles as glycogen, – During prolonged periods of running at a moderate pace, glycogen stores become depleted, and the body begins to break down fat for energy (gluconeogenesis), athletes cannot exercise intensively and may experience fatigue.
- After glycogen stores have been depleted and before gluconeogenesis kicks in, a competitor may experience symptoms of hypoglycaemia, which occurs when blood glucose levels are low. During hypoglycaemia, a person may feel extreme fatigue and a near complete loss of energy, often referred to as "bonking". When this occurs, it is not uncommon to see athletes collapse from the extreme fatigue. Dizziness and hallucinations may also occur.....

That sounds like a DNF to me.....

So.... Replacing energy cost is all about keeping the glycogen stores topped up.

But how can we do that – whilst running?!

How: Practice using blocks, malt loaf, jam sandwiches (see list at bottom), Kendal mint cake, gels. Whatever floats your boat as long as it is high in carbs.

**AS LONG AS YOU HAVE TRIALLED IT IN TRAINING!**

Why is it important to practice? We're all individuals and different things will work for you. Using un-trialled food sources may lead to Indigestion, heartburn, the runs (not to be confused with making you go faster!) Nausea. You've got enough on without adding any of these to the mix!

If you like gels just be warned you really will have to have one every 15-20 mins once you have started as with any sugar high a sugar crash will follow.

Ideally a combination of regularly ingested oat based bars for slow energy release and your preferred option of fast to digest sugars (i.e. jelly babies) with some carbs in your drink should keep your energy levels stable (although the running might not!).

Remember to take on plenty of fluid too – I'll come onto the importance of hydration next month but on average you'll need 1.49 L per hr, based on the sweat rates of the activity (ACSM, 2007).

It may be cold but you will still be sweating!

So basically, try some things out, find what works and take plenty of it with you. On race day no matter how deep you're digging DO NOT try anything you haven't practiced in training.

It's important to know how to fuel properly, to test out your nutrition plan on long runs, and to be able to choose wisely from the selection of available foods at aid stations.

If like me you'd like to know exactly how much you should be consuming per hour here is a guide below. Grams of Carbohydrate can be found on food labels.

### Carbohydrate (CHO) Recommended Intake

When		Recommendations for athletes	Your individual CHO requirement	Type
<b>Pre</b>	3 - 4 hrs prior	<b>140-330g*</b>	<b>330g</b>	Low GI
Ingestion of a CHO rich meal prior to exercise has been shown to increase muscle glycogen levels and enhance exercise performance (Jeukendrup, ed. 2010).				
<b>During</b>	Every 15 mins	<b>20-70g per hour*</b>	<b>70g</b>	High GI Drinks –30-40g/500ml + contain sodium. Gels – approx. 25g Bars – 20-30g
* Based upon demands of the sport (Maughan, et al.eds. 2004; Jeukendrup, ed. 2010)				

Good Luck with the final stages of training!

Sarah Walker

Northlight Strength and Rehabilitation Centre

[starstrengthenandconditioning.co.uk](http://starstrengthenandconditioning.co.uk)

References:

1. American College of Sports Medicine (2007) Exercise and Fluid Replacement. *Official Journal of The American College of Sports Medicine*, pp. 377-390.
2. Dumke, C.L., Lind, R.H., Nieman, D.C. & Shooter, L. (2006) *Indirect Calorimetry During Ultradistance Running: A Case Report*. *Journal of Sports Science Medicine*. Vol. 5(4). Pp.692-698.
3. Jeukendrup, A. & Gleeson, M. (2010) *Sport Nutrition – An Introduction to Energy Production and Performance 2<sup>nd</sup> Edition*. Human Kinetics: Leeds.
4. Maughan, R.J., Burke, L.M. & Coyle, E.F. (eds.) (2004) *Food, Nutrition and Sports Performance II. The International Olympic Committee Consensus on Sports Nutrition*. Routledge: New York.