

Endurance nutrition – Beyond a half

Basics first: Eat a healthy diet

- ✓ Eatwell Guide <https://www.nhs.uk/live-well/eat-well/the-eatwell-guide/>

Fuel for exercise

- ✓ Carbohydrate improves performance
- ✓ A high carbohydrate diet increases glycogen stores before exercise
- ✓ Taking carbohydrate during training and the race will:
 - allow you to train at a higher intensity
 - improve performance
 - delays time to exhaustion

Try different fuelling strategies in training

- ✓ **Gels:** try different options: standard gels need to be taken with water, but isotonic gels don't
- ✓ **Drinks:** commercial or homemade. Isotonic (6-8% carbohydrate) is easier to stomach. 300-400ml is equivalent to 1 x 20g carb gel:
 - 500ml unsweetened fruit juice (orange, apple, pineapple) , 500ml water, mix
 - Dissolve 50g sugar in 800ml warm water, pinch salt, 200ml sugar-free squash, mix
 - 250ml ordinary squash or 200ml high juice squash (not sugar free or low calorie), 750-800ml cold water, 1.25g salt
- ✓ **Foods:**
 - Sweet: jelly babies, haribo, banana chips (without added fat), banana, jam sandwich, cereal bar/ flapjack (just check the label), Nutella, porridge, rice pudding, tinned fruit, full sugar Coca cola (good for caffeine overnight), sports drinks, gels, sweets (usually 4-5 hours is enough of sweet food), Cereals (cornflakes, rice krispies), Jam sandwich (white bread), Chocolate bars.
 - Crisps (salty), broth, baked beans, white bread cheese or marmite or nut butter sandwich. Coffee or tea with sugar.

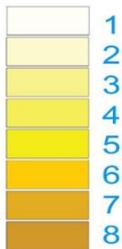
Recovery

- ✓ **Rehydrate** – water and food or drinks containing electrolytes. Drink 500ml immediately after training/ racing and then little and often until your urine is clear.
- ✓ **Refuel** - Carbohydrate and protein rich meal within first hour of finishing exercise replaces glycogen and repairs muscles.
 - If you have 24 hours between sessions just time your usual meal to refuel after training.

- If you have less than 8 hours between sessions take approximately 1g carbs/ kg body weight each hour for 3-4 hours after training
- ✓ **Rebuild** with protein – helps with recovery and adaptation to training. Have 20g protein after training/ race and include a protein-rich food at meals and snacks spread out over the day.
- ✓ Good options :
 - Not eating straight away? Milk and milkshakes, which are naturally high in electrolytes as well as providing carbohydrate and protein for recovery e.g 30g oats, 1 pint low fat milk and a banana. Add nut butter if you need to add extra protein (NB plant-based milks are lower in protein than cow's)
 - A meal containing:
 - 50-70g carbohydrate, such as 2 thick slices bread, bread, 100g (dry weight) pasta, 85g (dry weight) rice, large potato, 60g porridge oats with 1 tablespoon dried fruit **and**
 - 20g lean protein, these foods contain 10g protein: 40g meat, 50g fish , 2 eggs, ½ pint milk, 200g low fat yoghurt or 100g high protein yoghurt, 125g hummus, 125g cottage cheese, 50g nuts

Hydration

- ✓ Start exercise hydrated, 1-3 urine colour, drink 300-600ml in the 2-4 hours before exercise
- ✓ During exercise: Start drinking early and then at regular intervals. Energy drinks are effective at hydration and fuel, always include salt (sodium) if exercise is over 2 hours or in hot/ humid conditions
- ✓ After exercise: Replace fluid and electrolyte losses, drink as much as is comfortable immediately then drink regularly until rehydrated.



Healthy wee is 1-3
4-8 you must hydrate

Train your gut

- ✓ Training the gut increases tolerance of taking fluid and nutrition when running
- ✓ Concentrated carbohydrate (gels, hypertonic drinks), fibre, fat and protein increase symptoms
- ✓ Hydration is essential to maintain blood flow to the gut so start drinking early in training/ race

PRACTICE YOUR STRATEGIES IN TRAINING SO YOU ARE RACE READY

Useful links

Sports Dietitians Australia <https://www.sportsdietitians.com.au/factsheets/>

The sports dietitian <https://www.thesportsdietitian.co.uk/>

Anita Bean <https://anitabean.co.uk/sports-nutrition/>

Recipes – British cycling <https://www.britishcycling.org.uk/knowledge/nutrition/recipes>