December Workshop

Rowing Nutrition

Focus

- Maximising your diet and understanding of nutrition to enhance performance

Areas to consider:

1. Fuelling & Refuelling
2. Hydrating & Rehydrating
3. Building & Rebuilding

Fuelling & Refuelling

- Fuelling = availability of energy.
- Focus on carbohydrates - prior, post and sometimes during training and competition.
- Carbohydrate is a rapid energy source, needed for muscle function.
- Body needs sufficient energy available during a session to enable full muscle functionality - we need to have sufficient amounts available prior to a session/race (and potentially think about adding more fuel during longer sessions).
- The need to have replace energy expended post session is key in order to perform in subsequent sessions/the next day.

Timing of fuelling

- Early morning sessions pose the greatest issue - training is half of the performance outcome with nutrition the other half.
- To ensure we adequately prepare for training, we will need to wake up earlier enough to consume the correct nutrition before training.
- For longer steady state (>30 minutes), consuming a low glycaemic index (GI) carbohydrate rich meal is advised **60-90 minutes prior to training** .
    - E.g. rolled porridge oats, pulses, or wholegrain cereals (without added sugar) are good examples of food sources to be consumed.

A note on mid-session fuel

- Not overly common due to duration of outings/training sessions
- BUT for info:
  - For a training duration of 30-75 minutes only small amounts of carbohydrate should be taken; for sessions lasting between 1-2 hours, 30g of carbohydrate per hour should be consumed, while 60g per hour is recommended for sessions lasting between 2-3 hours. (Jeukendrup 2014)

Timing of fuelling cont.

- Low GI foods slowly increase blood glucose and reduce the risk of having a drop in blood glucose when training starts. This strategy may also increase the fat utilisation as an energy source during long steady state training.
- As a guide 0.8-1.2g of carbohydrate per kg of body mass is recommended (Thompson and Wolf 2016).

Breakfast example

- For a 75kg female rower, this would be between 60-90g of carbohydrate.
- Easy option - 50g of rolled porridge oats with 300ml of whole milk
- Macros:
  - 43g of carbohydrate
  - 15g protein)
  - The addition of a 250ml glass of orange juice would add another 25g of carbohydrate, totalling 68g.

Hydrating & Rehydrating

- Replacing/maintaining fluid, most of which is lost through sweat.
- Need to consume water & electrolytes.
- Significant water loss = dehydration, which can have significant effects on performance (fluid loss of 2% of body mass).
- Maintaining hydration is essential throughout training, preferably water & electrolytes.
- Recommendation is 400-800ml per hour (circa 150ml every 15 minutes) for training lasting longer than 60 minutes. (Sawka et al 2007)
- BUT consider external factors like weather, nature of session and individual variations.

Rehydration amounts - a rough guide

- A simple solution to determine how much fluid to take on, is to weigh the athlete pre and post training session.
- The difference in body mass will be reflective of the fluid loss.
- Consuming between 1-1.5 litres per kg of body mass lost is a general guideline.
    - E.g. A 75kg female rower losing 1.5kg body mass post training would require 2-2.25 litres of fluid. There are obviously some inaccuracies with this method, but it does provide a good starting point in to develop personal hydration strategies.

Building & Rebuilding

- Training is going to result in muscle damage and breakdown, an essential aspect!
- Protein is the only macronutrient that can stimulate muscle protein synthesis (MPS) which is critical for changes in muscle strength and hypertrophy.
- Protein is also required for aerobic training adaptation, specifically mitochondrial biogenesis, which are organelles involved in aerobic respiration and energy metabolism.
- Post training we often talk about the ‘golden 30 minute window’ where protein uptake is key - timing is everything!

Building & Rebuilding cont.

- A general rule is to consume 20-25g of protein asap post-training which will cover the majority of rowers of varying body masses. 0.3g of protein per kg of body mass will provide a more accurate measure of protein needs.
- E.g. for a 75kg female rower, this would be 22.5g of protein, which can be found in a medium chicken breast of four large eggs.
- The other element to consider is to replenish lost glycogen stores and return from a caloric deficit. This can be achieved through a mixture of high and low GI food; consuming 0.8-1.2g of carbohydrate per kg of body mass.

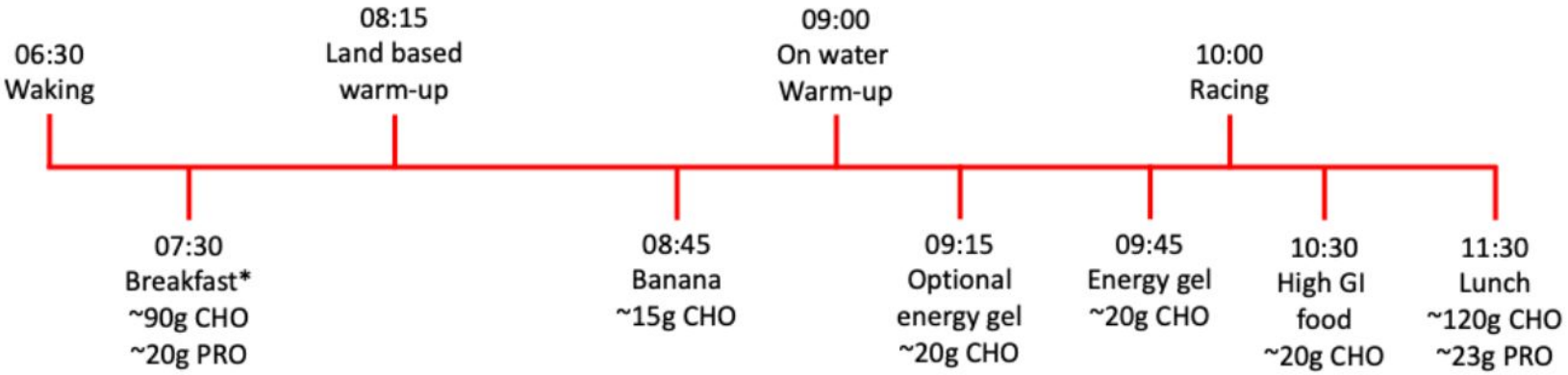
Race days

- Unlike training, the focus for race day rowing nutrition is about optimising performance rather than maximisng training adaptation.
- The key focus is on ensuring glycogen stores are replenished from overnight fasting (from sleeping), blood glucose levels are slightly higher and stable at rest, and you are completely hydrated.
- The little and often approach is key - the timing of the race can affect the fuelling plan, but aim to ensure your body has sufficient glycogen available.
- Ideally, there should be at least 2 hours between a main meal and racing.

Further guidance & meal examples from BR

- A fantastic resource if you have not come across it previously: https://www.britishrowing.org/wp-content/uploads/2016/10/Nutrition-Guide.pdf

E.g. 75kg female fuel plan for 2k race @ 10am



* Breakfast
50g rolled oats & 300ml whole milk with 10g honey & 10g walnuts
Banana
250ml orange juice
250ml black coffee

Conclusions

- Trial and error with this is inevitable
- Food diaries are a HUGE help
- Volume of food (calories) is often underdone, particularly with the training volumes on the senior programmes
- The macros are important, but we don’t need to be overly prescriptive.
- I’m always happy to advise, so do ask!