Fuelling with Carbohydrate – *Acutely Before Exercise and Competition*

Food Characteristics: *Follow this guide when choosing your pre-exercise foods*

- Primary focus → carbohydrates
- Carbohydrate foods can be categorised by their glycaemic index (GI) → GI describes the blood glucose response a carbohydrate-based food triggers → typically two (2) broad categories *Low* and *High* GI
- High GI carbohydrates for faster absorption when closer to start time e.g., white bread, honey, bananas, watermelon
- Low GI carbohydrates may provide more sustained energy and increased satiety (staying fuller for longer) → more suitable when exercise start time > 3 hours e.g., brown rice, oatmeal
- Choose foods low in fibre, fat, and protein → helps digestibility and decreases bulk in gut
- Protein → this nutrient is more important for **after** exercise → see our **Recovery Brochure** for more information!
- Nutrition practices should suit individual preferences or requirements

(Burke & Deakin, 2015; Burke et al., 2011)

Example Meal: *Race Day*

Factors to consider:

Size and timing of last meal, race intensity and duration, time before race, athlete body mass

Food	Serving Size	Carbohydrate (g)	Protein (g)	Fat (g)
Oats (raw)	80g	39.9 g	9.8 g	7.6 g
Milk (regular fat)	250 mL	13.8 g	8.5 g	8.8 g
Honey (total)	20 mL (1 table spoon)	20.5 g	0.1 g	0 g
White bread	2 slices ~65g Lightly toasted	30.0 g	0.1 g	0 g
Butter (plain, unsalted)	~5g (teaspoon)	0 g	0.1 g	4.1 g
Banana (medium)	~130 g	30.0 g	0 g	0 g
Sports Drink	600mL	35.0 g	0 g	0 g
Totals		170.0 g	18.6 g	20 g

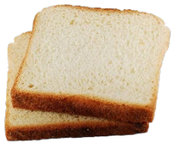
Example Foods: *Presented as Serving Size and Carbohydrate (CHO) Content per Serve*

Medium Banana
(~130 g) 30 g CHO

White Jasmine Rice
(~125 g) 40 g CHO

Sultanas
(40 g) 31 g CHO

Honey (tablespoon)
(20mL) 20.7 g CHO



White bread
(1 slice ~33 g) 15 g CHO

Gluten Free White bread
(1 slice ~39 g) 17 g CHO

(Food Standards Australia New Zealand, 2023)

Pre-Exercise Carbohydrate Calculator: *Practical tool*

- **Practical Application:** use the carbohydrate content of the example foods presented here, or check the Nutrition Information Panel of your preferred foods to correlate the carbohydrate content with your recommended amount
- **Assessing individual response:** remember to assess your response during exercise by monitoring energy levels and gastrointestinal comfort
- Consume **more** food pre-exercise for additional energy
- Consume **less** food or allow for more digestion time before exercise if you experience discomfort
- Use the following links or scan the QR code to access a **calculator** to determine the amount of carbohydrate to consume before exercise!

Pre-Exercise Carbohydrate Calculator:

https://asluggett.github.io/Sport-Nutrition/pre-training-carbohydrate-calculator.html

Calculator Home Page:

https://asluggett.github.io/Sport-Nutrition/