

Fuelling with Carbohydrate – Before Exercise and Competition

Goals of Pre-Exercise Nutrition

- Address hunger levels
 - Meet the demands of exercise
- Keep glycogen levels topped up
 - Suit individual preference or requirements

(1)

Food Characteristics

- Low in fibre and fat → aids in digestibility and decreases bulk in gut
- High glycaemic index (GI) carbohydrates for faster absorption when closer to start time e.g., white bread, honey
- Low GI carbohydrates may provide more sustained energy → more suitable when exercise start time > 3 hours e.g., brown rice, oatmeal

(1)

Example Foods -



Medium Banana
(~130g) 30g CHO



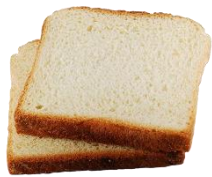
White Rice (Jasmine)
(~125g serve) 40g CHO can
have 2 serves with meal >3
hours



Sultanas 45g/30g CHO



Honey 20mL/20.6g
CHO



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

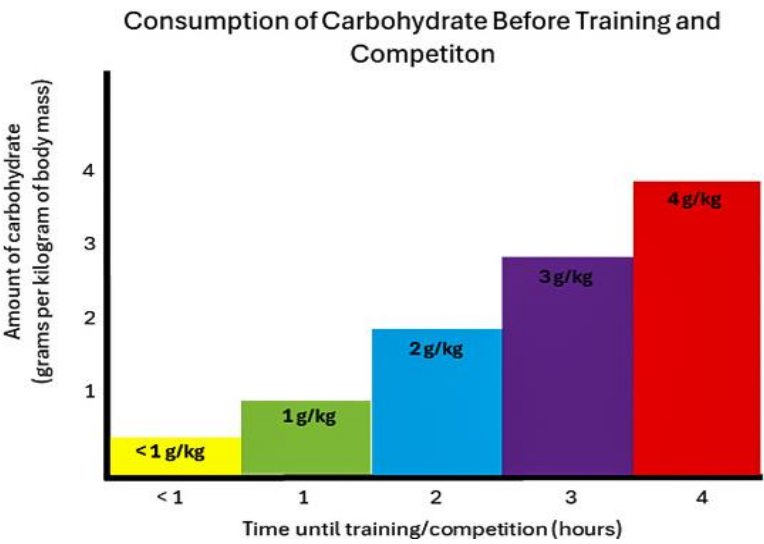


Gluten free bread (1 slice ~38g)
17g CHO slide

(3)

Guidelines and Considerations

- Time before exercise: more time → more food
- 1 - 4 grams of carbohydrate per kilogram of body mass → consume 1 - 4 hours before
- Meeting individual preferences → solid vs liquids or consuming regular snacks especially if prone to gastrointestinal difficulties



(1) (2)

Pre-Exercise Carbohydrate Calculator

- Use the following links or scan the QR code to access a calculator to determine the amount of carbohydrate to consume before exercise!
- Use the carbohydrate content of the example foods included here to correlate with your recommended amount

Calculator Home Page: <https://asluggett.github.io/Sport-Nutrition/>

Pre-Exercise Carbohydrate Calculator: <https://asluggett.github.io/Sport-Nutrition/pre-training-carbohydrate-calculator.html>



1. Burke LM, Hawley JA, Wong SHS, Jeukendrup AE. Carbohydrates for training and competition. J Sports Sci. 2011;29(1):S17-S27.

2. Podlogar T, Wallis GA. New Horizons in Carbohydrate Research and Application for Endurance Athletes. Sports Medicine. 2022;52(1):5-23.

3. Food Standards Australia New Zealand. Australian Food Composition Database - Release 2.0 [Internet]. [place unknown: publisher unknown]; [updated 2023 Dec 6; cited 2024 Apr 4]. Available from: <https://afcd.foodstandards.gov.au/default.aspx>.