

NUTRITION INFORMATION

For rowers and parents

By Sophie Robson

Includes:

Daily recommendations for protein and carbohydrates.
Advice for before/after training and before/after racing.

Focus for recovery.

Example of recovery foods.

BASICS TO REMEMBER

- ❖ The average person's diet should be made up of 45-65% carbohydrates, 15% protein and 30% fat, with less than 10% of this as saturated fat.
- ❖ Athletes should aim to focus their eating around their training sessions.
- ❖ They need to fuel before (depending on stomach upsets) and after training and racing.
- ❖ These tips can be used with other sports as well, if necessary

RECOMMENDED DAILY INTAKES OF PROTEIN AND CARBOHYDRATES:

PROTEIN

Group	Protein intake (g/kg/day)
Sedentary men and women	0.8 – 1.0
Recreational endurance athlete (approx. 30min 4-5x per week @ <55% VO ₂ max)	0.8 – 1.0
Moderate intensity endurance athlete (approx. 45-60min 4-5x per week)	1.2
Football, power sports	1.4 – 1.7
Elite male endurance athletes	1.6
Resistance athletes (early training)	1.5 – 1.7
Resistance athletes (steady state)	1.0 – 1.2
Female athletes	~15% lower than male athletes

CARBOHYDRATE

Intensity	Situation	CHO Intake (g/kg/day)
Light	Low-intensity or skill based activities	3 – 5
Moderate	Moderate exercise programme (~1 hr/day)	5 – 7
High	Endurance programme (ie. moderate-high intensity exercise of 1-3 hrs/day)	6 – 10
Very High	Extreme commitment (ie. moderate-high intensity exercise of >4-5 hrs/day)	8 – 12

Before training

- Aim for moderate carbohydrate, low fat, easy to digest and comfortable for you.
- If early morning session, at least a piece of toast if not two, or cereal.
- If afternoon session, may need a snack (eg. a muesli bar) to have before training if lunch was more than a few hours before.
- Training is also ideal for figuring out what you want to eat on race day – monitor how you feel after certain snacks, and think about what you could be doing on race day when you might have races quickly after each other. Eg. A sports drink might be an easier, more digestible option.

After training:

- Have a mixture of protein and carbohydrates within half an hour following training, then a meal within 2 hours. (See “Recovery” section)
- Morning: Take a snack to have straight after training if you don’t have breakfast with you (eg. muesli bar, banana)
- Afternoon: Have a snack for after training to tide you over until dinner.
- 10g of protein + 15g CHO = best recovery.

Before racing:

- Usually it is suggested to have a carbohydrate-rich meal the night before, but see what suits you. (Figure out what works with training).
- Aim for last meal to be 2-4 hours before race (depending on stomach upset). Eg. Have breakfast at 6am if your first race is at 8am.
- Then have small snack ~1 hour before racing as needed.
- Maintain hydration the DAY and night BEFORE (but not so it disturbs sleep).

After racing:

- Have snacks ready if another race is soon after.
- If stomach doesn’t handle food well, maybe stick to sports drinks or easy to digest lollies.
- But watch out for too many lollies, as they can give you a quick energy burst followed by an energy low. Eg. often you’re on the water for about 30mins before a race, so you don’t want to peak then, then have no energy for the race.
- Have a meal within 0.5-1hr after race if there’s a bigger gap before your next race, to aid recovery and preparation.

Stay hydrated:

- Maintain fluid levels throughout the day, as well as during training sessions.
- During Summer training, you may want to have sports drinks with you in the boat to sip during the session, not just afterwards.
- Should consume 1.5L of fluid for every kilogram weight lost during a session. (If you often feel dehydrated, try weighing yourself before and after a session to see how much you sweat. Multiply the kilograms lost by 1.5 to get how many litres you will need to drink to rehydrate.)

RECOVERY

Always remember the 3 R's:

- Refuel** → energy stores, with carbohydrates (CHO) (~50g)
- Repair** → muscles, with protein (~10g)
- Rehydrate** → fluid losses, with water, sports drinks or milk
→ milk has similar electrolyte composition to sports drinks, with the added benefit of CHO and protein to aid recovery.

*****Combine 10g protein and 50g carbohydrates within 30mins post-session for most efficient recovery *****

+ Followed by a meal within 2 hours following training.

EXAMPLES OF 10g PROTEIN

Animal Foods	Plant Foods
2 small eggs	4 slices (120g) wholemeal bread
30g (1.5 slices) reduced fat cheese	3 cups (90g) wholegrain cereal
70g cottage cheese	2 cups (330g) cooked pasta
1 cup (250ml) low-fat milk	3 cups (400g) cooked rice
35g lean beef, lamb or pork (cooked weight)	¾ cup (150g) lentils or kidney beans
40g lean chicken (cooked weight)	200g baked beans
50g grilled fish	120g tofu
50g canned tuna or salmon	60g nuts or seeds
200g reduced fat yoghurt	300ml soy milk

These foods are also low in fat and high in other nutrients. Combine them with one of the carbohydrate options from the next table to get the best recovery, for example:

- ❖ 5 wheetbix + 1 cup of milk.
- ❖ 2 cups light cereal + 200g reduced-fat yoghurt
- ❖ Fruit smoothie with banana, strawberries, yoghurt and milk
- ❖ 30g reduced-fat cheese + 6 large dry biscuits
- ❖ 2 boiled eggs + 2 English Muffins
- ❖ Wholegrain sandwich + 60g ham + cheese
- ❖ 50g grilled fish + vegetables +/- rice

RECOVERY continued...

EXAMPLES OF 50g CARBOHYDRATES:

Cereal	Fruit
5 wheetbix (60g)	1 cup fruit crumble
2 cups (60g) light cereal	1.3 cups fruit salad in heavy syrup (280g)
1-1.5 cups (65g) muesli flake cereal	2 cups canned fruit in light syrup (520g)
1 cup (90g) toasted muesli	2.5 cups fresh fruit salad (500g)
1.3 cups (350g) porridge made with milk	2 medium-large bananas
2.5 cups (350g) porridge made with water	2-3 large fruit (mango, pear, grapefruit etc.)
1 cup (90g) rolled oats	3-4 medium fruit (orange, apple etc.)
4 slices white/3 slices w/grain (100g) bread	12 small fruit (nectarine, apricot etc.)
1 large/2 medium (110g) bread rolls	2 cups grapes (350g)
2 pita/Lebanese bread (100g)	6 cups melon
2.5 chapati (150g)	12 cups strawberries
2 full English Muffins (120g)	4 tbs sultanas or raisins (70g)
2.5 crumpets	22 halves dried apricots (115g)
2.5 muesli bars	Vegetables
6 thick/10 thin rice cakes	1 very large/3 medium potatoes (350g)
6 large/15 small crispbreads/dry biscuits	2.5 cups sweet potato (350g)
5 fruit filled biscuits	1.2 cups creamed corn or 2 corn cobs
8-10 plain sweet biscuits	14 cups green beans
6 cream filled/chocolate biscuits	1 large can baked beans (440g)
1 large/2 medium cakestyle muffins (115g)	2 cups lentils (400g)
2 medium Pancakes (150g)	2 cups soy/kidney beans (400g)
3 medium scones (125g)	5 cups pumpkin and peas (700g)
1.5 iced fruit buns (105g)	Dairy Products
1.5 large/2 medium croissants (149g)	1L milk
1 cup rice, boiled (180g)	560ml flavoured milk
1.3 cups pasta/noodles boiled (200g)	1.3 cups custard (300g)
1 large can spaghetti (440g)	4 tubs 'diet' or natural yoghurt (800g)
Sugars and Confectionary	2 tubs flavoured non-fat yoghurt (350g)
50g sugar	10 tbs ice cream (250g)
3 tbs jam	1.5 cups rice pudding/creamed rice (300g)
4 tbs syrups	Drinks
3 tbs honey	600ml fruit juice – unsweetened
80g chocolate	500ml fruit juice – sweetened
1.5 Mars Bars and other 50-60g bars	800ml cordial
60g jubes or jelly babies	500ml soft drink/flavoured mineral water
Mixed Dishes	250-300ml fruit smoothie
200g pizza (medium – ¼ thick or 1/3 thin)	Sports Foods
1.3 Big Macs	700ml sports drink
400g lasagne	250-300ml liquid meal supplement
1.3 cups fried rice (200g)	1-1.5 sports bars
	2 sachets sports gel

A note on protein supplements:

There is no need for protein powders/supplements. They are costly and often provide no other nutritional components other than protein. Athletes should be able to get their protein recommendations from food alone. In addition, excessive protein intake can sometimes be harmful, resulting in bone mineral loss and/or kidney damage.

If you want/need extra protein, try:

- ❖ Adding an egg to a milkshake
- ❖ Adding skim milk powder to a milkshake or glass of milk
- ❖ Adding yoghurt to a fruit smoothie

The table below demonstrates how expensive supplements are by comparing their cost (in cents) per gram of protein:

Food	Cost per 1g protein
Milk	2.08c
Egg	4.44c
Tuna	4.82c
Bread	9.00c
Steak	4.80c
HPLC bar	10.06c
Protein revival shake	13.26c
FX Lo Carb Shake	13.38c
FX Lo Carb Mini protein bar	21.80c

GOOD LUCK FOR THE SEASON AHEAD!!

FOR MORE INFORMATION:

- AIS Website – nutrition information, or to buy the cook books.
<http://www.ausport.gov.au/ais/nutrition>
- Dietitians Association of Australia (DAA) website – general nutrition information, to find an accredited dietitian.
<http://www.daa.asn.au/>
- Sports Dietitians Australia (SDA) website – specifically sports nutrition information, to find a sports dietitian.
<http://www.sportsdietitians.com.au/>

IF YOU HAVE ANY OTHER QUESTIONS, FEEL FREE TO EMAIL ME:

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