

## Carbohydrate Before, During & After Exercise

To increase stamina, improve performance and delay fatigue it is important to take in sufficient fuel while you exercise.

### Before Exercise

- A small meal containing about 1g/kg body weight of starchy carbohydrate is recommended up to one hour before exercise.
- This can help your performance by providing slow-releasing energy, thereby delaying fatigue.

**The table below gives examples of starchy carbohydrate foods that contain 50g of carbohydrate and are suitable up to one hour before exercise:**

Breads/Crackers	Weight g	Handy Measure
Wholemeal bread	125	3-4 slices
White bread	100	3-4 slices
Bread with jam/marmalade/honey		3 slices
Rolls	100	2 soft/crusty
Naan bread	100	2 small
Pitta bread	100	1 Large
Currant bun/scone	100	2 average
Bagel	75	1
Swiss Roll	100	3 slices
Jam tart	75	3 small
Muffin		1 and a half
2 slices of bread & 1 banana		1 sandwich
Fruit cake	100	
Ryvita	75	9 biscuits
Crackers/rice cakes	75	10 biscuits
<b>Cereals</b>		
Shreddies/Branflakes/	75	Large bowl
Cocopops/frosties/ricekrispies	50	Large bowl
Shredded wheat/weetabix	65	3 biscuits
Porridge (made with milk)	375	One and ½ bowls

Museli (unsweetned)/ fruit & fibre	70	Large bowl
Special K/Start/Cornflakes	60	Large bowl
<b>Cereal Bars</b>		
Museli/cereal bars	80	2 and ½ bars
Tracker	80	3 bars
Kellogg's Nutrigrain	2x37g	2 bars
Maxim Bar	55	1 bar
Isostar bar		2 bars
Nature Valley Bar	42g	1 ½ bar
Fruseli bar	2.5 x 33g	2 and ½ bars
Kellogg's Squares	2 x30g	2 bars
Popcorn	100g	
<b>Fruit</b>		
Dried Figs	90	5 figs
Dried dates	90	7 dates
Banana	200	2 large
Raisins/sultanas/currants	75	2 heaped tablespoons
Apples/oranges	500	3 medium
Pears	525	3 medium
<b>Potato/Pasta/Rice</b>		
Cooked rice	160	4 heaped tablespoons
Cooked pasta	225	8 heaped tablespoons
Tinned spaghetti in tomato sauce	400	1 large can
Potato baked/boiled	200	1 large
Mashed potato	325	5 scoops
Tinned Ravioli	500	1 large tin
Roast potato*	200	4 small
Chips (use oven chips) *	165	
Pizza*	200	
<b>Pulses</b>		
Baked beans	325	¾ of a large tin
Chickpeas/sweetcorn/lentils/red	300	10 tablespoons

kidney beans		
<b>Dairy Foods</b>		
Low fat rice pudding	325	1 can
Low fat custard	425	1 can
Ice-cream*	225	4 scoops
Milk (semi-skimmed)	1 litre	2 pints
Fruit Yoghurt (low fat)	250	2 pots

### During Exercise

- For exercise lasting longer than 60 minutes, it is important to refuel during that time.
- Refuelling should start after 30 minutes of exercise.
- An intake of between 30-60g of sugary carbohydrate/hour is recommended.
- Remember this is also an important time to rehydrate!

### Sugary Carbohydrate that can be consumed during exercise include:

Food	Weight	Handy measure
<b>Beverages</b>		
Orange juice	570mls	1 pint
Ribena	288mls	1 carton
Lucozade sport	700mls	1 ½ bottles
Isostar	750mls	3 scoops
Gatorade/ NRG		1 can
Powerade		
<b>Confectionary</b>		
Fruit pastilles	75g	2 packets
Jelly babies	75g	1 med. packet
Liquorice allsorts/Smarties	70g	1 medium bag
Peppermints	50g	
Fruit gums	110g	
Marshmallows		6
<b>Biscuits</b>		
Jaffa cakes	75g	6 biscuits

Fig rolls	125g	4-5 biscuits
Gingernut/ Garibaldi	75g	7 biscuits
Jam filled biscuits		4 biscuits
Kimberely/Mikado/Hobnobs	75g	5 biscuits

- = Foods are high in fat

### After Exercise

- The minimum time it takes to refuel muscle glycogen after exercise is 20 hours
- It is important to replenish carbohydrate stores after exercise to be able to train harder and longer, especially if you train every day or every other day.
- Recommended to take 1g of carbohydrate/kg body weight within 2 hour of finishing training or competition.
- The addition of protein to these recovery snacks/meals may also assist with recovery by helping to reduce muscle soreness.
- This can be achieved through the use of a sugary carbohydrate snack within 30 minutes of finishing (as per list above), followed by a mixed meal that contains both starchy carbohydrate (as per list above) and protein, within two hours of training.