



MC NUTRITION

FUELING GAELIC GAMES

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## Three Key Principles of Sports Nutrition:

- Stay well hydrated
- Provide fuel for your muscles
- Provide optimal recovery after training or match

## BEFORE TRAINING OR COMPETING:

### Start Hydrating Early

- Start hydrating **at least** 24hrs prior to exercise
- Check urine color: straw colour = well hydrated; apple juice color = drink more fluid
- 2–3 hours before exercise: Drink 500ml of water/sports drink (sip!)
- During active warm-up: Drink 150ml water/sports drink

### Stay Hydrated and Fueled

- Avoid losing more than 2% of body weight
- Do this by drinking at least 400ml of water/sports drink each hr
- However, consuming too much fluid during exercise can lead to overhydration, or hyponatremia, which impairs performance and can have serious health consequences
- Calculate your sweat rate, know how much fluid to consume during exercise
- Weight yourself. For every kilo lost drink 1.5 litres.
- Consume sports drink with sodium if going for more than 1hr or anytime it is hot or humid

### Rehydrate and refuel throughout exercise

- Be sure to get 30–60 grams of carbs per hr if exercise lasts 1–2 hrs OR 45–90 grams for exercise 2hrs+ to help delay fatigue and improve performance
- Get your carbs from easy-to-digest sources such as sports drinks/gels
- Consuming multiple sources of carbs eg 2:1 blend glucose/fructose can improve performance\*

\*Dual source energy blends can deliver 20–50% more energy to muscles than glucose alone.

# What and When to Eat

**STRENGTH Training** **CARDIO**

## PRE-WORKOUT

Building lean muscle requires a ready supply of **protein** for tissue repair.

Pre-workout nutrition for a cardio session requires more **carbs** than protein.

The more **intense** your efforts, the more protein you'll need.

Carbs give you the energy to **power** through an **intense** workout.

Carbohydrates should constitute **75%** of a pre-workout meal, and protein should constitute **25%**.

Carbohydrates should constitute **75-100%** of a pre-workout meal.

Protein must first be broken down into amino acids in order to be used by muscles to **repair** and **build** lean tissue.

Carbs are **metabolized** into glucose (energy) very quickly.

Your pre-workout meal should be consumed between **30-60 minutes** before hitting the gym.

**1-2 hours** prior to strength training, consume protein in order to have an adequate reserve for the upcoming workout.

The amount of protein required is based on **body weight**, **intensity level**, **length of workout**, and **gender**.

Add protein and fiber to deliver a **steadier supply of energy** throughout the workout and prevent fatigue resulting from consuming only carbs.

Recent studies suggest taking in around 10-20 grams of high-quality protein within **2 hours** after strength training is usually enough to jumpstart **recovery** and prevent muscle loss.

**Low Glycemic Index (GI) carbs** release sugar into the bloodstream more slowly... and tend to contain more essential nutrients like fiber.





▶ They are generally optimal to consume

**30-60 minutes**

prior to either a strength-training or cardio workout.



Also good to consume post-workout.

▶ Examples include whole foods like:



**High GI carbs** release sugar very quickly, providing a quick but **brief energy boost**.



▶ Examples include :



Best to consume before an intense cardio workout.



## Pre-Workout Choices

Your pre-workout meal should include **low GI carbs** to give you the energy you'll need, and **protein-rich** foods to store in reserve.

▶ Egg white omelette with spinach, whole grain toast, and skim or soy milk.



▶ Smoothie of protein powder, soy or skim milk, high GI fruits—such as mango, peach, or pineapple—and flax seed.



▶ Greek yogurt with banana, walnuts, apples, and honey.



Eat a small snack to help **boost blood sugar levels**, especially if your cardio workout is before your first meal or between meals.

▶ Whole, mixed grain hot cereal with raisins and walnuts, skim milk, and honey.



▶ Scrambled egg whites in a whole grain pita with a sliced apple.



▶ Greek yogurt parfait with layers of banana, peaches, and granola.

▶ Fruit smoothie made with soy milk, ice, banana, strawberries, and honey or brown sugar.

## POST-WORKOUT

**i** After a workout, dietary protein is more readily used for muscle building, rather than **fat storage**.

A protein shake or meal within **2 hours** of a workout will give your body what it needs to build lean muscle.

Although many believe consuming a protein drink during a strength-training workout is best for building muscle, **no significant evidence** supports this.

After a workout, **hydration** is the main goal.

A **significant** amount of water is lost through perspiration.

**Pure water** is the best source of hydration for the **average exerciser**.

Sports drinks like Gatorade and Powerade replenish lost electrolytes, but contain **large amounts** of sugar and calories.

Only athletes may need the extra electrolytes that make sports drinks **worth** the sugar and calories.

Generally, the **average** workout doesn't demand the extra calories and electrolytes in sports drinks.

Coconut water is a great alternative to sports drinks, offering lots of **potassium** and **magnesium**, which restores your electrolytes.

Also, after a tough cardio session, your energy resources may need replenishing with a **carb-rich** snack or meal.

PUTTING IT ALL TOGETHER			
	CARBS	PROTEIN	FLUID
BEFORE	<ul style="list-style-type: none"> <li>2-4 hours before exercise, have a carb-based, low-fat, low-fiber meal</li> <li>To top off energy stores, have a carb-based snack 30-60 minutes before exercise (aim for 40-60 grams of carbs)</li> </ul>	<ul style="list-style-type: none"> <li>2-4 hours before exercise, have a moderate-protein meal</li> </ul>	<ul style="list-style-type: none"> <li>Start hydrating 24 hours prior to exercise</li> <li>Drink 14-20 fl oz water or sports drink 2-3 hours before</li> <li>Drink another 8 fl oz prior to your practice</li> </ul>
DURING	<ul style="list-style-type: none"> <li>30-60 grams per hour for sessions &gt;1 hour</li> <li>45-90 grams of carbs per hour for sessions &gt;2 hours</li> </ul>	<ul style="list-style-type: none"> <li>Not required</li> </ul>	<ul style="list-style-type: none"> <li>Calculate your sweat rate as your guide: go to <a href="http://www.powerbar.com/src">www.powerbar.com/src</a></li> <li>Start with 13-26 fl oz of water or sport drink each hour</li> <li>Drink small amounts about every 15 minutes</li> <li>For exercise sessions &gt;1 hour and when weather is hot and humid, use a sports drink with sodium and carbs</li> </ul>
AFTER	<ul style="list-style-type: none"> <li>Within 30 minutes after exercise, have 0.5 grams of carbs per lb body weight (1.1 grams per kg)</li> <li>Repeat hourly for 3 hours, or transition to carb-based meals or snacks</li> </ul>	<ul style="list-style-type: none"> <li>Within an hour after exercise, have 15-25 grams of protein</li> </ul>	<ul style="list-style-type: none"> <li>Gradually drink about 16-24 fl oz per lb body weight lost (1,000-1,500 ml per kg weight lost)</li> </ul>
DAILY	<ul style="list-style-type: none"> <li>Low-intensity exercise: 2.3-3.2 grams of carbs per lb body weight (5-7 grams per kg)</li> <li>Moderate- to heavy-intensity exercise: 3.2-4.5 grams of carbs per lb body weight (7-10 grams per kg)</li> <li>Extremely heavy-intensity exercise: 4.5-5.5 grams of carbs per lb body weight (10-12 grams per kg)</li> </ul>	<ul style="list-style-type: none"> <li>0.5-0.8 grams per lb body weight (1.2-1.7 grams per kg)</li> </ul>	<ul style="list-style-type: none"> <li>Hydrate continuously throughout the day</li> </ul>



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**Glycemic Index Food Chart :**

**Use Low-Med GI 90% of the time and High GI pre/post game or training**

Foods with GI index less than 55 are considered Low Glycemic Index food (GI < 55). Foods with GI index between 55 and 70 are considered intermediate (55< GI <70). High Glycemic Index foods are with GI index more than 70 (GI >70).

| [GI Food Chart](#) | [Low GI Foods](#) | [Medium GI Foods](#) | [High GI Foods](#) |

Food List	Rating	Food Glycemic Index
<b>Bakery Products</b>		
*Pound cake	Low	54
Danish pastry	Medium	59
Muffin (unsweetened)	Medium	62
Cake , tart	Medium	65
Cake, angel	Medium	67
Croissant	Medium	67
Waffles	High	76
Doughnut	High	76
<b>Beverages</b>		
Soya milk	Low	30
Apple juice	Low	41
Carrot juice	Low	45
Pineapple juice	Low	46
Grapefruit juice	Low	48



Orange juice	Low	52
<b>Biscuits</b>		
Digestives	Medium	58
Shortbread	Medium	64
Water biscuits	Medium	65
Ryvita	Medium	67
Wafer biscuits	High	77
**Rice cakes	High	77
<b>Breads</b>		
Multi grain bread	Low	48
Whole grain	Low	50
Pita bread, white	Medium	57
Pizza, cheese	Medium	60
Hamburger bun	Medium	61
Rye-flour bread	Medium	64
Whole meal bread	Medium	69
White bread	High	71
White rolls	High	73
Baguette	High	95

Breakfast Cereals		
All-Bran	Low	42
Porridge, non instant	Low	49
Oat bran	Medium	55
Muesli	Medium	56
Mini Wheats (wholemeal)	Medium	57
Shredded Wheat	Medium	69
Golden Grahams	High	71
Puffed wheat	High	74
Weetabix	High	77
Rice Krispies	High	82
Cornflakes	High	83
Cereal Grains		
Pearl barley	Low	25
Rye	Low	34
Wheat kernels	Low	41
Rice, instant	Low	46
Rice, parboiled	Low	48
Barley, cracked	Low	50
Rice, brown	Medium	55
Rice, wild	Medium	57
Rice, white	Medium	58
Barley, flakes	Medium	66

Dairy Foods		
Yogurt low- fat (sweetened)	Low	14
Milk, chocolate	Low	24
Milk, whole	Low	27
Milk, Fat-free	Low	32
Milk ,skimmed	Low	32
Milk, semi-skimmed	Low	34
*Ice-cream (low- fat)	Low	50
*Ice-cream	Medium	61
Fruits		
Cherries	Low	22
Grapefruit	Low	25
Apricots (dried)	Low	31
Apples	Low	38
Pears	Low	38
Plums	Low	39
Peaches	Low	42
Oranges	Low	44
Grapes	Low	46
Kiwi fruit	Low	53
Bananas	Low	54
Fruit cocktail	Medium	55
Mangoes	Medium	56



Apricots	Medium	57
Apricots (tinned in syrup)	Medium	64
Raisins	Medium	64
Pineapple	Medium	66
**Watermelon	High	72
<b>Pasta</b>		
Spaghetti, protein enriched	Low	27
Fettuccine	Low	32
Vermicelli	Low	35
Spaghetti, whole wheat	Low	37
Ravioli, meat filled	Low	39
Spaghetti, white	Low	41
Macaroni	Low	45
Spaghetti, durum wheat	Medium	55
Macaroni cheese	Medium	64
Rice pasta, brown	High	92
<b>Root Crop</b>		
Carrots, cooked	Low	39
Yam	Low	51
Sweet potato	Low	54
Potato, boiled	Medium	56
Potato, new	Medium	57
Potato, tinned	Medium	61

Beetroot	Medium	64
Potato, steamed	Medium	65
Potato, mashed	Medium	70
Chips	High	75
Potato, micro waved	High	82
Potato, instant	High	83
**Potato, baked	High	85
Parsnips	High	97
<b>Snack Food and Sweets</b>		
Peanuts	Low	15
*M&Ms (peanut)	Low	32
*Snickers bar	Low	40
*Chocolate bar; 30g	Low	49
Jams and marmalades	Low	49
*Crisps	Low	54
Popcorn	Medium	55
Mars bar	Medium	64
*Table sugar (sucrose)	Medium	65
Corn chips	High	74
Jelly beans	High	80
Pretzels	High	81
Dates	High	103

Soups		
Tomato soup, tinned	Low	38
Lentil soup, tinned	Low	44
Black bean soup, tinned	Medium	64
Green pea soup, tinned	Medium	66
Vegetables and Beans		
Artichoke	Low	15
Asparagus	Low	15
Broccoli	Low	15
Cauliflower	Low	15
Celery	Low	15
Cucumber	Low	15
Eggplant	Low	15
Green beans	Low	15
Lettuce, all varieties	Low	15
Low-fat yogurt, artificially sweetened	Low	15
Peppers, all varieties	Low	15
Snow peas	Low	15
Spinach	Low	15
Young summer squash	Low	15
Tomatoes	Low	15
Zucchini	Low	15
Soya beans, boiled	Low	16

Peas, dried	Low	22
Kidney beans, boiled	Low	29
Lentils green, boiled	Low	29
Chickpeas	Low	33
Haricot beans, boiled	Low	38
Black-eyed beans	Low	41
Chickpeas, tinned	Low	42
Baked beans, tinned	Low	48
Kidney beans, tinned	Low	52
Lentils green, tinned	Low	52
Broad beans	High	79

Notes: \*high in empty calories \*\*low-calorie and nutritious foods



**Monounsaturated fats and polyunsaturated fats** are known as the **“good fats”** because they are good for your heart, your cholesterol, and your overall health.

GOOD FATS	
Monounsaturated fat	Polyunsaturated fat
<ul style="list-style-type: none"> <li>➤ Olive oil</li> <li>➤ Canola oil</li> <li>➤ Sunflower oil</li> <li>➤ Peanut oil</li> <li>➤ Sesame oil</li> <li>➤ Avocados</li> <li>➤ Olives</li> <li>➤ Nuts (almonds, peanuts, macadamia nuts, hazelnuts, pecans, cashews)</li> <li>➤ Peanut butter</li> </ul>	<ul style="list-style-type: none"> <li>➤ Soybean oil</li> <li>➤ Corn oil</li> <li>➤ Safflower oil</li> <li>➤ Walnuts</li> <li>➤ Sunflower, sesame, and pumpkin seeds Flaxseed</li> <li>➤ Fatty fish (salmon, tuna, mackerel, herring, trout, sardines)</li> <li>➤ Soymilk</li> <li>➤ Tofu</li> </ul>

**Saturated fats and trans fats** are known as the **“bad fats”** because they increase your risk of disease and elevate cholesterol.

Appearance-wise, saturated fats and trans fats tend to be solid at room temperature (think of butter or traditional stick margarine), while monounsaturated and polyunsaturated fats tend to be liquid (think of olive or corn oil).

BAD FATS	
Saturated fat	Trans fat
<ul style="list-style-type: none"> <li>➤ High-fat cuts of meat (beef, lamb, pork)</li> <li>➤ Chicken with the skin</li> <li>➤ Whole-fat dairy products (milk and cream)</li> <li>➤ Butter (but not totally bad for you!)</li> <li>➤ Cheese</li> <li>➤ Ice cream</li> <li>➤ Palm and coconut oil</li> <li>➤ Lard</li> </ul>	<ul style="list-style-type: none"> <li>➤ Commercially-baked pastries, cookies, doughnuts, muffins, cakes, pizza dough</li> <li>➤ Packaged snack foods (crackers, microwave popcorn, chips)</li> <li>➤ Stick margarine</li> <li>➤ Vegetable shortening</li> <li>➤ Fried foods (French fries, fried chicken, chicken nuggets, breaded fish)</li> </ul>

