



## METRIFIT FACT SHEET: NUTRITION AND THE ATHLETE

In order for an athlete to reach their peak performance one of the essential ingredients is proper nutrition. In much the same way that even a car in the best mechanical condition won't go very far without the right quantity of quality fuel, an athlete's body needs to be properly fuelled if it is to perform at its peak.

The more fuel you put in the further you can go, up to some point. You also need to put the right type of fuel into a car. Adding the wrong fuel can lead to the car breaking down. When we talk about fuel for humans, we are talking about calories (or energy). Calories can be broken down into 3 macronutrients, which are Carbohydrate, Fat and Protein.

### GET THE BALANCE RIGHT?

Proper nutrition involves achieving the right balance of the following elements:

**Carbohydrates:** Essential for providing glucose for energy and are found in pasta, bread, cereal, rice, grains, potatoes, fruit, vegetables, milk, yogurt etc.,

**Protein:** Essential for muscle growth and to repair body tissues, and as an energy source. It can be found in lean meats like chicken and turkey, eggs, and Greek yogurt.



**Fat:** A vital energy source used to fuel longer exercise and endurance activities, such as hiking, cycling, and long-distance running. Found in avocados, salmon, nuts and nut butters, and olive oils.

**Water and fluids:** Water and fluids are essential to keep the body hydrated and at the right temperature. Your body can lose several litres of sweat in an hour of vigorous exercise.

### THE 3 Ts of NUTRITION

Of course it is not as straightforward as simply eating the correct types of foods, as other factors have to be taken into consideration such as when and how much the athlete eats are just as important. The 3Ts of Nutrition is a theory put forward by many [Nutritionists](#) – Timing, Type and Total.

**Timing** – It is recommended that elite athletes consume food around 5 times a day, roughly every three hours, to create a habit of eating smaller portions that provide energy throughout the day. This gives the body the best opportunity to digest foods as efficiently as possible, and also ensures the athlete has a plentiful supply of energy inside their body.

**Type** – It has long been promoted that an athlete's diet should contain up to 60 to 70% carbohydrate, 20% fat and the rest protein. Whilst this is applicable to some athletes, it is not for every athlete and consideration needs to be given to the amount and type of carbohydrates given to certain athletes.

**Total** – Depending on each individual athlete and their upcoming schedule of training and playing, the portion sizes may need to be reduced or increased to match their likely physical activity levels. It is important athletes are conscious of the amount of exercise they are undertaking and matching their food intake accordingly.

## NUTRITION BEFORE AND AFTER EXERCISE

As well as developing good eating habits on a consistent basis, athletes also have to be aware of the need to fuel their bodies prior to exercise, and also to refuel afterwards. The food you eat before you exercise greatly affects the quality of your athletic performance, and the following tips may be useful:-

- Eat a larger meal if you have 5-6 hours before you begin your exercise. Smaller “mini” meals are better to have 2-3 hours before your workout begins. Meals that are high in complex carbohydrates (foods rich in carbohydrates for long-lasting energy power) are best because they fuel your muscles.
- Avoid high-bulk (high-fiber) foods such as broccoli, baked beans, or bran cereal right before exercise.
- Sugars and sweets don’t provide lasting energy.
- Limit foods that are high in dietary fat such as fast food, eggs, meat, and cheese.
- Don’t try new foods before a competition.
- It’s very important to refuel your body after a hard workout. Because your body replaces glycogen stores in your muscle within the first few hours after exercise, it’s important to eat carbohydrates and some protein soon after your workout.
- Even if you aren’t hungry, try eating a snack that contains carbohydrates (such as a yogurt or half a sandwich) within 30 minutes after a workout.
- You should eat a larger meal that’s high in carbohydrates and has some protein within the next 2-3 hours to replace muscle glycogen stores that were used up during exercise.

## SUPPLEMENTS AND THE ATHLETE

Vitamin and mineral supplements are not usually required if the athlete is maintaining optimum body weight and consuming adequate energy from a balanced diet. Athletes who restrict their calorie intake or partake in different diets/weight loss programs or eliminate certain food groups from their diet can be at risk of nutrient deficiencies. Young athletes often turn to supplements as there are many obvious advantages that help improve their training and in turn their performance in competition. However, despite the advantages, it is not just a matter of an athlete getting their hands on supplements and every problem is solved. Like everything in their training program they have to ensure that it is the right one for their particular needs and that it is taken in the right quantity. The article [Sports Supplements in Junior Athletes](#) offers the following practical advice in terms of the questions you should ask when taking supplements:



- Is the product legal (i.e. is not on the [World Anti-Doping Agency’s \(WADA\) prohibited list?](#))
- Is there a sound body of evidence with a physiologic basis for action that supports the claims made by the product?
- Are they specific to your training/competition needs?
- Are there any side-effects?

If in doubt, go to an expert and discuss the advantages and disadvantages with a dietitian who will be able to help identify your particular needs and which products are best suited. Proper nutrition and hydration for athletes is one of the most important factors you need to take into consideration when planning a sports performance program. If proper fuel is not the foundation of a training program, you cannot meet your full athletic potential and you leave yourself more susceptible to fatigue and injury.

## REFERENCES

[Sports and Nutrition: Fueling Your Performance](#) | Center for Young Women's Health  
[Nutrition and Athletic Performance](#) | MedlinePlus  
[The 3Ts: Type, Total and Timing](#) | Everton FC  
[Supplements and the young athlete](#)  
[Fueling for Athletic Performance](#)

[Refuelling during exercise](#)  
[Getting the right pre-workout meal will pay dividends](#)  
[Fuel your body to reach peak performance level!](#)  
[Sports drinks, energy bars and gels – Just how useful and effective are they?](#)  
[Nutrition for Athletes](#)



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