

What should be in an athlete's diet?

An athlete should ensure that they consume a varied diet that is sufficient in energy to support both health and performance. Due to the stresses that high volume, endurance training places on the body, it is important to ensure that the diet is sufficient in energy (predominantly from carbohydrates) and protein and rich in vitamins, minerals and antioxidants. These nutrients are vital to energy production, muscle recovery and immune function, amongst other factors.

An athlete's diet should contain plenty of nutrient dense foods such as:

- whole grain products
- nuts
- vegetables
- oily fish
- fruit
- dairy products
- pulses (beans, peas, lentils)

Athletes have slightly higher protein demands, so high quality proteins are fundamental in the diet, for example:

- lean meats
- fish
- eggs
- dairy (particularly milk) and vegetarian alternatives such as soy milk and tofu

Iron is one of several essential nutrients for endurance athletes and iron rich foods include:

- lean red meat
- eggs
- dark green leafy vegetables
- fortified cereals

Recovery

Fuelling up and recovering from training and competition is crucial in maximising performance and promoting muscular adaptations, whilst also minimising the risk of illness and injury.

Carbohydrates play a key role in this area as they are an important source of energy for the muscles, hormone responses and the cells of the immune system. Carbohydrates are also an important energy source for the brain and are therefore necessary for concentration both during training and at school, university or work.

Good sources of carbohydrate are:

- cereals
- bread
- rice, pasta, noodles
- couscous
- milk
- fruits and vegetables (particularly sweet potato, butternut squash, parsnips etc)

Replacing fluid lost during training or competition is crucial and becomes even more important in hot and humid conditions. If the fluid shortfall is too great, then it is likely that this will have a detrimental effect on performance. In order to restore fluids after exercise, it is necessary to drink more than the amount lost through sweat, as well as ensuring the electrolytes (particularly sodium) are replenished.

How good nutrition can help you recover from injury

When recovering from an injury, whether it is muscular, bone or connective tissue, the body requires a nutrient rich diet in order to support the synthesis of new tissue and the cells of the immune system (which will be working overtime), whilst enhancing nutrient delivery to the injured site and minimising any excessive inflammation.

What is important?

- Energy - Regardless of the injury, it is important to meet your overall energy requirements, whilst also recognising the reduction in energy expenditure due to reduced activity levels.
- Protein - Cell turnover will be much higher during an injury as the cells of the immune system work hard to fight infection, control inflammation and remove dead, damaged cells from the site of injury. New tissue will need to be formed in order to replace the damaged tissue, therefore high quality protein is of great importance.
- Antioxidants - When the body is under stress free radical production increases. To minimise any further damage consume plenty of antioxidant rich foods.

- Omega 3 fatty acids - These fats play an important role in inflammation and can help to reduce excessive inflammation that can impede recovery.

Bone injury

In addition to the above, a number of nutrients can play an important role in bone injuries. These are listed below, along with the types of food they are found in.

- Calcium - milk and dairy products, fortified white flour, dark green leafy vegetables, pulses, seeds
- Vitamin D - oily fish, fortified margarines, fortified breakfast cereals; although predominantly generated in the skin from the impact of UVB rays from the sun
- Vitamin K - green leafy vegetables, e.g. spinach, broccoli, green cabbage
- Phosphorus - red meat, dairy products, fish, poultry, bread, rice, oats
- Magnesium - vegetables including potatoes, meats, dairy products, pulses, bread, cereals

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