

Sport & Nutrition

Good nutrition is fundamental to sport.

The appropriate diet is important to enhance sports performance while optimising and maintaining overall health and wellbeing.

Introduction

Certain nutrients have specific roles in sports performance and adequate fluid intake is vital for hydration.

Sports differ in terms of intensity, endurance and training programmes, hence nutritional needs will need to be tailored in accordance. Nonetheless, this guidance sheet highlights the essentials of sports nutrition and provides dietary advice to enhance sports performance.



Where does the energy for exercise come from?

The main source of energy for exercise comes from carbohydrates. Carbohydrate is stored in our muscles and liver as glycogen; however these stores are quite small. As glycogen stores are used up, fatigue sets in. These stores should be 're-fuelled' sufficiently before another bout of activity to ensure performance is not compromised. Therefore, regular carbohydrate consumption is needed during periods of activity. The type of carbohydrate and the timing of consumption are also important – this is discussed below in more detail.

Before Sport

- Adequate glycogen stores is key to sports performance, therefore consuming a carbohydrate-based meal 3-4 hours before the event is recommended. The amount of carbohydrate needed will depend on intensity and time of the previous training session and the type of sport.
- Ideally, the meal prior to sport or exercise should be carbohydrate-based, low in fat, contain some protein and be easy to digest. Rice and pasta dishes with a tomato-based sauce and a small serving of meat are ideal.

During Sport

- Experts recommend consumption of carbohydrate during intense exercise lasting longer than one hour. Also, carbohydrate intake may be useful in prolonged events or events with intermittent performances such as tournaments.
- During sports, consuming carbohydrates via fluids is more practical.



After Sport

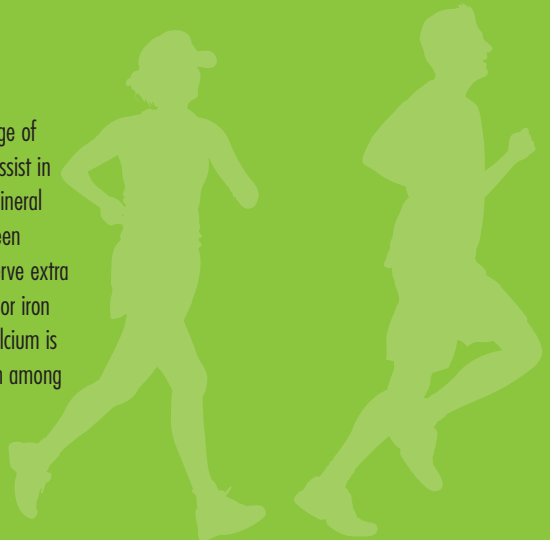
- The body replenishes glycogen stores at a faster rate after sport, therefore eating carbohydrate-based foods as soon as possible after exercise or training is ideal. You may not feel like eating straight after sports, or it may not be possible for you to eat a meal straight after sport due to location etc., therefore a snack or drink may be more practical and convenient.
- It is important that glycogen stores are sufficiently refuelled before the next training or sports session. If sessions are scheduled close together, significant efforts should be made to consume carbohydrate-based foods. If glycogen is not adequately restored, consequences may include fatigue and poor performance.

What about protein?

Regular exercise increases protein requirements, however, these requirements are not as high as many athletes think! The typical diet consumed by most athletes supplies adequate protein for their needs (exception may include athletes with a low energy intake) and there does not appear to be any benefit in consuming extra large amounts. It is thought that the consumption of some protein immediately before and after exercise may be beneficial to muscles. Therefore, including protein in a carbohydrate-based snack after training may be beneficial e.g. small cheese or meat sandwich, yogurt or flavoured milk.

Are vitamins and minerals important?

A healthy balanced diet including a range of foods from the main food groups will assist in achieving recommended vitamin and mineral requirements. Iron and calcium have been highlighted as two minerals which deserve extra attention. Some athletes may suffer poor iron status due to food restrictions, while calcium is of particular importance for bone health among young female athletes who may have reduced levels of oestrogen.



Hydration

During exercise the body generates heat, which is lost through sweat. These fluid losses must be replaced in order to maintain performance and avoid dehydration. Drinks containing sodium (in correct proportions) assists water absorption and the rehydration process. Athletes should be fully hydrated prior to exercise. Fluid consumption may be required during exercise lasting more than 30 minutes. Water is sufficient for sessions up to an hour, but for longer sessions sports drinks may be useful. Ideally, fluid intake should match fluid loss, remembering to take into account continuing sweat losses during the recovery period. Training sessions should be used to develop a fluid strategy.

Carbohydrate-based foods

- 1 Banana
- Pasta in a tomato sauce
- Flavoured Milk
- Bread/Toast
- Small Sandwich
- Scone and Jam
- Breakfast Cereal and Milk

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