

## Sports Nutrition - the nutrition you need for your active lifestyle

Leading an active lifestyle requires the right nutritional balance that varies depending on the level of physical activity.

### Carbohydrates

Carbohydrates are the body's main energy source (1). During exercise, they are the first fuel used (2,3). Restricting carbohydrates can lead to quick fatigue and impaired performance(4).

Daily carbohydrate recommendation based on exercise intensity

| Low  | Moderate                                     | High  | Very High                                     |
|--|--|---|---|
|  |  |   |   |
| 3 - 5g of carbohydrate per kg of body weight | 5 - 7g of carbohydrate per kg of body weight | 6 - 10g of carbohydrate per kg of body weight | 8 - 12g of carbohydrate per kg of body weight |



### Carbohydrates during exercise

For exercise lasting over an hour, consuming carbohydrates can provide necessary energy and improve performance (5). Sports drinks and gels are convenient options for this carbohydrate boost.

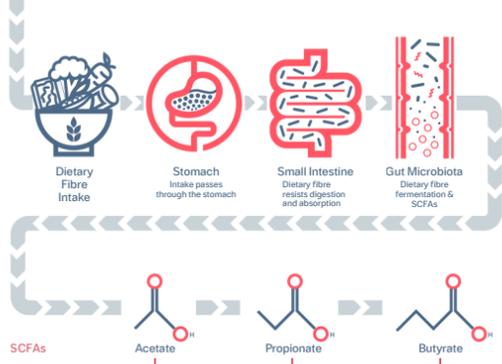


### Fibre

Fibre is a type of carbohydrate that is not digested in the stomach or small intestine and passes intact to the large intestine (also called the colon)(6). Once there, the fibres may be partially or completely fermented by gut bacteria to produce short-chain fatty acids (SCFAs), which help to keep your digestive system healthy.



The journey of fibre through the human body



### The benefits of soluble fibre for an active lifestyle

Emerging evidence suggests that a particular type of fibre, known as soluble fibre has a number of potential health benefits. Soluble fibre can be found in fruits such as ripe bananas, apples and pears, vegetables including root vegetables, broccoli and peas, as well as oats.

Whilst further research is needed into how fibre can benefit athletes and their performance, it's certainly an exciting area for the future.

|   |   |   |
|---|---|---|
|   |   |   |
| <b>Bone Health</b>  | <b>Gut Health</b>   | <b>Immunity</b>   |
| Healthy bones are important for an active lifestyle. Studies have shown that certain types of soluble fibre can increase calcium absorption and help keep bones healthy (13). | A healthy and diverse gut microbiota may support energy levels and increase performance and health (14). Some soluble fibres promote the growth of certain bacteria and the production of SCFAs, helping to support a healthy gut (15, 16). | Soluble fibre encourages the growth and activity of certain bacteria, potentially supporting gut health and immune function (16, 17). Further research is needed to fully understand the effect of fibres on specific aspects of the immune system. |

### Protein

High-biological value protein to help you reach your daily goals include dairy proteins, eggs and soy. Dairy proteins are particularly good for muscle protein synthesis due to their high digestion(5, 23).



Guidelines for daily protein intake (5)

| Low-Moderate                 | High Endurance             | High Strength and Power      | Female Athletes     |
|------------------------------|----------------------------|------------------------------|---------------------|
|                              |                            |                              |                     |
| 0.8 - 1.2g/kg of body weight | 1.2 - 2g/kg of body weight | 1.6 - 2.2g/kg of body weight | 20% less than males |

### Plant based protein

Although plant and animal proteins differ in composition(22), research shows that they both contribute towards muscle growth and building strength(25).



### Hydration

Hydration needs vary based on factors such as exercise intensity and weather conditions. Remember that you are likely to be slightly dehydrated even before you start to feel thirsty.



A rough guide as to the amount of hydration you need (5)

|   |   |   |
|---|---|---|
|   |   |   |
| <b>Before exercise</b>  | <b>During exercise</b>                              | <b>After exercise</b>                                       |
| 500ml the night before training/competition and 400 - 600 ml 20-30 mins before<br><small>(For an adult with average weight of 70kg)</small> | 500ml to 2L of fluid per hour to offset weight loss | 500 - 700ml for every 0.5 kg of weight loss during exercise |

### Choosing the right hydration

Sports drinks can be a good option as they already contain the right balance of electrolytes for the body. Electrolytes are essential minerals like sodium, potassium, calcium & chloride (27).



### Conclusion

An active lifestyle and good nutrition go hand in hand. Whatever your level of activity, it's important to get the nutritional balance you need. Following healthy eating guidelines, staying hydrated, and using specialist sports nutrition products where needed to support your goals are a firm foundation for success. At Tate & Lyle, our portfolio of innovative ingredients is leading the way for products that you can incorporate seamlessly into your chosen exercise routine.



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