

NUTRITION FOR HOCKEY

Hockey (known as field hockey internationally) is a team-based sport played on artificial turf or grass, depending on the competition level. The game is played with two teams, each having ten players on the field and one in goals. A game consists of 35-minute halves with a 5-10-minute break between halves.

Training

Hockey is predominantly played in the winter months, with athletes typically having a lengthy break over the summer or taking up a summer sport. At higher levels of competition (i.e. state and national), training and competition may continue throughout most of the year. Pre-season training starts with conditioning and strength training, moving on to skill training as the season approaches. Match practice and fitness are improved moving into the season. There is usually 3-4 hockey skills training sessions per week with a game on the weekend. Training sessions are generally 1-2 hours in length with the intensity of sessions reducing towards the end of the week in preparation for competition. Cross training sessions such as resistance training, flexibility, speed and endurance may form parts of these sessions or extra training throughout the week.

Competition

The usual competitive season involves one game per week on the weekend. At the higher level there may be tournaments with a series of games over a short period of time. Regular interstate or international travel is necessary for elite hockey players.

The game is played at a fast pace with short bursts of high intensity sprints, with tackling, dribbling, passing and many changes in direction interspersed. Energy expenditure can be 60 – 80 kilojoules/min, with the higher end of the range for midfield positions. Hockey is a non-contact sport, however injuries often occur from ball or stick accidents, or joint and muscle damage. A high level of energy expenditure, coupled with fluid loss and injuries, means sound nutritional and hydration strategies are required to optimise performance.

Physical Characteristics

Hockey players vary greatly in body size and shape, but require endurance, strength, power, skill, agility and speed for the game. Low body fat levels are an advantage to assist with agility and speed. The following table shows typical physique characteristics for elite hockey players:

	Males	Females
Height (cm)	175-186	161-171
Body Mass (kg)	71-80	55-69
Sum of 7 skinfolds (mm)	40-60	59-83

Common Nutrition Issues

Coping with a Busy Lifestyle

Hockey is not a professional sport, and most players have full time jobs or study to contend with, on top of training and playing. This creates a very busy lifestyle, which can lead to poor eating habits, especially for athletes who lack the skills to shop and cook. Takeaways are often a trap in this busy world. Learning to choose better takeaways, understanding food labels, and learning to cook can all have advantages in helping hockey players recover from exercise and minimise the effects of fatigue.

Body Fat Levels

For good speed and agility, hockey players need to keep body fat levels under control. This is especially an issue during the off-season, where there can be an energy imbalance when activity levels drop. This can be resolved by decreasing energy intake over this time or increasing the amount of exercise undertaken by playing another sport or undertaking some specific fitness training.

The Training Diet

Hockey is mainly an aerobic sport with short bursts of high intensity sprinting. Energy requirements for hockey players vary greatly depending on the standard of play. Overall, the training diet for a hockey player needs to be based on nutrient-rich sources of carbohydrate (cereals, fruit, vegetables, flavoured yoghurt etc), provide moderate levels of protein and smaller amounts of nutrient-poor carbohydrate (sugar, cordial, soft drink, lollies, cakes etc.) and fat.

Carbohydrate is a key nutrient for active hockey players. The training workload and intensity of training and games influences how much carbohydrate is required. Typical requirements range from 5-8 grams of carbohydrate per kilogram body mass (see the fact sheet Carbohydrate – how much? on the AIS Sports Nutrition website for further guidance). Regular consumption of carbohydrate-based foods at all meals will allow refuelling of muscle glycogen stores. The most important times are following training and games, to assist with recovery from each session. One game of hockey may not fully deplete an athlete's glycogen stores if starting with a full supply, but if the daily diet provides inadequate amounts there may be difficulty in performing optimally. Throughout a tournament scenario, a reduction in carbohydrate stores may lead to decreased performance. Be sure to include carbohydrate sources such as bread and cereals, rice, pasta, fruit and flavoured low-fat dairy products in your daily food intake.

Hydration

Fluid intake is another important aspect of hockey. With the game being played usually over the winter season, fluid losses may be the greatest very early and very late in the season when the temperatures are the warmest. When games and tournaments are held in hot weather, fluid losses can be large (1-5L over a game have been recorded in AIS athletes). Sports drinks can be valuable for hockey players, especially for midfield players who tend to have the greatest requirement for carbohydrate and fluid. Sports drinks help to look after fluid and carbohydrate needs simultaneously.

Match Preparation & Recovery

During a normal hockey season, matches are usually held once per weekend, either during the day or evening. Preparation for and recovery from these matches is important to get the best performance. In tournament situations, when there are games daily, recovery becomes extremely important to maintain energy levels over the tournament duration.

Consuming a high-carbohydrate, low-fat meal 3-4 hours prior to a game plus staying well hydrated will keep you fuelled and hydrated for the game. (See the fact sheet Eating Before Exercise on the AIS website for more information). Small carbohydrate snacks can also be eaten 1-2 hours before a game to top up fuel stores. Ideas for snacks include fruit – fresh or dried, cereal bars, crackers, yoghurt and jelly lollies. Fluids suitable to consume include water, sports drink, juice and cordial.

Recovery from a game requires replacing lost fluids and electrolytes, refuelling depleted carbohydrate stores and repairing muscle damage from the game. When quick recovery is required (i.e. you will be exercising vigorously again within 24 hours), food and fluid combinations that provide fluid, carbohydrate and protein are recommended immediately after the game. Suitable foods to select from include yoghurt, fruit, flavoured milk, cereal, cereal bars, sandwiches, sports drinks, juice and water.

This fact sheet is based on AIS / National team athletes and is therefore specific to these athletes. Written by AIS Sports Nutrition, last updated April 2009 © Australian Sports Commission.