

NUTRITION FOR SQUASH

Elite level squash is predominantly a moderate to high-intensity aerobic activity with intermittent bursts of energy supplied by anaerobic energy sources. It is a fast paced game of skill, speed, agility and concentration. The ability to change the direction of the ball at the last instant is an important skill as it leaves the opponent off balance. If an opponent's shot can be anticipated, a player then has time to react sooner and may gain the advantage.

Traditionally, squash has not been considered a spectator friendly sport due to fast paced shots using a black ball in an enclosed area making viewing limited. This is beginning to change with the use of coloured balls and glass courts as squash is being considered for inclusion as an Olympic sport.

Training

Elite level squash players will generally train two to three times daily with 1-2 sessions per day on-court, supplemented with weight training; cross-training such as running, cycling or Pilates; agility or technique training. Recovery from multiple training sessions is important and as squash is not a well-funded sport most elite squash players must work to support themselves. Combining nutrient and fluid replenishment within the confines of a busy lifestyle is often challenging and requires planning, organisation and experience.

Competition

A squash match can last as little as 10 minutes however a typical game at the elite level lasts 30-40 minutes. Rallies generally last 4-8 seconds or greater in games of experienced athletes. A game is won when a player reaches 11 points, with a match won in a 'best-of-five' system.

Squash players may play more than one game in a day and tournaments may last for 4-5 days in a round-robin fashion where players are knocked out if they lose. Competition squash games have a high work-to-rest ratio with play accounting for greater than 50% of game time. This places a high demand on fuel and fluid supplies within the body. Elite level players have been documented to expend approximately 3000kJ/hr during match play.

Physical Characteristics

Squash players have a high anaerobic capacity with the ability to cope with high lactate levels, at times exceeding 10 mmol/L, but otherwise their physiology is not uniform within the sport. Many high-ranking elite squash players are from Asia where the typical physique is small and lightly muscled. In Australia high-level squash athletes are moderately muscular with a low to moderate body fat level. Sport-specific technique is the most important characteristic of a squash athlete.

Common Nutrition Issues

Body composition

Optimising body composition for squash involves deciding on an individual level of body fat which is conducive to optimal play and fuel intake. Having too high body fat levels may reduce agility and speed as well as heat tolerance while having too low body fat levels may mean an athlete lacks endurance or is not consuming adequate nutrients for training and competition demands. Adjusting and maintaining body fat levels to optimum levels is usually achieved over a long period of time and is best performed with assistance from a Sports Dietitian to ensure maintenance of performance and health.

Training nutrition

Squash athletes require a high carbohydrate diet with particular emphasis on intake around training. Carbohydrate intake appears to assist in the maintenance of skill after short-term fatiguing exercise thus consuming carbohydrate during training such as in a sports drink may be of benefit. Protein intake around resistance training aids muscle accretion and adaptations. A regular fluid intake over the day will assist in maintaining adequate fluid levels. Recovery from multiple training sessions in a day requires organisation, planning and preparation. Check out the 'What to Eat before Training and Hydration Factsheets' for more information.

Competition Nutrition

The variable nature of matches and the competition timetable may mean that it is difficult for players to anticipate their needs for the next event, or, sometimes even the start of play. Being prepared for every eventuation of competition is important and does require considerable planning. Players should begin a tournament well fuelled and then consume a carbohydrate rich meal or snack with plenty of fluid as soon after their match as possible to begin their recovery. They can then top up over the day if further competition is expected. If an athlete has completed competition for the day then they should also consume a high carbohydrate, high fluid recovery snack as soon after the cessation of the match as possible. And then continue their normal pattern for the remainder of the day focusing on adequate carbohydrate and fluid if they have further competition on subsequent days.

Hydration

While squash matches are usually of relatively short duration, they can be played in hot and humid conditions despite being played indoors. Dehydration is a common problem in squash athletes particularly in tournaments with sweat losses measured at 1333-2370mL per hour in male elite squash players. Most were unable to match their fluid intake resulting in dehydration of 1.3-2.2% of body weight. It is recommended that dehydration be minimized to less than 2% of body weight to prevent decrements in performance. During a squash

match, fluid intake is limited to the periods between games. Players must optimise opportunities available to consume fluid and ensuring volume is sufficient. Fluid should be consumed before, and after the match, particularly if further competition or training is planned for later in the day.

Athletes must start games and training well hydrated and utilise every opportunity to drink sufficient fluids to minimise losses. Athletes should consider the inclusion of sports drinks as they provide carbohydrate and electrolytes such as sodium as well as fluid. Having access to cool, clean and sweet fluids may encourage intake and help with cooling in hot, humid environments. More information on fluid intake can be found on the Hydration Factsheets.

Travel

Elite squash players will travel overseas for competition many times in a year to countries such as Asia, India and the United States. This presents many nutritional challenges such as coping with plane travel; disruption in sleep, meal and training routine; staying in hotels; eating foreign food; food and water safety; acclimatization to the environmental conditions and simply access to familiar foods. Travelling players will benefit from being organised, planning ahead and taking familiar snacks, suitable sports foods and drinks with them to minimize the disruption to their routine. The Travel Factsheets will give you more information on managing your food and fluid requirements while traveling.

This fact sheet is based on AIS / National team athletes and is therefore specific to these athletes. Written by the AIS of Sports Nutrition, last updated May 2013. © Australian Sports Commission.