

## 壁球 SQUASH



### Overview

Squash is a game of skill, speed, concentration, agility, and endurance. It is played by both men and women, in singles competition. At elite level, squash, which is fast and mobile game, is highly reliant on anaerobic energy system. Therefore, players need to have adequate carbohydrate fuel stores.

### Training

Local squash players participate in training 2 - 4 hours per day and 6 days per week. The trainings include both on-court practice and fitness training.

### Competition

A squash match is played over the best 5 sets for both men and women and 11 points in each set. The length of a match varies greatly, ranging from 30 minutes to 2 hours or more. The fuel and fluid demands of a match will vary accordingly. In addition, squash players often need to play several matches on the same day or in consecutive days. Therefore, rehydration and replenishment of muscle glycogen storage are also important.

### Physical Characteristics

The physical characteristics of squash players are long arms and a relatively low center of gravity (short legs in proportional to trunk). Such physical characteristics can facilitate extra reach for playing stroke. However, squash players come in all shapes and body sizes. Players adapt their game to make the most of their physical strengths. The body-fat levels of squash are relatively low allowing greater stamina.

### Common Nutrition Issues Training Nutrition

Day to day training of full-time squash players increases daily energy and carbohydrate requirements. If squash players do not consume adequate carbohydrate between training sessions, they may suffer fatigue and unwanted weight loss and this will directly affect their performance and training gains. Squash players in heavy training need to start recovery nutrition immediately after exercise. Ideally, squash players should aim to consume 50 – 100 grams of carbohydrate within 30 minutes after training. Recovery snacks should be combined with fluid to replace fluid lost during exercise. Squash players who are undergoing puberty need extra energy and nutrients for the growth and daily activity. Each of the following provides approximately 50 grams of carbohydrate. Eat 1 to 2 of these portions to ensure fast recovery after a heavy training and repeat this pattern after 2 hours until the normal eating pattern have been resumed.

- 650 – 800 ml of sports drink
- 500 ml of fruit juice
- 1 1/2 banana (medium)
- 3 medium pieces of fruits
- 1 jam sandwich made with 2 thick slices of bread and plenty of jam
- 1 energy bar

### Hydration Guidelines for Competition and Training

Although squash is an indoor sport, players can have significant sweat losses when the match or training lasts 2 - 3 hours or more. To reduce the risk of dehydration, squash players should follow a plan of fluid intake before, during, and after exercise.



#### Before exercise

Four hours before exercise, drink 5-7 ml/ kg body weight of fluid. If no urine is produced two hours before the event, drink another 3-5ml/ kg body weight of fluid.

#### During exercise

Drink adequate fluids to keep weight loss to less than 2% after exercise. Replete with fluid according to individual differences and environmental conditions. Drink small amounts of fluid frequently is better than drinking a large amount all at once because this allows more efficient absorption and better tolerance to taking fluids.

#### After exercise

Each kilogram of weight lost is equivalent to 1L of fluid. To fully rehydrate, squash players should consume 150% of deficit over the next 2 hours to achieve fluid balance. For example, if a squash player lost 1 kg after exercise, the squash player will need to consume 1.5L of fluid in order to achieve fluid balance.

The rate of sweat losses of local squash players is shown as follow:

	Temperature (°C)	Fluid Intake (L)	Sweat Rate (L/hour)
Male	21	1	0.7
Female	20.8	0.85	0.45

Squash players should keep cool and refreshing fluids on court-side and grab a drink as appropriate. On some days it may be sufficient to drink between sets but it is probably good practice to grab a quick drink after a set. Squash players should remind themselves to have good hydration practice during training. Such practice not only help in training but will also give the players opportunity to practice drinking strategies during a match, including the choice of drinks.

Water is a good source to replace fluid losses but there may be additional advantages in providing carbohydrate and electrolytes during long

intensive matches, especially if the players are gradually becoming glycogen-depleted over a long week of matches. Carbohydrate intake during the match may help to boost decreasing fuel stores and delay the fatigue of muscle and brain. Sports drinks are suitable for squash players to use during exercise.

### Traveling Nutrition

Squash players often have to train or compete overseas. Foods supply may not be dependable or may not suit the athletes' appetite. Bringing certain foods to overseas training and competition is a safety measure to ensure that athletes will not be depleted in energy or nutrients while away from home. The following is a list of foods from each food group which are convenient to carry.

<b>Breads and Cereals</b>	Instant noodles
	<ul style="list-style-type: none"> <li>• Rice vermicelli</li> <li>• Mung bean noodle</li> <li>• Chinese noodle</li> <li>• Udon</li> <li>• Macaroni</li> <li>• Spaghetti</li> </ul>
	Instant congee
	Cup noodle
	<ul style="list-style-type: none"> <li>• Rice vermicelli</li> <li>• Chinese noodles</li> </ul>
	Soda crackers or biscuits
<b>Fruits</b>	Cereal drinks (e.g. Nestles, Quaker)
	Dried fruits
	Prunes
	Raisins
<b>Milk and Dairy Products</b>	Milk powder
	Canned tuna
<b>Meat and Alternates</b>	Baked beans
	Luncheon meat (Low fat and low sodium are better choices)
	Snacks
<b>Others</b>	<ul style="list-style-type: none"> <li>• Cereal bars (e.g. Quaker, Nature Valley, Alpen)</li> <li>• Prepacked Chinese desserts (e.g. red bean soup, mixed bean soup)</li> <li>• Nuts</li> </ul>
	Drinks
	<ul style="list-style-type: none"> <li>• Pocari Sweat powder</li> <li>• Glucolin</li> <li>• Ovaltine</li> <li>• Horlicks</li> </ul>



A good dietary habit not only ensures health but also brings your potential that pave the road of victory

The above information is provided by the Sport Nutrition Unit of the Athlete and Scientific Services Division. All information is for reference only.

Reproduction of materials is welcome with prior permission. Acknowledgements are required.

For enquiry, please contact:  
Sports Science Department. Tel: 2681 6277

Hong Kong Sports Institute Limited

Hong Kong Sports Institute, 25 Yuen Wo Road,  
Shatin, N.T., Hong Kong  
Tel: (852) 2681 6888 Fax: (852) 2681 6330  
Website: <http://www.hksi.org.hk>