

Sports Nutrition Specifics

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What to eat leading into a tournament?

Squash tournaments can run for various lengths of time. Each athlete can compete daily or even more than once per day. Often leading into events athletes try to “load up” to ensure their energy reserves are maximised. The nutrition focus is more about maximising energy levels during a whole tournament, particularly between matches, rather than the lead into the tournament. Loading up prior to an event only enhances the first match as opposed to the whole tournament. That is not to say energy levels should not be maximised before a tournament begins, it just means that what goes on during the tournament schedule is just as important.

What to eat and drink as a pre-match meal?

Although the pre-game meal will not ensure an athlete has enough energy, it will maximise energy stores prior to the match. During everyday life the body requires energy even if activity is not involved. The body uses 200-300g of carbohydrate from the liver during sleep. Therefore it is always important to top up stores right up until the match.

The type, timing and amount of food becomes an individual choice due to many factors. Many athletes find it difficult to consume large volumes of food prior to a match and therefore it is important to train the athlete to cope with something rather than playing without consuming anything.

The main meal before the match should be three to four hours. This meal should be high carbohydrate (focusing on low glycaemic index carbohydrate; one which releases slowly into the body) with moderate protein, fat and fibre. A percentage of athletes find that too much protein, fat or fibre can cause gastric discomfort, keeping it lower in this meal will reduce the risk.

Meal ideas include:

- ? Breakfast cereal with low fat milk and fruit
- ? Toast/muffins or crumpets with low fat topping
- ? Baked beans on toast
- ? Pasta with tomato based sauce
- ? Smoothie made from low fat milk, yoghurt and fruit
- ? Bread roll or sandwich with honey or banana

Snacking up until one hour before the match is ideal. Choosing foods the athlete is comfortable with is important for physical as well as psychological reasons. Ensure food choices, volume and timing is practiced at training and during competition situations. Try to aim for more than 50g of carbohydrate in this meal or snack.

Fluid is an important component of the lead into a match. Hydration before the match should be carefully planned, particularly in hot climates. Volumes should include 300-600ml with the pre-event meal and then approximately a cup every 15-20 minutes up until one hour or so before the beginning of the match.

The type of fluid can include water, fruit juice and sports drinks. Each will improve hydration status while the fruit juice and sports drinks will provide extra carbohydrate and the sports drink will provide electrolytes to maximise fluid retention. If fluids other than water are consumed it is still imperative to ensure water intake is included.

What to eat and drink during a match?

Carbohydrate intake

Studies have indicated that an athlete's energy demands are greater during tournament conditions as opposed to practice matches due to the increased anxiety and emphasis put on the athlete during this time. Therefore, it is important for an athlete to potentially expect to have a greater consumption during the tournament period.

Continuing to fuel up during a match will ensure that energy levels are well maintained throughout the match. Squash matches can go for varying lengths of time. Studies have shown that ingestion of modest amounts of glucose during prolonged exercise will prevent a reduction in blood glucose levels therefore delay the onset of poor performance and fatigue induced by low volumes of carbohydrate.

To ensure performance is maximised during the match fluid and carbohydrate needs to be matched with losses. It is best to aim for 30-60g of high glycaemic index carbohydrate per hour of activity. This includes things such as:

- ? 600ml of sports drink
- ? 1 banana sandwich

- ? 50g of lollies
- ? 2 pieces of fruit
- ? 375ml of fruit juice

Fluid intake

Fluid replacement will minimise the risk of dehydration during a match. Dehydration is a loss in body fluid content. Dehydration of 2% fluid loss reduces performance due to reducing mental function and skill co-ordination, having an impact on decision making. Whereas dehydration of more than 3-4% fluid loss will increase the risk of nausea, vomiting, diarrhoea and gastro-intestinal problems during exercise. High levels of dehydration may increase the risk of heat stress on the body. To avoid dehydration, fluid intake plan needs to be constructed for the individual.

The best method to determine fluid loss is to weigh yourself before and after a training session. Try to weigh yourself with minimal clothing, ensuring you have towelled yourself dry. One kilogram of weight lost is equivalent to one litre of fluid. It is best to do this during training to prepare yourself for tournament. Take into consideration the conditions of the day you trained. For example was it a light training session, do you work harder in games, was the weather mild etc. If a game is usually harder work you can be sure you will lose more fluid.

- o For example, if you weigh 50kg before training and after training you weigh 49kg you have lost 1kg in body weight which is equivalent to 1 litre of fluid loss. This is equivalent to 2% fluid loss.

However, if you also had 500ml to drink over the training session you need to calculate this in as well.

- Not only did your body weight drop by 1kg but you managed to replace 500ml lost. In total you actually lost 1.5kg of fluid.

Knowing how much fluid you lost over the training time will allow you to organise a drinking plan so you do not lose more than 1kg body weight over another training session or a match.

It is important to ensure the athlete is never thirsty. If fluid is not lost always drink until thirst is no longer present and also include a few extra sips to cover what may further be lost.

What to drink?

To drink is what is important. For a young athlete, different choices may be required to be available to enhance drinking. Often cool drinks are more satisfying and tempting to athletes.

It is important for individual athletes to find drinks they prefer. Water is always the optimal choice, however scientific research has shown that sports drinks during exercise can improve performance. These drinks provide the correct concentration of carbohydrate and electrolytes to help replenish lost stores of fuel and fluid during exercise.

At the end of the day incorporating water with sports drinks is beneficial, as long as enough total fluid is consumed based on fluid losses.

Practical Tips

- ? Thirst is not a good guide for dehydration. Thirst occurs when a significant amount of fluid has already been lost.

- ? Start a session well hydrated. Ensure fluid loss from the last session has been replaced.
- ? Continue drinking fluid up until about 30 minutes before a match leaving enough time to go to the bathroom if needed.
- ? Have a small sip of fluid 10-15 minutes before commencing to replace the first beads of sweat.
- ? Do not rely on visible sweat as a guide for your fluid needs.
 - o Children have lower sweat rates and are therefore less able to regulate their body temperature when in the hot.
- ? Aim to drink early in the session or match and continue at regular intervals.
- ? You can teach yourself to drink 600-1000ml per hour.
- ? You cannot train yourself to handle dehydration. It is more important to work on a fluid intake plan that suits you.
- ? Once a session or match is completed aim to rehydrate as quickly as possible, particularly if you could be playing 2-3 matches in a day. If you know you have lost a particular amount of fluid, aim to drink more than what you have lost to take into account ongoing fluid loss post-training and post-match.

What to consume for post-match recovery?

Recovery begins the minute you step off the court. There is a window of opportunity for an athlete to efficiently recover. That is why the emphasis on consuming something soon after the match is imperative. The type of food and fluid is important for efficient recovery.

Food intake

It is ideal to consume 1 gram per kilogram body weight of high glycaemic index carbohydrate immediately after the match or training. This is to be repeated two hours after or until normal meals are resumed. The importance of implementing this strategy is to ensure that the carbohydrate stores are maximised within the body so the next match or training session can begin with a topped up fuel tank.

If there is twenty-four hours before the next match it is important to consume high carbohydrate volume over the twenty four hour period. As the period progresses moving toward moderate to low glycaemic index carbohydrates will ensure stores are maximised for the next match.

Fluid intake

If fluid losses are a litre or less ensuring the athlete consumes fluid regularly after the match is enough to ensure hydration will be restored. If more than a litre is lost a rehydration plan is required. Typically consuming ~150% of the post-exercise loss should be consumed over the next two to four hours to restore hydration. An adequate supply of palatable fluids should be available to make drinking easier. Studies have also found that cool flavoured drinks seem to increase voluntary intake. Very cold drinks are beneficial when the environment is hot and or humid. Carbohydrate containing drinks will also help with refuelling.

If large volumes are lost sodium replacement will ensure fluids consumed will be retained in the body rather than immediately excreted. This is where sports drinks become very beneficial.

What to eat and drink between matches?

Food and fluid intake between matches is not an easy process. The difficulty can be determining the exact time difference between the matches. The recovery strategies mentioned above need to be implemented during this period. A clear plan needs to be devised to ensure food type and volume is available. Restoring carbohydrate and fluid before the next match is essential. Taking food to the courts can reduce the risk of not having appropriate choices at the courts. If an athlete cannot tolerate a lot of bulk between matches liquid meal supplements become a useful alternative.

If an individual is playing two matches in one day it is not unusual to hang around the courts in between matches. The problem is this may increase dehydration by sitting around in the warm weather and not drinking adequate amounts before stepping back onto the court.