

Tennis

January 2009

About Tennis

Tennis is a sport that is characterised by a high level of skill as well as repeated short bursts of high intensity exercise over a match that may last several hours. While the game of tennis is highly reliant on anaerobic energy systems, a strong aerobic capacity is still very important as it aids with recovery between games, tolerance to heat, and the endurance to play through extended matches. Although the game is not continuous, the length of the match may well challenge carbohydrate stores. This is especially the case during tournaments or team events, where multiple matches are often played across the day, and may continue for several days in a row, which can limit recovery time.

At an elite level, training is a full time job. Players can spend between 25-40 hours per week training, most of which is spent on-court, and approximately 1-2 hours per day spent in off-court conditioning such as running, weight training or agility work. At a recreational level, training varies, with some players using matches as their only training.

Training diet

Training is often more intense and physically demanding than the actual tennis game itself, which sets up large energy and carbohydrate requirements. A diet rich in carbohydrate foods is important to provide adequate energy to maintain a high standard of play and also assists recovery. All tennis players need to focus on eating nutrient-dense carbohydrate meals and snacks such as pasta, rice, bread, cereal, vegetables, fruit and dairy products.

Players in heavy training, who have less than 8 hours in between training sessions, need to start recovery nutrition tactics immediately after each training session. Ideally, players should aim to have 50-100 grams of carbohydrate within 30 minutes of finishing training. Recovery snacks should always be combined with fluids to replace sweat losses that may have occurred during the session. If players have 12-24 hours recovery time, there is no need to rush carbohydrate intake as long as the total amount consumed over that recovery time is enough to replenish stores.

What does 50 g of carbohydrate look like?

- 800ml sports drink
- 3 medium pieces fruit
- 1 large bread roll or fruit scone
- 2 pancakes with maple syrup
- 2 cereal/muesli bars
- 2 x 200 g cartons yoghurt (not artificially sweetened)
- 4 Weet-bix® with 1 cup low fat milk
- 1½ cups fruit salad with 1 tub of low fat yoghurt
- 250-350ml smoothie
- 3 slices toast with vegemite/honey/jam

Body fat levels

While body fat levels are important in most sports, playing tennis overweight will reduce speed and stamina, and increase body heat (thus impairing performance) during hot days on the court. But magic diet pills, miracle cures and quick fixes are not the way to go – instead, a long term approach to weight and body fat maintenance should be the goal. You might like to try the following:

- Consult a dietitian to learn exactly how much you need for your training requirements
- Avoid extreme hunger – a small, well-timed snack will prevent you from over-eating later on
- Eat slowly so you can feel when you have eaten enough
- High fibre foods can be more filling – enjoy these regularly in meals and snacks
- Drink water before and during your meal
- Take care with high-energy fluids such as juice, cordial and soft drink: these can be an easy way to consuming extra (unnecessary) calories
- Be careful with your favourite foods – enjoy them in small quantities
- Target sources of fat, alcohol and sugar
- Keep a food record to help identify not only what you eat but *why* you eat - are you hungry or just bored, upset, depressed, tired etc?
- Find non-food ways of rewarding yourself for reaching training goals

Adapted from the Australian Institute of Sport "Tennis" fact sheet; Dept. of Sports Nutrition 2004

Fluid needs

The fluid needs of tennis players during training and games are generally high because:

- The high intensity, "stop and go" style of exercise increases sweat rates
- Matches are often played in hot conditions and can last for several hours – court surface temperatures of 50°C have been reported from centre court during the Australian Open
- The timing of matches can be unpredictable (e.g. tournament play) which can make it difficult for players to maintain fluid status whilst waiting around for upcoming matches.

To stay hydrated, drink plenty of fluids before, during and after tennis e.g. sports drink and water.

You can assess how much fluid you have lost by weighing body yourself before and after the training session or game and aim to drink **1.5L of fluid for every kilogram** of weight lost.

Thirst is generally not a good measure of fluid status and a player may be significantly dehydrated before becoming thirsty. Sports drinks can be useful during training and matches as they provide a source of carbohydrate (for fuelling on-court) and small amounts of electrolytes (salts) that may be lost during play.

Dehydration impairs exercise ability, skill execution and decision making and thus can significantly affect tennis performance. Producing regular amounts of clear urine is a useful indicator of **good hydration status** before exercise. Other warning signs of dehydration include dark urine, headaches and nausea, dizziness and cramps. In hot conditions pay extra attention to fluid needs by having plenty of cool, refreshing fluids on hand, drinking at every opportunity (e.g. during breaks and when changing ends) and monitoring and replacing losses aggressively after a match/training session.

What should I eat before a game?

The pre-game meal should be eaten 2-3 hours prior to play. It should be high in carbohydrate and low in fat. To avoid stomach discomfort, foods low in fibre and fat may be preferred. It is important to ensure the meal is well planned and uses familiar foods and fluids. This could look like either of the following...

- Breakfast cereal + low fat milk
- Fresh/dried or canned fruit + yoghurt + low fat milkshake
- Muffins/crumpets/toast/scones with jam or honey
- Pasta + tomato-based sauce or rice dish
- Liquid meal supplement (e.g. Sustagen Sport®)

What should I eat and drink during competition?

The amount of food/fluid required during a match or training depends on the intensity and duration of the tennis. Tennis players should make use of each break in play (e.g. change of ends) to consume fluids such as sports drink and water for refueling and rehydration goals.

Carbohydrate-rich snacks can be used during intensive and/or extended tennis matches/training (>1 hour duration). Suitable snacks can include fruit, sports bars, muesli bars or sports drinks.

What about recovery?

It is very important to refuel with carbohydrate-rich foods during recovery in order to begin replenishing muscle glycogen stores for future training/games. This is especially important during tournament play when a number of matches are played within a short time frame, or during weeks of heavy training.

It is also important to include a lean protein source in recovery for muscle tissue repair and growth.

As a rule of thumb, aim to consume a recovery snack within 30 minutes of finishing a training session or match. This snack should contain carbohydrates, protein and a source of fluid, e.g. a salad sandwich with a bottle of sports drink, or a bowl of cereal with fruit and milk. Other suitable snacks include cereal/muesli bars, fruit and fruit bars and sports drinks.

The next meal should resume the normal training eating pattern, and should again contain carbohydrate-rich foods, a source of protein and fluids. Players should try to consume this meal within 3-4 hours of finishing a match/training.

Other nutrition tips

- Supplements are generally not necessary. A balanced healthy diet will usually meet all of the nutritional requirements for tennis
- Always bring carbohydrate-rich foods with you - keep these in your training bag as emergency “rations” when your estimated match time is delayed
- Be well prepared - don't rely on food being available or suitable at the venue you are playing at
- Liquid meal replacements such as Sustagen Sport® may, however be useful/convenient when in an unpredictable environment e.g. during a tournament when the start of the next match is uncertain or if nervousness is an issue before a match.

How do I get involved?

Contact Tennis Australia www.tennisaustralia.com.au or your state tennis centre to find out about tennis clubs or competitions available in your local area

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