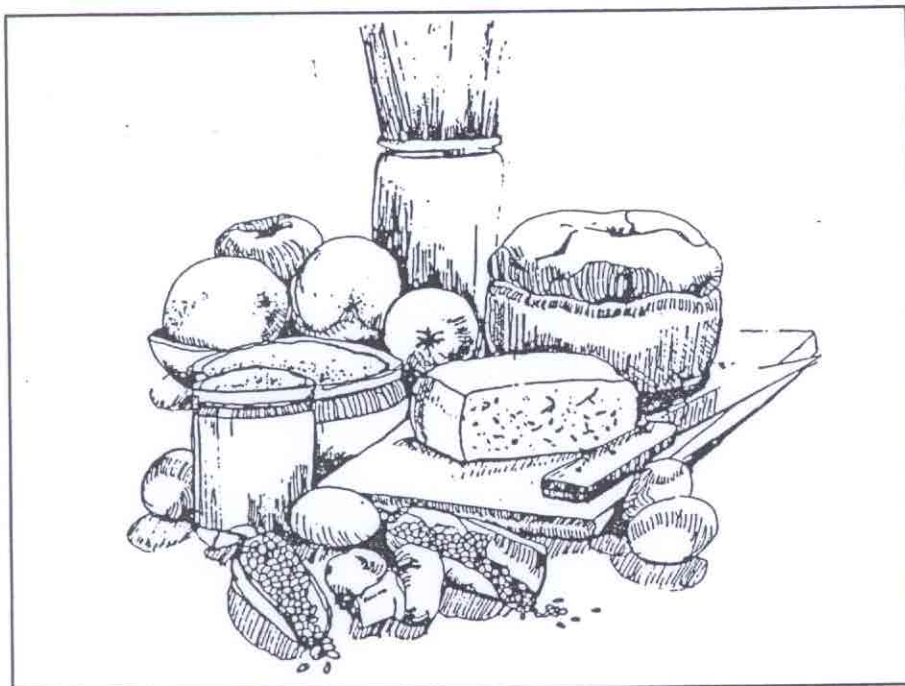


# Nutrition for Squash Players

by Rosemary Stanton, Nutritionist



The Australian diet is not really suitable for people who want to exercise. It has far too much fat and lacks sufficient quantities of the complex carbohydrates needed for maximum muscle power. Most sportspeople also forget to drink enough water to allow the body to work at peak performance.

the energy needed by muscles comes from the foods we eat. Muscle cells can use both carbohydrates and fats for fuel; protein is used only as a last resort. Carbohydrates in the diet are converted to glycogen which is stored in muscles.

With any short sharp bursts of activity, carbohydrates are the only possible fuel. For longer, sustained physical activity, a mixture of carbohydrates and fats can only be used efficiently if there is also some carbohydrate present.

Squash entails a sustained release of energy from muscle cells (aerobic activity) with occasional bursts of sudden activity (anaerobic activity). Carbohydrates are thus extremely important to provide the fuel for both these types of activity.

The limiting factor for physical activity is almost always carbohydrate. This vital nutrient maintains blood sugar levels and is stored in the liver and muscles in the form of glycogen. The liver glycogen is used to maintain blood sugar levels while the muscle glycogen is a direct fuel for muscle cells.

Once the glycogen stores run out, fatigue sets in and performance drops.

The amount of glycogen stored in muscles depends on the carbohydrate eaten in the diet. By eating more carbohydrate, glycogen stores are maximised.

Carbohydrate comes in two forms: simple sugars and complex carbohydrates. The former are found in fruits, milk and sugar. The complex carbohydrates occur in breads, grains and all types of cereal foods (such as pasta, rice, porridge, breakfast cereals), in vegetables (especially potatoes) and in legumes, seeds and nuts.

Both sugars and complex carbohydrates can be converted to glycogen in muscles, although the complex carbohydrates give the best storage in the long term.

There are also some other factors to be considered in the choice of carbohydrate. Various vitamins and minerals are important for the body to use carbohydrates. Foods such as breads, cereals, grains, vegetables, legumes, fruits and milk supply these. Sugar itself is completely devoid of any vitamin, mineral or other nutrient. It therefore makes sense for sportspeople to get most of their carbohydrate from foods other than sugar. Small quantities of sugar, however, are no problem for those who are not overweight.

The key features of an appropriate diet for squash players are as follows:

## Complex carbohydrate

Each of the day's three meals should contain plenty of this major fuel. In practice, most people have to consciously remember to eat more of the basic foods which supply this type of carbohydrate.

Breakfast can have carbohydrate from porridge or a good quality cereal (not toasted muesli as it contains a high percentage of fat), with fruit and toast. If a more substantial meal is needed, baked beans, canned corn, mushrooms, tomatoes or a boiled or poached egg would also be suitable. These foods should be additions to the basic carbohydrate foods, not substitutions.

Lunch can easily supply plenty of carbohydrate if sandwiches, bread rolls or bread as well as some fruit are included. Salads are fine, but will need to be served with bread. Other suitable sources of carbohydrate would be potatoes, pasta, rice or other grain.

Dinner should include potatoes or rice of pasta or some type of legume as well as fruit and, if appropriate, more bread.

Between-meal snacks can include nutritious carbohydrate foods such as bread or rolls with bananas, or fresh or dried fruit. For those who are very active, dried fruits mixed with some nuts and sunflower or pepita seeds makes a highly nutritious snack.

## Other carbohydrates

Fruits and milk contain important nutrients as well as their respective sugars. Fresh fruit has the highest level of nutrients but canned fruits can also be included. Dried fruits are particularly handy for snacks. The most suitable milks or yoghurts are the low fat varieties.

The average Australian eats 230 teaspoons of sugar each week - far too much. Sugary foods tend to displace other more nutritious foods from the diet and many sweet foods (such as biscuits, cakes, pastries, chocolate, desserts) are also high in fat.

Those who are overweight should avoid sugar and make up their meals and snacks from more nutritious foods. Others can include small quantities of sugar, if desired.

Sugar and sweet foods (including sweet drinks) should not be eaten within an hour before competition. A 'shot' of sugar can cause a sudden burst of insulin which can send the blood sugar level on a temporary

high, followed by a low. This can affect fine co-ordination and judgement. The body will restore blood sugar levels to normal, but by the time this is accomplished, the crucial period for maintaining an even blood sugar may well be over.

Once physical activity is underway, exercise itself controls the release of insulin and small quantities of sugar do not usually cause problems. However, the idea that something sweet will provide muscles with a sudden surge of energy is false. The glycogen in muscles depends on what you ate yesterday and cannot be altered by eating glucose or any other form of sugar just before physical activity.

### Fat

Fat dominates the typical Australian diet since so many of the foods we eat contain a lot of hidden fats. Almost all fast foods, many processed foods (including biscuits, cakes, pastries, pies, chocolate, desserts, frozen and ready-prepared meals) are rich in fat, usually saturated fat. As well, we tend to fry foods and use a heavy hand with butter, margarine, cream and oil.

Eating saturated fats leads to a build up of cholesterol in the blood and the arteries.

This forces the heart to work harder to pump blood through and impedes the clear flow of blood which is demanded for peak physical performance. It is therefore important that sportspeople (as well as the rest of the population) eat less fat.

In practice this means avoiding large serves of fatty meats (such as sausages, salamis, large steaks, fatty chops); avoiding fried foods and fatty snacks such as chips; using minimal quantities of butter, margarine, cream, cooking fats and chocolate; keeping cheese intake moderate (a cheese and salad sandwich is fine, scoffing a whole cheese platter is not!) and selecting some low fat dairy products.

By selecting plenty of bread, grains cereals, potatoes, pasta, rice, fruits and vegetables, the diet will automatically have less fat since these foods contain little fat.

The common belief that physical activity protects people from the ravages of high cholesterol levels is incorrect.

Sportspeople can and do have high levels of fats in their blood and arteries. Physical activity is vitally important for a healthy heart but it cannot take the place of a healthy diet.

### Salt and water

Most Australians take in far more salt

than they need and drink only a fraction of the water they should. The more salt you eat, the more water you need to flush out the excess.

Plenty of water is vital for the production of energy within body cells. Without adequate water, the body simply cannot function efficiently.

After a heavy sweat, it can take 48-72 hours for the body's thirst mechanism to replace fluid losses.

So those who train hard and regularly may need to drink more water than their thirst dictates.

The ideal fluid to replace body losses is water. If plain water is unappealing, a small amount of sugar or juice can be added. Juices and some 'sports' drinks need to be diluted to about one quarter of their normal strength to be suitable for sportspeople.

The body's need for salt can easily be met by eating foods which contain salt naturally (meat, eggs, poultry, fish, some vegetables) as well as including foods such as bread. There is no need to use extra salt and salt tablets are inadvisable. Cramps are more likely to be caused by a lack of water than a lack of salt.

### Protein

Most people eat more than ample

quantities of protein and it is not a nutrient which needs special concern. Fish, poultry, lean meat, eggs, milk, cheese and yoghurt all supply protein. Further supplies come from bread, cereals, legumes, nuts and seeds. There is absolutely no need for protein supplements.

### The meal before a game

It is important to have eaten about 3 hours before beginning a game of squash. The food needs to be high in carbohydrate and low in fat so that it will be easily digested and will replenish the blood sugar level.

Bread or toast or muffins, cereals, fruit, pasta, rice, vegetables, low fat milk or yoghurt are all suitable. It is also important to drink plenty of liquid - either water, fruit juice, low fat milk or weak tea.

Before a game, you should also drink plenty of water. The quantity will depend on the individual. Enough fluid should be consumed so that your urine is clear rather than yellow.

Healthy eating for sportspeople does make a difference to performance. A high carbohydrate diet can almost double glycogen stores in muscles. This means that you will not only be able to keep up your squash for longer, but you will feel less exhausted. As many sportspeople have discovered, a healthy diet really can make a difference.

For further information, read 'Eating for Peak Performance' by Rosemary Stanton, published by Allen & Unwin, 1988.



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