

INTERNATIONAL COFFEE ORGANIZATION POSITIVELY COFFEE PROGRAMME

PEAK PERFORMANCE

A practical guide on eating, exercise and health

There is no such thing as a magic diet or food, but there are many benefits to be derived from eating well that will enable us to perform at our best, whether we are training to become an elite athlete or enjoying exercise as a recreational pleasure.

1. Energy Needs

Our daily energy intake provides for our immediate energy needs as well as affecting our body's store of energy. Whilst energy for normal body functions, activities and growth is met from daily intake, energy stores play an important role in exercise performance. Athletes will manage their energy stores of body fat, carbohydrate (to provide fuel for exercise) and protein (to increase muscle mass) to help improve exercise performance. However great care must be taken not to restrict energy intake below levels required for our normal body function and professional athletes will seek advice of a sports nutrition expert in developing their eating plan.

2. Role of Carbohydrates

Carbohydrate foods in the diet provide us with an important, but relatively short-lived, supply of fuel for exercise. Undertaking regular exercise therefore requires eating sufficient to fuel our training programme and for our muscle glycogen stores to recover in between. Nutrient and carbohydrate rich foods are the best choice, as they provide a readily available source of carbohydrate to optimise muscle recovery. Examples of such foods are:

- Most breakfast cereals
- Most forms of rice
- White and brown breads
- Potatoes
- Tropical fruits and juices
- Sports drinks and soft drinks

For those undertaking frequent workouts, there are advantages to eating a regular series of such snacks, whereas for those who exercise less than once a day, the timing of carbohydrate meals and snacks appears less critical.



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3. Importance of Proteins

The images of ancient Olympian athletes consuming vast quantities of meat has long established the important role of protein rich foods as a key factor in sporting success. However, results of recent dietary surveys show that the amount of such protein rich foods most of us now consume is, as most sports scientists believe, more than adequate to meet all our needs. So, the use of protein supplements to enhance performance is not necessary and may detract from the importance of eating a varied diet. The requirements of an elite athlete could be different.

4. Value of Vitamins and minerals

Strenuous and prolonged exercise can be stressful. Athletes are best able to meet those additional demands on their bodies by eating a varied nutrient and carbohydrate rich diet based on cereals, fruit, green and legume vegetables, lean meat and dairy products. Vitamin and mineral supplements are rarely warranted unless there is a restriction in the variety of food available e.g. when travelling.

Vegetarians, and those who move to train at a higher altitude, should also ensure that their iron intake is adequate. Examples of iron rich foods are red meat and iron fortified breakfast cereals. Absorption of iron from cereals and other plant sources is enhanced when such foods are eaten with foods rich in Vitamin C e.g. fruit juice or fruit with breakfast cereal.

Calcium is also particularly important for healthy bones, especially in adolescents and female athletes. Dairy foods such as milk, cheese or yoghurt are good sources of calcium or fortified non-dairy foods for those who cannot consume dairy foods. Low fat varieties are equally good sources of calcium and calcium rich water is another source.

5. The Importance of Fluid

The importance of not getting dehydrated during and rehydration after exercise is well known and most athletes appreciate this, especially when exercising in warm environments when dehydration can also cause heat illness.

In terms of performance benefits, water is the essential requirement although the use of sports drinks also helps to restore blood glucose as well as fluid levels. Sodium to replace salts lost in sweat must also be replaced and should be included in drinks consumed during exercises lasting longer than 1-2 hours.



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A caffeine-containing drink, such as coffee, can also enhance endurance during the final hour of prolonged exercise. Contrary to what many people believe, caffeine-containing drinks, do not cause dehydration nor affect the balance of fluid and electrolytes in the body. The small amount of caffeine found in a regular cup of coffee, about 100 mg, is sufficient to have a performance enhancing effect. Caffeine can also reduce the sensation of effort, so we feel less tired when we stop.

6. Calorie Counting

For many athletes a low level of body fat and body weight can provide performance benefits and in some sports, e.g. gymnastics, body building, the very way you look is judged alongside your performance. In others, competition involves strict weight divisions e.g. boxing, lightweight rowing. It is understandable that this group is considered most at risk of inadequate or badly balanced diets. So strategies for staying lean and trim will range from keeping a record of the food you actually should eat as oppose to want to eat, to choosing more low fat foods and snacks.

7. Use of Supplements

The use of supplements is widespread among sportspeople yet there is little sound research to support their value. The use of a supplement does not compensate for an inadequate diet or poor food choices.

8. Varying Dietary Requirements

Whereas top-level team athletes train throughout the year, most recreational team sports are seasonal. This may create a problem if off- season also means “off-diet” and “off-fitness”. Attempting to reverse the resulting loss of performance, with high intensity workouts, may cause dehydration from large sweat losses and depletion of fuel stores. Games are often won and lost in the closing minutes so remember that cup of coffee beforehand may counter the fatigue and help win you that match!

9. Alcohol

Whether to celebrate, commiserate or just talk through the tactics, alcohol plays a large part in post game and exercise activities. In moderation, this is no problem, but consuming excessive amounts of alcohol immediately after exercise is likely to interfere with the body’s recovery process.



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10. Eating On the Move

Participating in any team sport usually means travelling to away matches. If this is far away from home, then it may present challenges that disrupt the normal routine for training and lifestyle. Changes in climate, food availability and risk of gastrointestinal illness will be less traumatic if you take with you alternatives that can replace missing and important items. These could include:

- Breakfast cereal and powdered milk
- Rice cakes
- Spreads e.g. honey, jam, peanut butter
- Powdered sports drinks, sports bars
- Dried fruit and nuts

The margin between victory and defeat is very small – attention to detail CAN make the difference.

