

## FOOD FOR THOUGHT

How sure are you that you're essential body mineral levels are as they should be? Is it possible that your running, or other vigorous exercise regimes are reducing your calcium, potassium, magnesium or zinc levels and are not having a deleterious on body function? These are questions about which you should not worry unduly, but they should come to mind and be thought about.

If you run you will sweat. If you sweat you will lose minerals. If you did not sweat your body would have a temperature problem.

You will sweat even in the coldest weather conditions. There may be a bit less washing but sweat you will.

It has been estimated that an athlete in fairly heavy training will lose between seven and fourteen pints of sweat per week. This will vary according to weather conditions.

This sweating regime will result in mineral depletion, with four basic minerals; calcium, potassium, magnesium and zinc being lost. The intelligent runner will try to ensure that these minerals are replaced. A normal diet may not do this and a junk diet certainly will not suffice.

To ensure that **calcium** is replaced milk, cheese, broccoli, leafy vegetables, nuts, peas and lentils will provide. If there is a reliance on milk the danger is that there will be a lack of magnesium. Calcium absorption can be inhibited by too much bran and the phosphorous found in soft drinks. In addition too much fat and protein will have the same effect.

There is research evidence that chronic shin soreness can be attributed to calcium deficiency. There is a real problem for young athletes in that too many soft drinks will inhibit calcium absorption and such athletes are nearly always in the position of bone growth.

The heart muscle when running works overtime and a lack of **potassium** can affect the efficiency with which the heart muscle operates.

Some of the symptoms of a potassium deficiency is muscle fatigue (or more fatigue than usual) poor appetite, constipation, muscle cramps, and mental apathy. That is not the apathy you get from watching Eastenders and Newsnight.

When exercising in temperatures in excess of 80f it is recommended that you should drink lots of pure orange juice. Steve Ovett's collapse at the 1984 Olympics was attributed to a lack of potassium.

So, to ensure your potassium levels are satisfactory plenty of fresh fruit and vegetables and whole grains.

**Magnesium** has the important role of distributing calcium, potassium, and sodium. Manifestation of magnesium deficiency can be muscle cramps, twitching and muscle spasm especially in the feet and hands. There has also been a suggestion that low magnesium levels are associated with pre menstrual tension. A remedy for this has been offered by ensuring that vitamin B6 is included in the diet.

One piece of bad news is that alcohol depletes magnesium levels. Good sources of magnesium are nuts, soya beans, leafy vegetables, whole grains and hard tap water. So forget the bottled water and save some money.

**Zinc** is seen as so clinically important that it has been suggested that all serious runners should be tested for signs of zinc deficiency at regular intervals. A deficit in zinc will almost certainly reduce muscle strength and endurance.

Some effects of inadequate zinc are nail white spots, reduced immunity to infection, skin disorders, hair loss above the normal, long duration injuries, poor night vision, impaired taste and smell.

A high fibre diet and iron supplements are also associated with the non absorption of zinc. Growth spurts, puberty and pregnancy make strong demands on zinc and a high protein diet will demand a high zinc requirement.

Fortunately zinc can be found in all forms of nuts and natural raw food. In addition it also comes in muscle meats, split peas, egg yolk, parsley, potatoes, garlic, carrots, clams chicken, and much more besides.

So unless you are on a very specialised diet you should not be short of zinc and should not require a supplement. However, it is a good idea to check on what you are consuming too make sure that you are getting the foods in enough quantity for zinc replenishment. A reliance on refined food has been seen as a possible problem and might lead to a shortage of zinc.

While a 'normal' diet should keep you topped up with essential minerals you should as runners see yourselves as vulnerable to mineral deficiencies through the process of more sweating than the ordinary Joanna and Joe. Always go for diet replenishment rather than supplements. Should you for some reason need to have a specialised diet always get professional advice that takes into account your exercise regime.

Lastly keeping an eating diary is as important, if not more important than keeping a training diary.

There are two things that I feel serious athletes should do and that is to have regular blood tests that could indicate whether there are any causes for concern and a regular visit to a chiropodist. The disregard that runners give to their piggy's has always struck me as remarkable.

Happy eating, running and sweating

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February 2010