

ESSENTIAL VITAMINS AND MINERALS FOR RUNNERS

Vitamins and minerals are essential to one's well-being, however, there are certain kinds that are of greater importance to runners. The key vitamins and minerals are calcium, iron, B group vitamins and vitamin C. They offer significant benefits, and a deficiency in them will result in poor performance.

Text: Jaclyn Reuters

CALCIUM

Daily Requirements: 800mg

Runners require a constant intake of calcium as their bones undergo constant remodelling. Calcium is found in a wide variety of foods but dairy foods contain the most absorbable calcium.

Foods that are good sources of calcium are milk, cheese, yoghurt, calcium-fortified soy milk and tofu, sardines and

canned salmon with edible bones, anchovies, spinach, tahini, baked beans, soy beans, bok choy, almonds and brazil nuts.

When choosing calcium supplements, check the form of calcium it contains. Bear in mind that calcium carbonate and calcium citrate are better supplements as compared to calcium gluconate due to the higher amount of pure calcium you will absorb.

VITAMIN C

Daily Requirements: 85-105mg

Vitamin C is required for the enhanced absorption of iron and to improve immunity for the avid runner. Running regularly does put an oxidative

stress load on the body's cells which increases the need for a powerful antioxidant such as vitamin C. Foods that contain vitamin C: oranges, mandarins, kiwi, grapefruit, broccoli, pineapple and capsicum.



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IRON

Daily Requirements:
6mg for men, 19mg
for women

Runners require a constant supply of iron as they are susceptible to foot-strike haemolysis. This occurs every time the foot hits the ground during running. Some red blood cells are destroyed in this process and this commonly affects long distance runners. Female runners need to pay extra attention to their iron intake during their menstruation. Iron is found in both plant (non-haem) and animal (haem) foods. Heme iron is more well absorbed than

non-heme iron. Ways to improve iron absorption is to eat lean red meat three to four times a week and include a piece of fruit after each meal. The vitamin C found in fruit increases the bioavailability of iron in food.

Foods that are good sources of iron: liver, lean beef, lean pork, chicken, Milo, iron fortified cereals, breakfast bars, wholemeal bread, fruit loaf, spinach, baked beans, peas, dried apricots, almonds, prunes and raisins.

Before taking an iron supplement, check with your doctor first as excessive iron intake is harmful to the body.

B GROUP VITAMINS

The B Group vitamins play an essential role in a runner's diet. Thiamin, riboflavin, niacin and pantothenic acid are involved in the carbohydrate and fat metabolism to provide energy to the muscles. Pyridoxine, folate and cyanocobalamin are required for manufacture of red blood cells. A deficiency in any

of these will result in fatigue. The requirements for these B vitamins are small and are easily met by a normal balanced diet. Examples of foods that contain the B group vitamins: chicken, pork, milk, beef, yoghurt, breakfast cereals, mushrooms, almonds, pistachios, banana, broccoli, liver, salmon.

Calcium Content of Some Common Foods

Food	Calcium (mg)
Milk and soy foods	
Calcium-fortified milk, 250ml	500
Nonfat milk, 250ml	375
Low fat milk, 250ml	310
Skim milk, 250ml	310
Calcium-fortified soy drink, 250ml	300
Tofu, firm (calcium coagulant), 100g	160
Yoghurt, per 200g	
Low-fat, natural	360
Low-fat, fruit flavour	320
Plain, natural	290
Whole, fruit flavour	260
Cheese, per 30g	
Cheddar	240
Processed	200
Other foods, per serving	
Sardines + bones, 50g	175
Salmon + bones, 50g	150
Spinach, ½ cup cooked	140
Other foods, per serving	
Tahini, 1 Tbsp	90
Baked beans, 1 cup	90
Soybeans, ½ cup	80
Bok choy, ½ cup cooked	80
Almonds, 30g	70
Brazil nuts, 30g	55

Iron Content of Some Common Foods

Food	Iron (mg)
Meats, seafood, egg	
Liver, 100g	10.0
Lean beef, 100g	3.8
Lean pork, 100g	1.0
Chicken leg, no skin, 100g	1.0
Tuna, salmon, 100g	1.0
Shellfish, average serving	1.0
Drinks	
Milo, Ovaltine, 2 rounded tsp	1.0
Breakfast Cereals	
Iron-fortified cereals, 45g	2.5+
Weetabix, 2 biscuits	2.5
Breakfast bars, 1 average	2.5
Bread, rice and pasta	
Wholemeal bread, 1 slice	0.6
Fruit loaf, 1 slice	0.6
Vegetables, fruits, nuts, seeds	
Spinach, 100g	3.0
Baked beans, lentils, kidney beans, ½ cup	2.0
Cashews, 30g	1.5
Peas, ½ cup	1.3
Dried apricots, 5 pieces	1.3
Almonds, 30g	1.0
Potato, 1 medium	0.8
Raisins, 2 tbsp	0.6
Brazil nuts, 30g	55

