



## Why supplement?

Many people believe that eating a well balanced diet provides all the vitamins, minerals and trace nutrients necessary for good health. In ideal circumstances, this is the case, but in reality there are many reasons why you may need vitamin or mineral supplements to cope with living in the 21<sup>st</sup> century environment. Taking supplement when required is a safe method of optimizing your dietary sources of nutrients, providing you follow the instructions on product labels.

### **1. Poor digestion**

Even when food intake is good, inefficient digestion can limit your body's uptake of vitamins. Some common causes of inefficient digestion are not chewing well enough and eating too fast. Both of these result in larger than normal food particle size, too large to allow complete action of digestive enzymes. Many people with dentures are unable to chew as efficiently as those with a full set of original teeth.

### **2. Hot coffee, tea and spices**

Habitual drinking of liquids that are too hot, or consuming an excess of irritants such as coffee, tea or pickles and spices can cause inflammation of the digestive linings, resulting in a drop in secretion of digestive fluids and poorer extraction of vitamins and minerals from food. Remember our gut wall or digestive lining acts as our 'internal facing' between the external environment and our internal world. It regulates what we absorb and what we don't. Once damaged or altered, the rest of health may well be affected as well.

### **3. Alcohol**

Drinking too much alcohol is known to damage the liver and pancreas, which are vital to digestion and metabolism. It can also damage the lining of the intestinal tract and adversely affect the absorption of nutrients, leading to sub-clinical malnutrition. Regular heavy use of alcohol increases the body's needs for the B group vitamins, particularly thiamine, niacin, pyridoxine, folic acid and vitamin B12, A and C as well as the minerals zinc, magnesium and calcium. Alcohol affects availability, absorption and metabolism of nutrients.

### **4. Smoking**

Smoking too much tobacco is an irritant to the digestive tract and increases the metabolic

requirements of Vitamin C, all else being equal, by at least 30 percent more than the typical non-smoker. Vitamin C that is normally present in such foods as paw paws, oranges, and capsicums, oxidizes rapidly once these fruits are cut, juiced, cooked or stored in direct light or near heat. Vitamin C is important to the immune function and is one of the anti-oxidant nutrients.

### **5. Laxatives**

Overuse of laxatives can result in poor absorption of vitamins and minerals from food, by hastening the intestinal transit time. Paraffin and other mineral oils increase losses of fat-soluble vitamins A, E and K. Other laxatives used to excess can cause large losses of minerals such as potassium, sodium and magnesium.

### **6. Fad diets**

Bizarre diets that miss out on whole foods of foods can be seriously lacking in vitamins. Even the popular low fat diets, if taken to an extreme, can be deficient in vitamins A, D and E. Vegetarian diets, which exclude meat and other animal sources, must be very skillfully planned to avoid vitamin B12 and Iron deficiencies, which may lead to anaemias.

### **7. Overcooking**

Lengthy cooking or reheating of meat and vegetables can oxidize and destroy heat susceptible vitamins such as the B-group, C and E. Boiling vegetables leaches the water-soluble vitamins B-group and C as well as many minerals. Light steaming is preferred. Some vitamins such as vitamin B6 can be destroyed by irradiation from microwaves.

### **8. Food storage**

Freezing food containing vitamin E can significantly reduce its levels once defrosted. Foods containing vitamin E exposed to heat and

air can turn rancid. Many common sources of vitamin E, such as bread and oils are nowadays highly processed, so that the vitamin E is significantly reduced or missing totally, which increases storage life but can lower nutrient levels. Vitamin E is an antioxidant, which inhibits oxidative damage to all tissues. Other Vitamin losses from food preserving can include vitamin B and C.

#### **9. Convenience foods**

A diet overly dependent on highly refined carbohydrates, such as sugar, white flour and white rice, places greater demand on additional sources of B-group vitamins to process these carbohydrates. An unbalanced diet contributes to such conditions as irritability, lethargy and sleep disorders.

#### **10. Antibiotics**

Some antibiotics although valuable in fighting infection, also kill off friendly bacteria in the gut, which would normally be producing the B-group vitamins to be absorbed through the intestinal walls. Such deficiencies can result in a variety of nervous conditions, therefore it may be advisable to supplement with the B-group vitamins when on a lengthy course of broad-spectrum antibiotics.

#### **11. Food Allergies**

The omission of whole food groups from the diet, as in the case if individuals allergic to gluten or lactose, can mean the loss of significant dietary sources of nutrients such as thiamine, riboflavin or calcium.

#### **12. Crop nutrient losses**

Some agricultural soils are deficient in trace elements. Decades of intensive agriculture can overwork and deplete soils, unless all the soil nutrients, including trace elements are regularly replaced. In one U.S Government survey, levels of essential minerals in crops were found to have declined by up to 68 per cent over a four year period in the 1970's.

#### **13. Accidents and illnesses**

Burns lead to a loss of protein and essential trace nutrients such as vitamins and minerals. Surgery increases the need for zinc, vitamin E and other nutrients involved in the cellular repair mechanism. The repair of broken bones will be retarded by an inadequate supply of calcium and vitamin C and conversely

enhanced by a full dietary supply. The challenge of infection places high demand on the nutritional resources of zinc, magnesium and vitamins B5 and B6.

#### **14. Stress**

Chemical, physical and emotional stress can increase the body's requirements for vitamin B2, B5, B6 and C. Air pollution increases the requirements for vitamin E.

#### **15. P.M.T**

Research has demonstrated that up to 60 per cent of women suffering from symptoms of premenstrual tension, such as headaches, irritability, bloatedness, breast tenderness, lethargy and depression can benefit from supplementation with vitamin B6.

#### **16. Teenagers**

Rapid growth spurts such as in the teenage years, particularly in girls, place high demands on nutritional resources to underwrite the accelerated physical, biochemical and emotional development in this age group.

#### **17. Pregnant women & Breast feeding**

Pregnancy creates higher than average demands for nutrients, to ensure healthy growth of the baby and comfortable confinement for the mother. Nutrients which require increasing during pregnancy are the B-group, especially B1, B2, B3, B6, folic acid and B12, A, D, E and the minerals calcium, iron, magnesium, zinc and phosphorus.

#### **18. Oral contraceptives**

The Pill can decrease absorption of folic acid and increase the need for vitamin B6 and possibly vitamin C, zinc and riboflavin. Approximately 22 per cent of Australian women aged 15 to 44 are believed to be 'on the pill' at any one time.

#### **19. The Elderly**

The aged have been shown to have a low intake of vitamins and minerals, particularly iron, calcium and zinc. Folic acid deficiency is often found in conjunction with vitamin C deficiency. Fibre intake is often low. Riboflavin (B2) and pyridoxine (B6) deficiencies have also been observed. Possible causes also include impaired sense of taste and smell, reduced secretion of digestive enzymes, chronic disease and maybe physical impairment.

## 20. **Lack of sunlight**

Invalids, shift workers and people whose exposure to sunlight may be minimal can suffer from insufficient amounts of vitamin D, which is required for calcium metabolism, without which rickets and osteoporosis (bone thinning) has been observed. Ultraviolet light is the stimulus to vitamin D formation in the skin. It is blocked by cloud, fog, smoke, ordinary window glass, curtains and clothing. The maximum recommended daily supplemental take of vitamin D is 400 i.u.

## 21. **Bio-individuality**

Wide fluctuations in individual nutrient requirements from the official recommended average vitamin and mineral intakes are common, particularly those in high physical demand vocations, such as athletes and manual labourers, taking into account body weight and physical type.

## 22. **Athletes**

Athletes consume large amounts of food and experience considerable stress. These factors affect their needs for B-group vitamins, vitamin C and iron in particular. Tests on Australian Olympic athletes and A-grade football players, for example have shown wide-ranging vitamin deficiencies.

- **Remember** - Check with your practitioner the times of day and in what combinations, are best to take your supplement/s. This is important to optimise the absorption from your digestive tract and the way your body utilises the nutrients.
- **Remember** - Being recommended supplements is unlikely to be a life sentence. They are usually prescribed taking into consideration any factors affecting your nutritional status, and your individual needs, as discussed above.
- **Remember** - Self-prescribing is often time wasting and costly. Your practitioner will mostly use 'practitioner-only ranges', which are high in quality and often very competitive in price to the common retail lines.