

maintaining good nutrition

If you've got food intolerances, and need to restrict a lot of flavoursome and colourful fruits and vegetables, you may worry that you're not getting enough vitamins and other nutrients. Low-chemical sources of the most important nutrients are summarised in the table on page 18.

Even on a strict low-chemical diet you should be able to meet your protein and energy needs. If you're not maintaining your desired weight, you're probably not getting enough kilojoules (calories) and you'll need to increase your energy intake from staple foods. Ask your dietitian for help if necessary.

We now have access to a vast range of foods that were not available when *Friendly Food* was first published. Since then, our clinical experience with several thousand people on long-term low-chemical diets and detailed analysis of their nutrient intake has shown that almost all are able to maintain good nutrition. However, for the most highly sensitive people, and for those with special requirements, it's best to see a dietitian for tips about food choices and appropriate supplementation. Special attention may need to be paid to particular nutrients, as outlined below.

special requirements

pregnancy and breast-feeding increase requirements for energy, iron, folic acid, calcium and iodine. If you become pregnant and you're on a restricted diet, check the table on page 18 and consult a dietitian for detailed advice. When breast-feeding you'll need to increase your energy intake so as not to lose weight. If necessary, ask for help in preparing suitable snacks and main meals.

infants and young children have changing dietary requirements as they grow and develop, and their individual food preferences vary, so there's no one diet that suits every child. For those with food intolerances, low-chemical foods such as legumes and cabbages provide good nutrition, promote the development of healthy taste preferences and reduce fussy eating. Infants and toddlers with allergies to several staple foods such as egg, milk, soy and wheat can have difficulties meeting their nutritional needs if they have coexisting intolerances, and supplementation with an elemental (amino acid) formula may be necessary.

Remember that energy comes from major nutrients, not vitamins, so if you feel tired and run-down it's likely to be due to unrecognised intolerance reactions rather than a lack of vitamins.



LOW-CHEMICAL SOURCES OF MAJOR NUTRIENTS			
NUTRIENT	FOOD SOURCE	NUTRIENT	FOOD SOURCE
Protein	Meat, fish, poultry, eggs, tofu and legumes (lentils, beans, chickpeas, split peas)	Folic acid (folate)	Lettuce, cabbage, fortified gluten-free cereals, legumes (lentils, beans, chickpeas, split peas) and gluten-free wholegrain cereals (e.g. quinoa, brown rice)
Fat	Oils, dairy-free margarine, meat and eggs	Vitamin B₁₂	Meat, chicken, fish and eggs
Carbohydrates	Rice, potato, swede, pear, and gluten-free breads, pasta and cereals	Vitamin C	Potato, parsley, brussels sprouts, cabbage, green beans, swede, pear, leek and celery
Fibre	Gluten-free wholegrain breads and cereals, fruit and vegetables, and legumes (lentils, beans, chickpeas, split peas)	Iron	Tofu, meat, chicken, white fish, eggs, legumes (lentils, beans, chickpeas, split peas), gluten-free wholegrain cereals (e.g. quinoa, brown rice), fortified gluten-free breakfast cereals and organic baby rice cereal (no rosemary)
Essential fatty acids (omega-3 fats)	Canola, sunflower and safflower oils and margarines, and egg yolk	Calcium	Calcium-fortified rice milk, tofu (set with calcium), calcium-fortified soy drink and other plant-based alternatives, green beans
Natural antioxidants	Fruit and vegetables, gluten-free wholegrains and cereals, and foods containing vitamins A and C and vitamin E (canola, sunflower and safflower oils, dairy-free margarine)	Zinc	Meat, chicken, seafood (e.g. oysters), tofu, eggs, legumes (lentils, beans, chickpeas, split peas) and gluten-free grains (e.g. quinoa, brown rice)
Vitamin A	Eggs, dairy-free margarine, lettuce, green beans, brussels sprouts and cabbage	Iodine	Fish, eggs, iodised salt and commercial gluten-free breads
B-group vitamins	Meat, chicken, fish, legumes (lentils, beans, chickpeas, split peas) and gluten-free wholegrain breads and cereals	Potassium	Potato, soya beans, legumes (lentils, beans, chickpeas, split peas), meat, fish and poultry
Vitamin B₁ (thiamin)	Brown rice, quinoa, fish and fortified gluten-free breads and breakfast cereals		

calcium and vitamin D Calcium is stored in our bones, and requirements change throughout life. Bone mass increases sevenfold from birth to puberty, another threefold during adolescence, and then remains stable up to middle age, after which it begins to decline—more so if you are physically inactive.

Hormonal control adjusts dietary absorption of calcium to meet our needs (pregnancy, breast-feeding) and to compensate for losses. Calcium intake varies greatly and should be averaged over months, not days or weeks.

The best natural sources of calcium are dairy products. If you're on a dairy-free diet, you can use a calcium-fortified rice drink or oat milk, or you can dissolve a plain calcium supplement in homemade drinks; these can be used in a variety of recipes.

Vitamin D is a hormone that regulates calcium absorption and is important for maintaining healthy immune function in the skin and gut. The food we normally eat cannot provide adequate doses of vitamin D to maintain bone and immune health, so regular sun exposure or supplements are necessary. We produce vitamin D naturally through the action of sunlight on the skin; this process is inhibited by use of sunblock.

iron We need iron to make haemoglobin, the oxygen-carrying protein in red blood cells. An efficient internal recycling system supplies most of our needs, and the remainder comes from the diet. Absorbed iron is stored in the liver, and is released and transported to the bone marrow as required for the manufacture of new blood cells.

The iron balance in our body—absorption, storage, release and use—is under complex hormonal control, and is not influenced by dietary intake. However, poor long-term intake that is insufficient to replace daily losses can lead to depletion of the body's iron stores. Measuring ferritin levels in the blood gives the best indication of iron status.

Pregnant women have increased needs because supply of iron to the foetus is prioritised at the mother's expense; vegetarians can have difficulty meeting their needs because iron from plant foods is poorly absorbed.

Although iron is most efficiently absorbed from meat, it is possible to meet your iron needs through consumption of plant foods. Good vegetarian sources of iron include egg yolk, tofu, cashews, legumes, quinoa and brown rice, as well as iron-fortified cereals.

vitamin A Vitamin A is stored in the liver, so short- to medium-term restriction will not lead to deficiency. Over the long term, however, stores of vitamin A

can become depleted, causing impairment of night vision, immunity and skin integrity.

Vitamin A is found in animal products such as meat, fish, poultry and dairy; and beta-carotene, which is converted to vitamin A, is present in some fruits and vegetables (see the tables on pp. 22–3). If you're having eggs, dairy and/or soy products, you'll be able to meet your requirements easily, but if these foods are excluded you can increase your intake by including dairy-free margarine, green beans, Chinese cabbage, chicken, carob powder and (if tolerated) small amounts of carrot and sweet potato. A multivitamin supplement containing vitamin A will make up for any deficit.

folic acid Folic acid is important for growth, blood cell production, and nervous system development in the foetus. It's found in a variety of vegetables and fruits, legumes, cereals and nuts. Good sources include cabbage, lettuce, lentils, beans, and fortified breads and cereals.

iodine Iodine is needed for the production of thyroid hormones. Deficiency can cause goitre, and during pregnancy it can lead to impaired brain development in the foetus. Australian and New Zealand soils are naturally deficient in iodine, so local farm produce is not a good source for meeting our daily requirements.

Seafood, commercial breads and iodised salt are good sources. Aim for approximately two fish meals a week and use iodised salt in your cooking. If you're on a low-chemical diet, your reduced intake of salt from processed foods means you can use iodised salt to flavour your meals without concern.

If you're pregnant or breast-feeding, you may need iodine supplementation.

Many plant foods have high levels of natural pesticides and preservatives in the skin or outer leaves. 'Organically' grown fruits and vegetables can have even higher levels. Peel fruit and vegetables thickly or discard the outer leaves.



Dairy-free margarine (such as Nuttelex™) can be generously spread on toast and crackers, used in cooking and added to vegetables.