

## Nutrition - women's extra needs

Women's nutritional needs change during menstruation, pregnancy, breastfeeding and menopause. A woman's reproductive life means that her nutritional needs differ greatly from those of a man.

With the popularity of crash dieting in Australia, nutritional deficiencies are common, especially among young women. Good nutrition means eating a wide variety of foods every day, which isn't possible on a restrictive diet.

### **Food and premenstrual syndrome (PMS)**

The interplay of hormones throughout a woman's menstrual cycle affects her body and state of mind. Energy intakes are generally higher in the premenstrual phase and some women also have food cravings as their period approaches. Eating high protein foods every few hours can often temper or stop the cravings. This should not be done at the expense of other food groups, especially carbohydrates, which should form the basis of the diet.

Fluid retention is common in the days leading up to a woman's period because certain hormones encourage the body to hold salt (sodium). The more sodium the body holds, the more fluid is retained in the tissues.

Other common symptoms of premenstrual syndrome (PMS) include moodiness, tiredness and constipation. It is thought that taking B-group vitamins, particularly vitamin B6, may help but more research is needed to confirm this. Light to moderate exercise, such as a 30-minute brisk walk each day, has also been shown to noticeably reduce symptoms of PMS.

### **Iron and anaemia**

Iron is a mineral that works with other substances to create haemoglobin, the compound that carries oxygen in the blood. Women and men metabolise iron from food at roughly the same rate. However, while men need around 8mg of iron in their daily diet, women need up to 18mg (or 27mg if pregnant). This is to make up for the amount of iron they lose in their menstrual period, which averages around 1mg or so lost for every day of bleeding.

Iron deficiency is the most common nutrient deficiency in women. Insufficient iron can lead to anaemia. Common symptoms include tiredness and breathlessness. Iron deficiency in pregnant women increases the risk of having a premature or low birth weight baby, which can have a negative impact on the short and long-term health of the baby.

Good sources of iron include:

- Red meat, chicken and fish
- Fortified cereals
- Egg yolks
- Legumes and nuts
- Leafy green vegetables.

Iron absorption can be impaired by very high fibre diets, alcohol, the tannic acid in tea and concentrated sources of calcium (for example, calcium supplements).

### **Vitamins, minerals and pregnancy**

Eating healthily during pregnancy is important to meet the nutritional needs of the developing baby and for the mother's own wellbeing. However, this doesn't mean 'eating for two' – it is the quality of the diet that is important, not the quantity of food eaten.

Eating a variety of foods from each of the key food groups is generally enough to meet both mother and baby's requirements. Special attention should be given to several nutrients:

- **Calcium** – although a developing baby needs a lot of calcium, physiological changes during pregnancy help to protect the mother's bones, so there is no need for additional dietary calcium during pregnancy. However, it is important to include at least two serves of dairy products or equivalent high calcium foods every day. Good sources of calcium include milk, cheese, yoghurt and fish with edible bones (for example, salmon and sardines).
- **Folic acid (folate)** – extra folic acid is needed for the development and growth of new cells. Research suggests that insufficient folic acid at the time of conception and in the first trimester of pregnancy can increase the risk of neural tube defects in the unborn baby. Good sources of folic acid include leafy green vegetables, nuts, yeast extracts such as Vegemite, legumes and fortified foods such as bread and breakfast cereals.
- **Iron** – iron requirements increase significantly during pregnancy as maternal blood volume increases and the baby's blood system is developing. Anaemia is the most common nutritional deficiency during pregnancy. The best source of iron is red meat, with smaller amounts in chicken and fish. Iron is also present in plant foods such as legumes, nuts, wholegrain breads and cereals and green leafy vegetables, but it is not absorbed as well from these foods. Eating foods rich in Vitamin C at the same time can improve iron absorption. Iron supplements are frequently prescribed for pregnant women if they are unable to meet their requirements through food alone.
- **Zinc** – this nutrient is needed to maintain the health of cells. Taking iron supplements may interfere with the absorption of zinc so women taking iron supplements should continue to eat iron-rich foods, which are also a good source of zinc.
- **Iodine** – iodine is needed for normal mental development of the baby but it can be difficult to get enough from food. Ways of increasing iodine intake include using iodised salt, eating fish and seafood weekly (see your health professional for advice about safe types and amounts of fish) or using a multivitamin supplement that contains iodine and is safe for pregnancy.
- **Vitamin C** – vitamin C is important for normal gum, tooth, bone and body tissue formation. The best source of Vitamin C is an orange, but it is also found in other citrus fruits and a variety of vegetables.

### **Nutrition during breastfeeding**

A healthy diet is important during breastfeeding as the mother must provide for her own nutrient requirements as well for the production of breast milk. Particular attention needs to be paid to protein, calcium, iron, vitamins and fluids. The best advice is to eat a variety of foods from each of the key food groups each day. The amount of extra food will vary according appetite needs and weight loss – aim to lose weight gradually until you have reached your pre-pregnant weight.

Women who were anaemic during pregnancy should pay special attention to iron-rich foods as they will need to replete their iron stores. It may be necessary to continue taking iron supplements – be advised by your doctor.

### **Calcium and osteoporosis**

Osteoporosis is a disorder characterised by a thinning of the bones until they are weak and easily fracture or break. Women are at greater risk of developing osteoporosis than men, particularly after menopause, because oestrogen levels are reduced. There are many factors involved, for example:

- **Low calcium intake during the growing years** – this increases the susceptibility to osteoporosis later in life. Bone strength in later life depends on the development of bones earlier in life. Adequate calcium intake during youth is essential to achieve peak bone mass.
- **Diet** – salt, caffeine and alcohol may interfere with the balance of calcium in the body by affecting the absorption of calcium and increasing the amount lost in the urine. Moderate alcohol intake (1–2 standard drinks per day) and moderate tea, coffee and caffeine-containing drinks (no more than six cups per day) are recommended. Avoid adding salt at the table and in cooking.
- **Exercise** – or the lack of it, can also affect the development of osteoporosis.
- **Low body weight** – maintaining a low body weight (body mass index less than 18) has been associated with the development of osteoporosis.

### **Vitamin D and calcium**

Vitamin D increases calcium absorption and is required for normal bone metabolism. The main source of vitamin D for most people is sunshine. Women who have very low levels of sunlight exposure or have naturally very dark skin are at risk of vitamin D deficiency. Those affected may include women who cover most of their body when outdoors, shift workers, those who are unable to regularly get out of their house or women in residential care. Women who have certain medical conditions or are on some medications may also be affected.

It is important to balance the need to maintain adequate vitamin D levels with the risk of skin cancer from too much sun exposure. A sensible balance of sun protection and exposure can ensure that women are not at risk of vitamin D deficiency.

Good dietary sources of vitamin D are margarine, eggs and oily fish (such as mackerel and sardines).

Good sources of calcium include dairy foods, calcium-fortified soymilk and sesame seeds. For women who can't eat these foods, calcium supplements may be desirable.

### **Phytoestrogens**

Phytoestrogens have been linked to a range of health benefits, especially for women. They are natural substances found in certain plant foods including:

- Whole grains, including cracked wheat and barley
- Flaxseed (linseed)
- Sesame seeds
- Nuts, including almonds
- Legumes, especially soy and chickpeas
- Alfalfa sprouts
- Herb teas, especially sage and aniseed
- Extra virgin olive oil.

### **Oestrogen and phytoestrogens**

Phytoestrogens are natural oestrogen-like substances. Oestrogen is a hormone that is necessary for optimal health. There is a link between oestrogen levels and the development of heart disease, cancer and osteoporosis. At present there is no evidence that increasing the intake of phytoestrogen will prevent heart disease, cancer and osteoporosis.

### **Where to get help**

- Your doctor
- An Accredited Practising Dietitian, contact the Dietitians Association of Australia

### **Things to remember**

- Low intakes of dietary iron and calcium are common in women.
- Menstruation, pregnancy, breastfeeding and menopause are times of increased nutritional demand.
- Good nutrition means eating a wide variety of foods every day.
- Vitamin B6 can help ease the symptoms of premenstrual syndrome.
- Large quantities of foods like tea, alcohol, caffeine and salt can interfere with the absorption and excretion of important minerals.

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