

### **Water retention**

The medical term for water retention is oedema. Physiologically, oedema occurs due to a build up of excess fluid in the body tissues. Water retention is not a disease itself, but a clinical sign, which may or may not be due to an underlying medical problem. Many women suffer from mild water retention at some stage during the menstrual cycle. Or you might recognize it after a long haul flight when your feet, ankles and legs appear puffy. Many elderly people also suffer from water retention due to various medical reasons.

The general principle behind oedema is that it occurs when the body's normal balance of fluid intake and output is disturbed. We take fluid in by drinking and eating and we get rid of it in the form of sweat, urine, faeces and by breathing. Fluid within the body is transported by the blood vessels (arteries and veins) as well as the lymphatic system. The fluid moves through the walls of the blood vessels into body tissue to provide nutrition and water for cells. This is a dynamic process and fluids constantly move forwards and backwards to the blood vessels.

There are two possible mechanisms that can cause the abnormal fluid build-up seen in the tissues:

- If there is an increase in the pressure within the blood vessels, that will result in the fluid shift out of the vessels into the tissue
- When there is a decreased amount of protein in the bloodstream, there will be a shift of water out of the vessels into the surrounding tissues; this is the body's natural mechanism to maintain a balance

There are many causes of oedema, such as:

- 1) Heart failure
- 2) Kidney disease
- 3) Causes of decreased amount of protein, such as malnutrition or starvation and certain types of gastroenteritis, chronic liver disease, e.g. due to alcohol or hepatitis
- 4) Thyroid disease, an under active and an overactive thyroid gland could cause oedema, because the thyroid hormones play an important role in certain steps of the metabolism
- 5) Venous insufficiency, also known as weakened veins, this can cause a pooling of blood in the legs and result in swelling
- 6) Lymphoedema: the lymphatic vessels drain lymph from your legs and arms to the lymph nodes, which forms an important component of the immune system. If any obstruction occurs, because of infection, scar tissue, parasites or tumors, oedema may result.
- 7) Medication such as certain blood pressure medications, steroids and antidepressants

Water retention can also occur in a fit and healthy person. In this case, the water retention will resolve itself:

- hot weather causes blood vessels to expand and this leads to a fluid shift:
- immobility, the lack of use of one's leg muscles, leads to blood pooling in the veins, due to the gravity effect, hence the reason why you get off the plane with swollen feet after a long haul flight
- pregnancy and the menstrual cycle involves changes in hormone levels. These fluctuating hormone levels affect the rates at which fluid moves through blood vessels and tissues, hence the water retention some women experience.

How to treat water retention:

The treatment depends on the underlying cause of the oedema. There are various medications available on prescription to treat oedema. There are also a few general measures to take to improve the swelling:

- keep legs elevated as much as possible
- cut down on salt intake
- regular exercise
- weight loss
- wear supportive stockings

There are many different natural and homeopathic remedies to improve water retention, such as dandelion and parsley which are natural diuretics. Chinese herbs angelica and white peony are also often used.