

Iron Deficiency Anaemia

Anaemia is a deficiency of red blood cells. To produce red blood cells, the body needs iron, vitamin B12 and folic acid.

The body needs iron to successfully produce haemoglobin, the substance that carries oxygen throughout the body. The World Health Organization considers iron deficiency the number one nutritional disorder in the world. It develops gradually and usually begins with a negative iron balance; this means the iron intake does not meet the daily need for dietary iron. First of all the iron stores will be depleted, whilst the blood haemoglobin levels remains normal. Iron deficiency anaemia is an advanced stage of iron depletion. There are many reasons why a shortage of iron develops. Here are the main reasons:

- **A lack of iron in the diet**

This is common in vegetarian and vegan diets, because the main and best source of iron is red meat. Babies and children are also more like to develop a deficiency due to poor dietary intake of iron. Babies and children often eat very small amounts. This also accounts for the elderly who often have reduced appetites and eat very small amounts. Premature babies often suffer from anaemia due to the fact that an infant's iron stores are completed towards the end of pregnancy.

- **An increased need for iron**

During any stage in life when a large amount of cell divisions occur, such as during pregnancy, and during periods of rapid childhood growth.

- **Reduced absorption from the intestine**

Iron absorption is affected by diseases of the small intestine such as coeliac disease or Crohn's disease (inflammation of the intestine)

- **Loss of blood**

Iron deficiency often occurs when there is a constant or significant amount of blood loss. This could be either due to blood loss after accidents or after major surgery. It could also be caused by small ruptures in the intestine due to cancer or polyps (growths). Common stomach and duodenal ulcers can also lead to iron deficiency anaemia. Often the loss of blood from the digestive tract is so slight that it goes unknown, but after a period of time symptoms of anaemia will occur. Iron deficiency is common in women who suffer from heavy periods.

Generally women who smoke, eat a diet low in iron and have heavy periods are very susceptible to iron deficiency anaemia.

The normal level of haemoglobin (red pigment containing iron) is 12-15g/dL. When the levels drop below 10g/dl you will be classed and treated for iron deficiency anaemia. An analysis of the red blood cells will show that the red blood cells are small and pale. Iron deficiency can also be identified by techniques that examine the proteins that are involved in the storage and transport of iron known as ferritin and transferrin. Iron metabolism and turnover is complicated and a simple blood test would not be sufficient to show whether anaemia does exist.

Iron deficiency is treated with iron preparations (tablets) and an increase of iron in the diet.