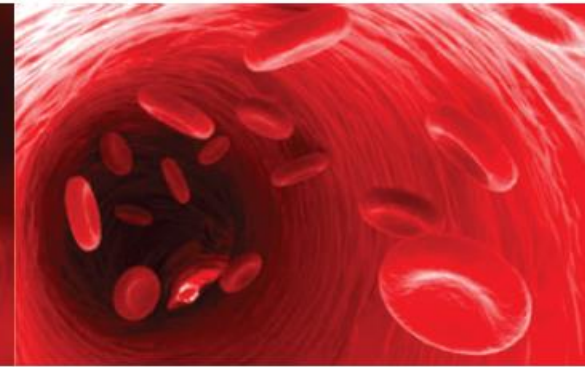
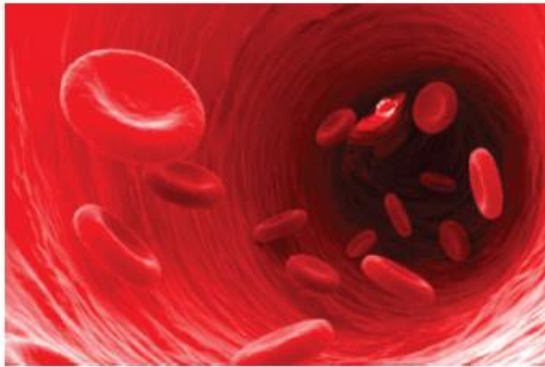


# IRON DEFICIENCY ANAEMIA





### What is iron?

Iron is a mineral found in all cells of our body and is an important component of haemoglobin. Haemoglobin is the part of red blood cells that gives blood its red colour and enables the red blood cells to carry oxygen throughout your body.

### What is iron deficiency anaemia?

Iron deficiency anaemia occurs when your body does not have enough iron to produce haemoglobin.

### Who is likely to have iron deficiency?

- Young children because of rapid growth.
- Adolescent girls and women of childbearing age due to blood loss during menstruation.
- Pregnant women due to their increased blood volume and the developing foetus.

### What causes iron deficiency anaemia?

- Blood loss due to menstruation, stomach ulcer, colon polyp or colorectal cancer.
- Inadequate dietary intake of iron due to poverty, ill health, poor eating habits or a vegetarian diet.
- Inability to absorb dietary iron from the intestine due to intestinal surgery (such as gastric bypass) or a disease of the intestine (such as Crohn's disease or coeliac disease).
- Increased iron demand in children and adolescents (during growth spurts), and in pregnancy (due to the woman's increased blood volume and the growing foetus).

### What are the signs and symptoms of iron deficiency anaemia?

These include fatigue, pale skin, breathlessness, headache, dizziness, cold hands and feet, irritability, sore tongue, brittle nails, fast heartbeat, unusual cravings for non-nutritive substances (such as ice, dirt or starch) and an uncomfortable tingling or crawling feeling in your legs (restless legs syndrome).

### How is iron deficiency detected?

The most common tests to screen for iron deficiency are:

- **Haemoglobin** - a lower than normal level of haemoglobin is a sign of anaemia.
- **Haematocrit or packed cell volume (PCV)** - this is the percentage of your blood volume made up by red blood cells. Lower than normal haematocrit levels indicate anaemia.
- **Mean corpuscular volume (MCV)** - it is a measure of the average size of your red blood cells. In iron-deficiency anaemia, your red blood cells are usually smaller than normal.
- **Mean corpuscular haemoglobin (MCH)** - it is a measure of the average amount of haemoglobin in your red blood cells. It is usually lower than normal in iron-deficiency anaemia.
- **Reticulocyte count:** reticulocytes are young, immature red blood cells that are produced in the bone marrow and released into the bloodstream, where they circulate for about 1-2 days before developing into mature red blood cells. The test measures the rate at which new red blood cells are made. Reticulocyte count is low in iron deficiency anaemia.

- **Peripheral smear:** a sample of blood is examined under a microscope. In iron-deficiency anaemia, red blood cells will look smaller and paler than normal.
- **Iron profile tests:** they are used to measure iron levels in your body and they include:

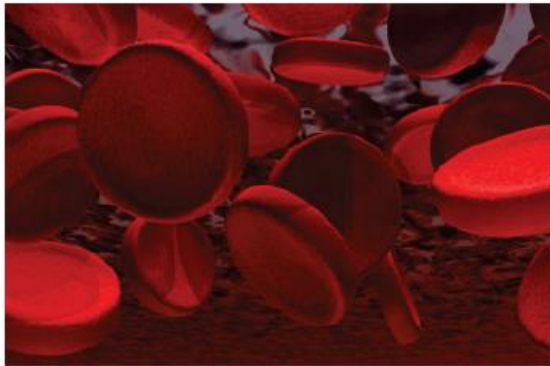
**Serum iron** - this test measures the amount of iron in your blood. Serum iron concentration is decreased in iron-deficiency anaemia.

**Ferritin** - this protein helps store iron in your body. Lower than normal ferritin levels indicate that your body's iron stores are low and you have iron deficiency.

**Percentage transferrin saturation** - transferrin is a protein in the blood that transports iron. Percentage transferrin saturation measures the amount of iron carried by transferrin. It is low in iron deficiency anaemia.

**Total iron-binding capacity (TIBC)** - measures how much of the transferrin in your blood is not carrying iron. If you have iron-deficiency anaemia, you will have a high level of transferrin that has no iron, thus TIBC will be high.

**Faecal occult blood test:** this looks for blood in the stool to determine whether bleeding from the intestine is the cause of iron-deficiency anaemia. If the test finds blood, your doctor may request for other tests to find the exact spot of the bleeding which could be in the stomach, upper intestines, colon or pelvic organs.



### How is iron deficiency anaemia treated?

It is important you consult your doctor for appropriate treatment which will depend on your age, health and cause of the iron deficiency. Your doctor may recommend you take iron supplements and also treat the underlying cause of your iron deficiency with dietary changes, medicines or surgery.

### What can I do to prevent iron deficiency anaemia?

You can reduce your risk of iron deficiency anaemia by eating iron-rich foods including red meat, poultry, eggs, sea food, fruit, green leafy vegetables and iron-fortified cereals. Eating vegetables and fruit rich in vitamin C, especially citrus juices (oranges, grapefruits, tangerines), can also enhance your body's absorption of iron.

### How can I prevent iron deficiency anaemia in infants?

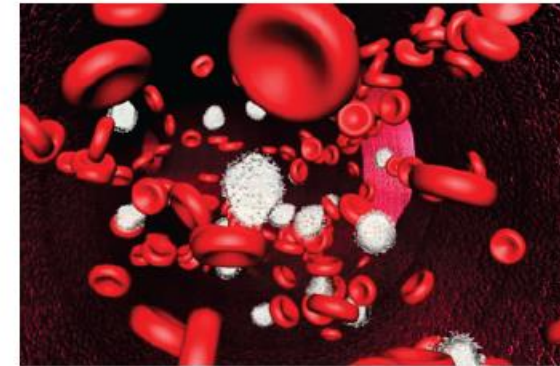
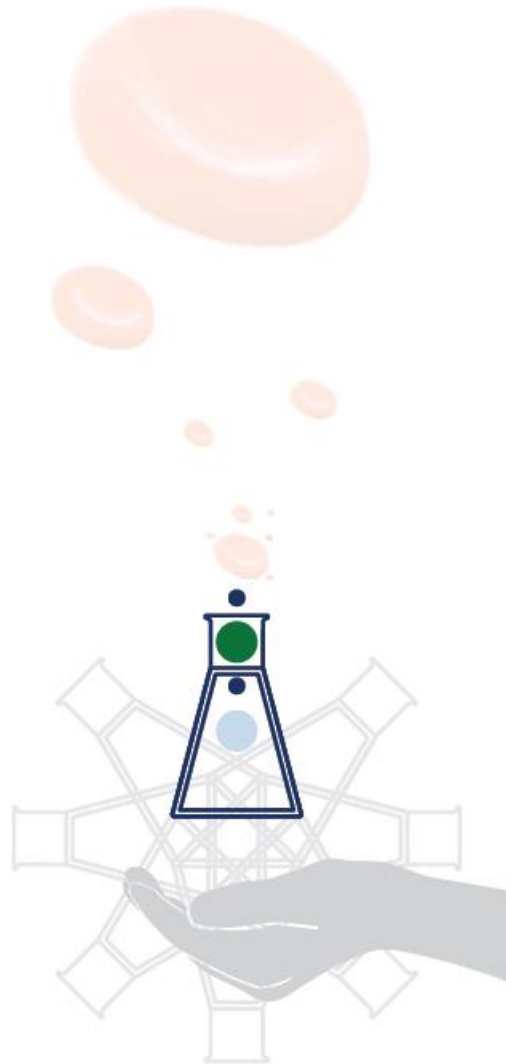
You can prevent iron deficiency anaemia in infants by feeding your baby breast milk or iron-fortified formula for the first year. Cow's milk is not a good source of iron for babies and is not recommended for infants under one year. Iron from breast milk is more easily absorbed than iron found in formula.

### REFERENCES

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