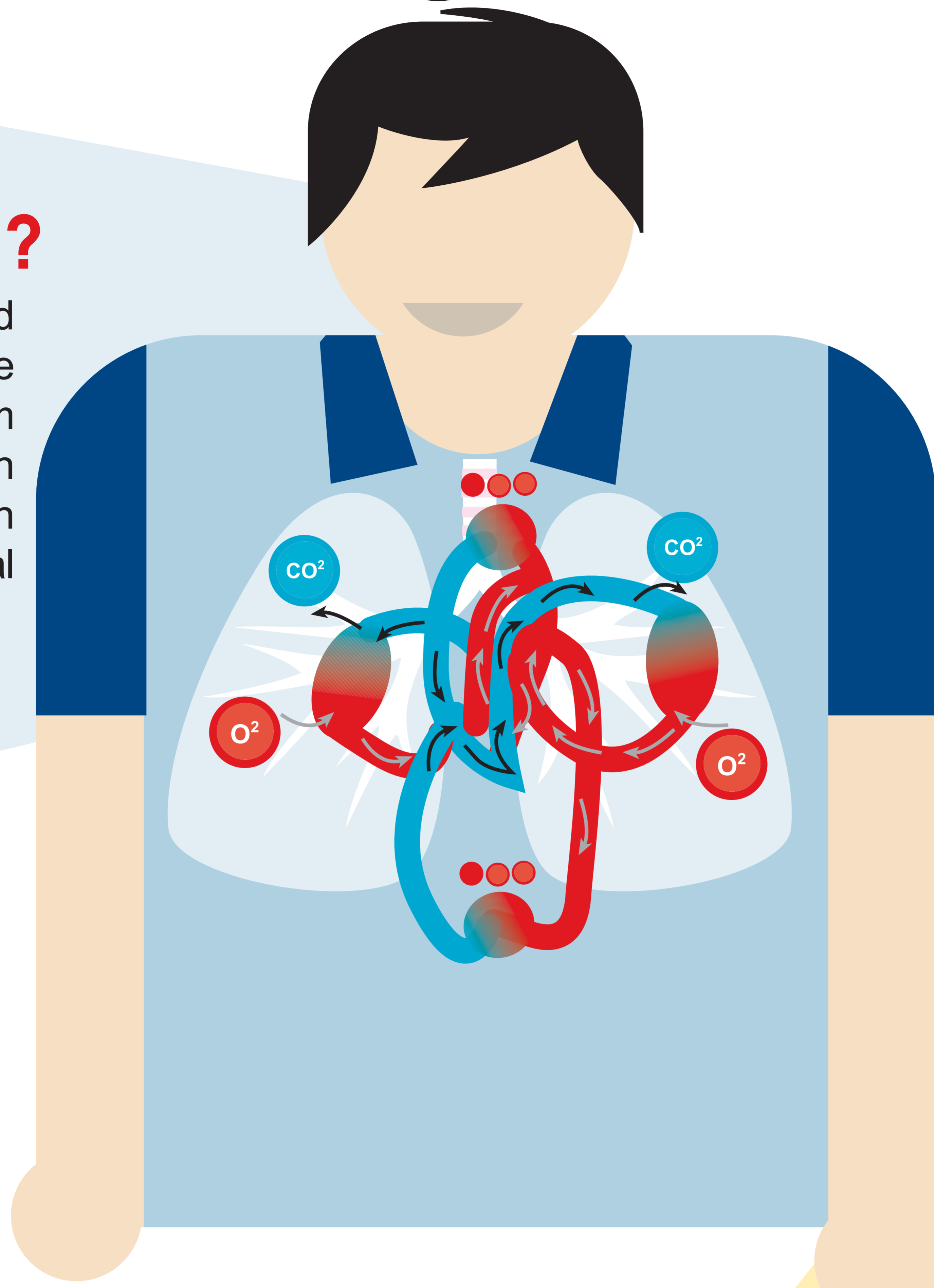


Maintaining Healthy Haemoglobin Level

What is Haemoglobin?

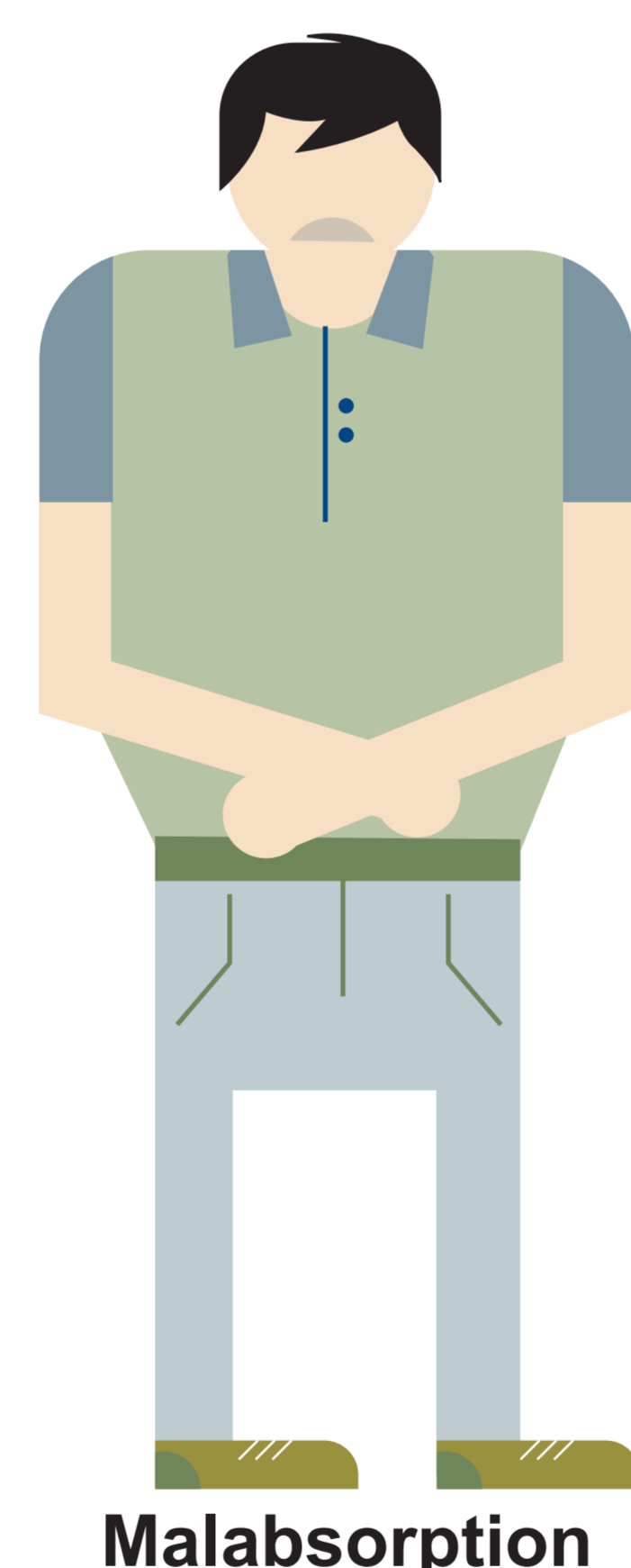
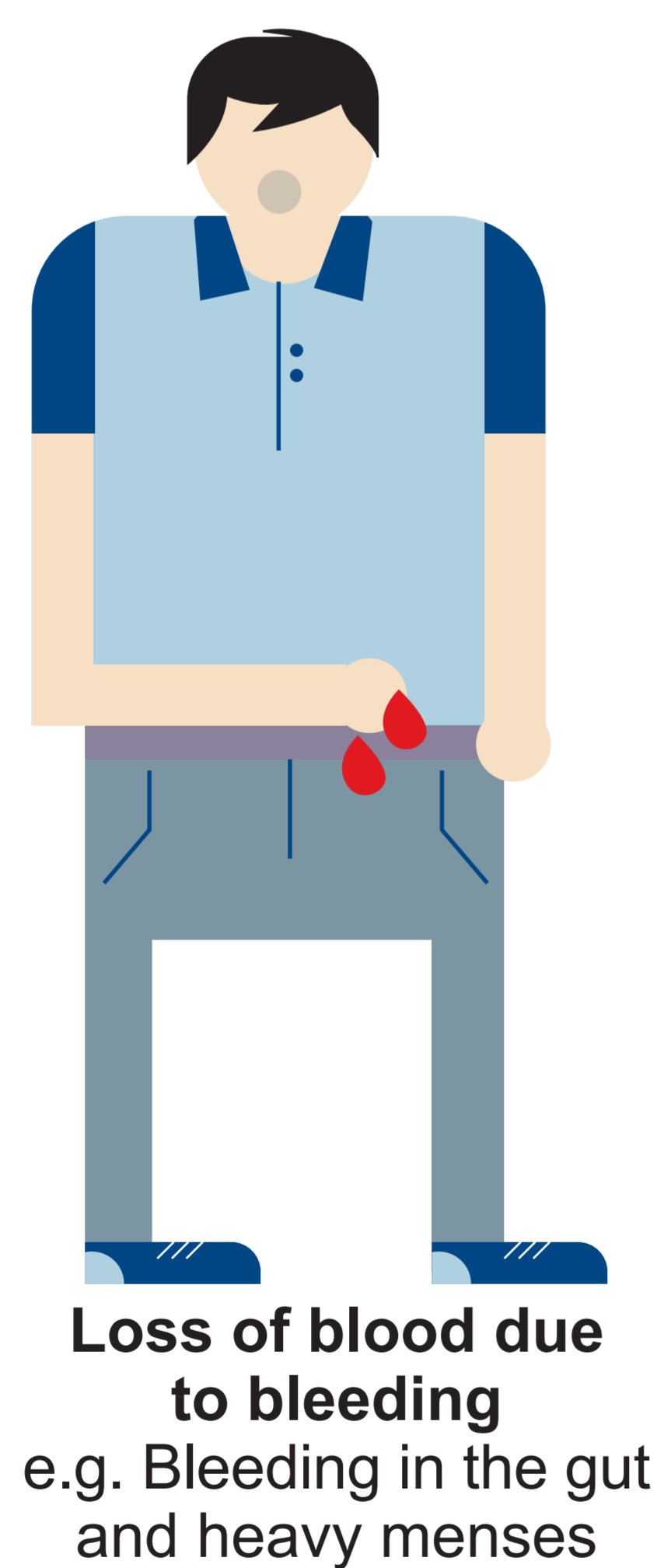
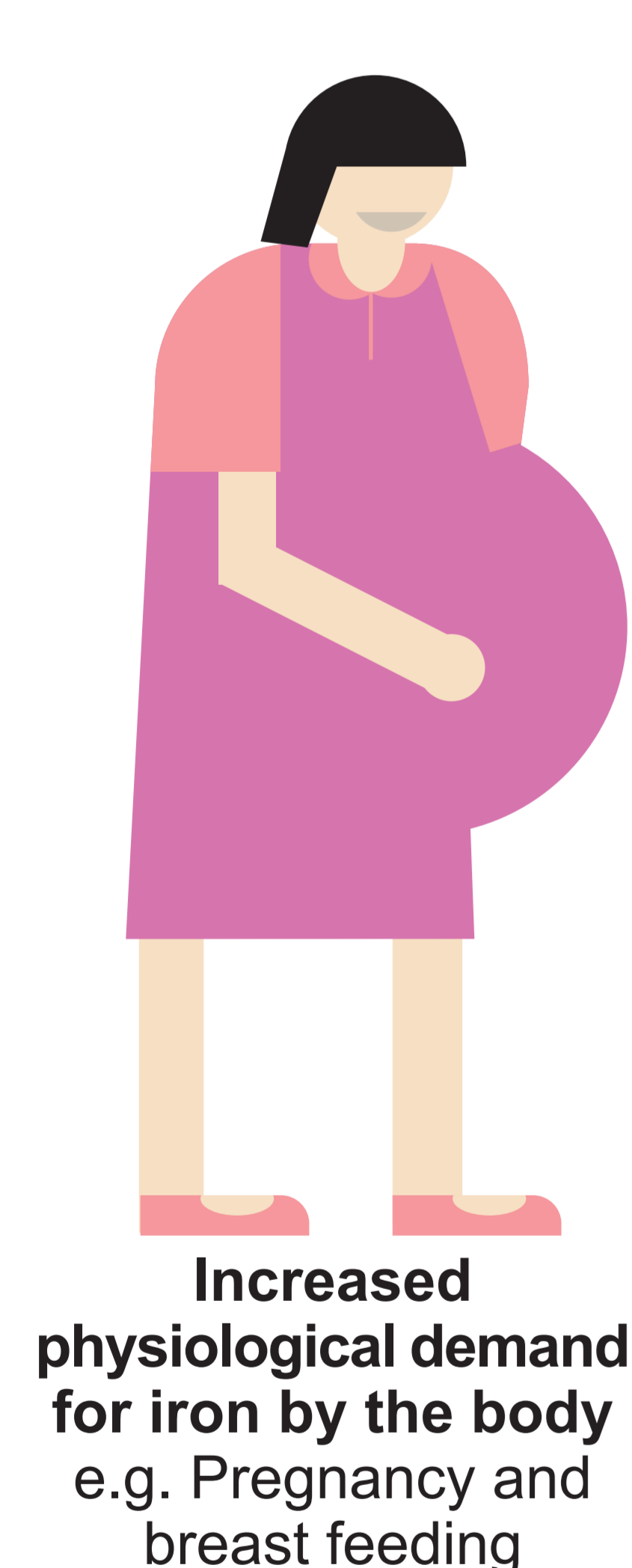
Haemoglobin is a specialised protein in red blood cells that carries oxygen (O₂) to the tissues and return carbon dioxide (CO₂) from tissues to the lungs. Each haemoglobin molecule carries four haem groups which in turn contains iron. Therefore, iron is essential for the manufacture of haemoglobin.



What Causes Iron Deficiency Anaemia?

Iron deficiency anaemia is the most common cause of anaemia worldwide. The development of iron deficiency anaemia varies with age and sex.

Four most common causes are:



Haemoglobin Level and Blood Donation

Haemoglobin level is always tested before a blood donation. This is usually done using a simple fingerprick test. Donors must have a haemoglobin level of at least **12.5g/dl** before they can donate blood. This is to ensure safety of the donor as frequent blood donations without sufficient replacement of the iron can lead to **iron deficiency anaemia**.



What is Iron Cycle?

An average diet contains about 10mg – 12mg of iron per day. Of which, about 10% (1 – 2mg) is absorbed.

About 0.5 – 1mg of iron is lost per day and it is caused by:

1. Shedding of cells from digestive tract
2. Growth of hair and nails
3. Excretion in urine and sweat

67% of the total body iron is contained in the circulating haemoglobin and is re-utilised for the production of haemoglobin after death of red cells.

Females lose an additional 0.5 – 1mg of iron per day during the menstrual cycle. Therefore, to compensate for the loss, their daily iron requirement is twice the amount required by males.

How can Iron Deficiency be Prevented?

It can be prevented by eating a well-balanced diet that includes iron-rich foods. Iron from meat and seafood sources is better absorbed by the body. However, you can improve iron absorption for non-meat and seafood sources by consuming them together with food and liquids rich in Vitamin C.

The following foods are ranked according to the iron content, from the highest iron content to the lowest per standard amount.

Rice and Alternatives

- Branflakes
- Cornflakes
- Wholemeal pasta

Meat and Seafood

- Pig kidney
- Chicken liver
- Pork liver
- Lean beef
- Lean mutton
- Canned tomato sardine
- Lean pork

Fruits

- Dried figs
- Dried longans
- Dried black dates
- Dried red dates
- Semi-dried prunes

Vegetables

- Kang kong
- Spinach (Bayam pasir)
- Chinese kale (Kai lan)

Beans, Nuts, Seeds and Soya Products

- Lentil
- Green gram
- Red gram
- Cashew nut
- Sunflower seed
- Watermelon seed
- White soya bean
- Pistachio
- Soya beancurd, tauhu