

## WHAT CAUSES ANAEMIA?

Anaemia means that there are not enough red blood cells in the blood. This can happen if your body:

- doesn't make enough red blood cells
- loses too many of them
- destroys red blood cells faster than they can be replaced

There are many different types of anaemia and the causes can include:

- Serious disease
- Low vitamin or iron levels
- Blood loss, eg. from an accident
- Inherited health problems or diseases
- Effects of medication or treatment
- Contact with industrial chemicals
- Poor diet

## HOW DO YOU KNOW IF YOU HAVE ANAEMIA?

The effects of anaemia depend on how severe it is and the rate at which it develops. You can feel:

- very weak
- extremely tired
- unusually cold
- short of breath
- dizzy
- unusually sad or depressed
- confused
- pale, eg a loss of pinkness in your lips, eyelid linings, gums and hands

You may not feel like eating, have trouble sleeping and your heartbeat may increase. Anaemia is a serious disease and can lead to other health conditions if left untreated. For example when the numbers of red blood cells drop, your heart works harder to maintain oxygen levels in the body. If the heart works too hard, the heart muscle can become larger and this can lead to heart failure.

It is important to see a doctor if you have any of these signs as it is easy to confuse the effects of anaemia with symptoms of other diseases.

A blood test is used to find out your haemoglobin (Hb) level and confirm if you have anaemia. Your haemoglobin level is a guide to the number of red cells in your blood. Haemoglobin is a red, iron-rich protein in red blood cells that carries oxygen. Red blood cells carry oxygen from the lungs to all parts of your body so it can be used as energy.

A haemoglobin level of less than 135 g/L (grams per Litre) of blood in adult men and less than 120 g/L in adult women is usually called anaemia. Haemoglobin levels vary from person to person but if it falls below these levels you will start to feel unwell.

## **WHO IS MORE 'AT RISK' OF GETTING ANAEMIA?**

People with serious conditions are more at risk of anaemia, including:

- Kidney disease
- Diabetes
- Heart disease
- Cancer
- Inflammatory bowel disease
- Rheumatoid arthritis

You are also more at risk if you:

- are over 65 years old
- have HIV/AIDS
- have surgery

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## **CAN ANAEMIA BE TREATED?**

The good news is that anaemia can be treated. The treatment varies greatly depending on the type of anaemia.

If you have kidney disease, the cause may be a lack of iron as kidney disease limits your body's ability to absorb iron from the gut. Iron is naturally found in red meat as well as green leafy vegetables, such as spinach, lettuce and bok choy. Sometimes a nutritional supplement of iron, B12 or folate is needed. Extra iron can be given in the form of tablets, injections or as an IV infusion (drip).

The hormone erythropoietin (EPO) is also used to treat anaemia if you have kidney disease. The kidneys make approximately 90% of the body's EPO and maintain haemoglobin levels in the blood by telling the bone marrow to make more red blood cells. EPO can be given intravenously (directly into the blood) or into the skin tissue. Many people are taught to give themselves this injection and find it easy and convenient. Over 80% of the people on haemodialysis take this medication, which is often given intravenously at the end of dialysis treatment.

The dose varies from person to person. Your doctor uses the level of haemoglobin in your blood and your body weight to decide on the dose. The timing of injections can vary from three times a week to once every four weeks depending on the type of EPO and the severity of the anaemia. However, EPO is expensive and approved for subsidised use only when the haemoglobin level has fallen below 100g/L.

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## **ARE THERE ANY SIDE EFFECTS FROM EPO?**

EPO corrects anaemia and reduces the need for blood transfusions so you usually feel much better. However, as with all medications, some people may get side effects. One of the effects of EPO is that it can cause blood pressure to rise, especially at the beginning of treatment so it is important that it is monitored.

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**For more information about healthy kidneys or this topic, please contact Kidney Health Australia:**  
Kidney Information Line (free call) on 1800 682 531 or visit website  
[www.kidney.org.au](http://www.kidney.org.au)

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This is intended as a general introduction to this topic and is not meant to substitute for your doctor's or Health Professional's advice. All care is taken to ensure that the information is relevant to the reader and applicable to each state in Australia. It should be noted that Kidney Health Australia recognises that each person's experience is individual and that variations do occur in treatment and management due to personal circumstances, the health professional and the state one lives in. Should you require further information always consult your doctor or health professional.

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