

Anaemia and Haemoglobin (Hb)

Patient Information Leaflets

What is Anaemia?

Haemoglobin (Hb) is a substance in red blood cells which carries oxygen around the body. Too low a level of Hb is known as anaemia. Anaemia causes tiredness, shortness of breath and paleness.

Anaemia, which is always secondary to some other disorder, can be caused by blood loss, blood destruction or commonly in kidney patients, poor blood production.

Why do patients with Kidney (renal) disease suffer from anaemia?

Erythropoietin is produced by the kidneys and is used to maintain haemoglobin (Hb) levels.

Damage to your kidneys

↓ May lead to ↓

Poor production of erythropoietin

↓ Will lead to ↓

Reduced number of red blood cells

↓ Will lead to ↓

Anaemia

How do I know if I am Anaemic?

Your doctor can check your Hb level. Symptoms of anaemia include general lethargy, tiredness, shortness of breath and paleness.

The normal Hb levels are in the range of 13 - 17 grams per decilitre (g/dl) for men and 12 - 15g/dl for women. These levels are reduced in anaemia, and kidney disease.

Normal ranges may not be achieved in patients with Chronic Kidney Disease for various reasons.

Your treatment will be aimed to maintain stable Hb levels of between 10.5 and 12.5g/dl as per accepted standard.

How can Anaemia be treated?

- Immediate treatment of severe anaemia requires blood transfusions.
- Blood tests should be performed to measure the level of iron in the blood (iron is an important part of Hb), and also two vitamins important in the production of red blood cells (vitamin B12 and folic acid).

If there is a deficiency of any of these, supplements can be given. Tests may be required to identify the cause of any deficiency.
- Drugs which act like the natural hormone erythropoietin have been developed. These drugs are called erythropoietic agents.

Erythropoietic Agents

These agents produce an identical response to the erythropoietin normally produced by the kidneys and either may be used to make up the shortage of natural hormone.

Regular monitoring will alert your doctor to a drop in Hb level which may then be treated by these drugs, without the disadvantages of blood transfusions.

How are Erythropoietic agents given?

These drugs are given by injection, usually once a week dependent upon the type of drug prescribed and the medical instruction given. They are injected under the skin (subcutaneous route) or into a vein or venous line (intravenous) following dialysis.

They come in pre-filled syringes ready to inject and so the treatment can be self-administered at home. The drug should be kept in the refrigerator and removed half-an-hour before injection so that it is not too cold.

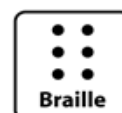
The solution should be checked before use and if it is discoloured, cloudy or has particles in it, it should not be used. Unused solution should be returned to the supplier.

How quickly will treatment with Erythropoietic agents work?

These drugs will start to work immediately but it could be a few weeks before your Hb level rises to the point where you begin to feel better.

Further information on anaemia management in chronic kidney disease is available on:

<http://www.nice.org.uk/guidance/cg39>



If you require a special edition of this leaflet

This leaflet is available in large print, Braille, on audio tape or disk and in other languages on request. Please contact:

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