Anaemia in chronic kidney disease
Information for patients and their families

Definition of anaemia:
We breathe in oxygen, which is carried by haemoglobin in red blood cells to all parts of the body. The oxygen is essential for metabolic processes in the body that give us energy.

Anaemia is when your blood contains fewer red blood cells than normal, so your blood can carry less oxygen.

This means you will have less energy and may feel tired.

New red blood cells are being produced by your bone marrow all the time.

Their production is controlled by a hormone in the body called erythropoietin (EPO), which is mainly produced in the kidney.

Other requirements for red blood cell and haemoglobin production are vitamin B12, folic acid and iron.

What does it mean to have anaemia in chronic kidney disease?
If your kidneys do not function properly:
Production of EPO is greatly reduced; as a result you have fewer red blood cells.

This causes:
• anaemia
• fatigue (tire very easily)
• you feel the cold more easily
• an increased risk of getting chest pain (your heart has to work harder because there is less oxygen to be pumped around)
• shortness of breath
• lose your appetite.
Drugs for anaemia
It is important to take your medication for your anaemia as directed by your doctor.

There may be some injections that need to be given weekly, monthly or even at longer intervals between doses e.g. erythropoietin, vitamin B12.

There are also some medications that are usually taken daily e.g. folic acid, iron and vitamin B.

There may be some medications that need to be given in hospital as an infusion e.g. iron.

Table of medications and how they work

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<th>Class of drug</th>
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| Erythropoietin | Injection               | Stimulates the bone marrow to produce red blood cells | • Flu-like symptoms  
• Bone pain  
• Headaches  
• Chills |
| Iron          | Tablet (given during dialysis) | Essential for making haemoglobin | • Nausea  
• Constipation |
| Folic acid    | Tablet                  | Needed for the production of red blood cells |  |
| Vitamin B12   | Tablet/Injection        | Needed for the production of red blood cells |  |

How do we monitor your anaemia?
By measuring your haemoglobin (Hb) levels in the blood.

What helps to reduce anaemia?
1. Diet:
   Your diet must be rich in vitamins and minerals such as red meat, chicken, fish, vegetables, eggs etc.

Ask your dietitian for more information.

2. Blood transfusion


It takes your body a short time to make red blood cells, so it will be about four weeks before you notice any effect.