

WILL THE TREATMENT AFFECT MY DIALYSIS AND DRUG TREATMENT?

With a greater red blood cell concentration you may need to increase heparin during haemodialysis. Some patients experience a rise in blood pressure which may need medication to lower it.

As your appetite returns you will probably want to eat more and a little extra dialysis may be needed. It is wise to stick to your diet to avoid any overload of potassium.

WHAT ABOUT IRON SUPPLEMENTS?

Your body needs enough iron to support the extra red blood cells produced by the treatment. So, if your iron level is low, you will need supplements, either by tablet or by injection.

WILL I NEED MORE TESTS?

When you begin taking an erythropoietic agent, your weight, blood pressure and haemoglobin levels will be monitored and the dose adjusted if necessary. You will still need all your usual blood tests.

ARE THERE ANY SIDE EFFECTS?

All erythropoietic agents are very effective and relatively safe in raising blood haemoglobin levels. To minimise the risk of increased blood pressure, which appears in 1 in 5 people, it is important not to neglect your control of salt and fluid intake.

Very rarely high blood pressure has caused a seizure but careful monitoring should prevent this. Because your blood has thickened, your fistula may be at a higher risk of clotting. Some patients have experienced flu-like effects shortly after injection and others have reported rashes: these effects are not serious and usually reduce with time.

Most patients have no ill-effects from taking these drugs. As with any other aspect of your treatment, if you feel unwell tell your doctor immediately.

DO I NEED TO TAKE THE DRUG IF I AM HOSPITALISED?

Usually yes. Tell the doctor or nurse caring for you that you are taking Recombinant Human Erythropoietin **EPO**, or Novel Erythropoiesis Stimulating Protein **NESP**.

HOW LONG DO I NEED TO TAKE THESE DRUGS?

Probably for as long as you are on dialysis. If you have a successful transplant your new kidney should produce enough of its own erythropoietin to allow you to stop treatment.

ARE THESE DRUGS ALWAYS PRESCRIBED FOR THOSE WHO NEED IT?

Unfortunately no. There are often problems in the health service in funding treatments. If blood transfusions are offered to treat your anaemia, then you should ask about erythropoietic agents. At the National Kidney Federation we are doing all we can to ensure that these drugs are offered to all who could benefit. If you have a problem we will do our best to help.

Note: References to fistula and venous line are for haemodialysis patients only.

The National Kidney Federation cannot accept any responsibility for information provided. The above is for guidance only. Enquirers are advised to seek further information from their own doctor

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ANAEMIA IN KIDNEY FAILURE



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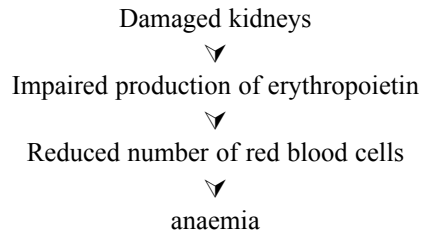
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WHAT IS ANAEMIA?

Anaemia occurs when there are not enough red blood cells to carry oxygen from the lungs to places where it's needed. Anaemia, which is always secondary to some other disorder, can be caused by blood loss, blood destruction or, commonly in kidney patients, impaired blood production.

WHY DOES IT HAPPEN TO PATIENTS WITH KIDNEY DISEASE?

Damaged kidneys are unable to produce enough of the hormone erythropoietin, which stimulates the bone marrow to produce red blood cells through a process called erythropoiesis. Within these cells oxygen is carried around the body by a protein called haemoglobin. When haemoglobin cannot be produced in normal amounts then the body does not receive enough oxygen to meet its needs.



HOW DO I KNOW IF I AM ANAEMIC?

Common symptoms are loss of energy and shortness of breath. Patients may become irritable and frustrated at the difficulty experienced in doing daily tasks. The symptoms of chronic renal failure - lethargy, mood fluctuations, disturbed sleep patterns and impaired sexual function - may be aggravated. Your doctor can check your haemoglobin level. The normal range is 14-16 grams per decilitre (g/dl) for men and 12-15g/dl for women. These levels are reduced in anaemic patients, sometimes as low as 4g/dl.

HOW CAN MY ANAEMIA BE TREATED?

In the past the only successful treatment has been by blood transfusions. Adding red blood cells to the body's low stocks gives a better oxygen-carrying capacity and hence improves the anaemia. However the disadvantages of transfusion limit its usefulness.

These include...

- **Fluctuating haemoglobin**
- **Risk of infection**
- **Formation of antibodies which could complicate a later transplant**

More recently drugs which act like the natural hormone erythropoietin have been developed in the laboratory. These drugs are called erythropoietic agents and comprise of two types of hormone:-

Recombinant Human Erythropoietin **EPO**
or
Novel Erythropoiesis Stimulating Protein **NESP.**

These agents produce an identical response to 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 haemoglobin level which can then be treated by these drugs, without the disadvantages of blood transfusions.

WHAT WILL THESE DRUGS DO FOR ME?

By increasing your haemoglobin level, these drugs will correct the symptoms of anaemia. Your energy levels and appetite should improve. You may experience improved heart and sexual functions. These drugs will not cure your kidney failure but they should make you feel much better so that you can enjoy a better quality of life.

WHO CAN BENEFIT?

These drugs can be prescribed for haemodialysis, peritoneal dialysis and pre-dialysis patients and for those with a failing transplant

HOW ARE THESE DRUGS GIVEN?

These drugs are given by injection, usually one, two or three times each 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 either come in pre-filled syringes ready to inject, or in vials containing either ready-to-inject liquid or a powder needing water to be added before injection.

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. Check the solution before use. If it is discoloured, cloudy or has particles in it, do not use but return it to your supplier for replacement.

HOW MUCH WILL I NEED?

Your dose will be calculated according to your weight and adjusted to achieve a steady rise in haemoglobin level. Your doctor should set a target for your personal level, usually 10-12g/dl.

Most patients want to know how their body is responding to treatment. Ask about your haemoglobin levels. Make sure you understand how you will reach your target and how it will be maintained. You can use a "Know your numbers" record card or "Patient Fact File" obtainable from the NKF to keep your own personal record to refer to.

HOW QUICKLY WILL THE TREATMENT WORK?

These drugs will start to work immediately, but it could be a few weeks before your haemoglobin level rises to the point where you begin to feel better. In patients who have started treatment before their haemoglobin level falls below 10g/dl, the symptoms of anaemia should be kept at bay.