

Medicines used to treat anaemia if you have kidney disease

Renal and Transplant Services

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Information for Patients

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Introduction

This booklet gives information about anaemia in people with kidney disease. It also has information about medicines used to treat the anaemia.

If **you** have any questions, please talk to your kidney doctor, nurse or pharmacist at the hospital.

Useful numbers and contacts at Glenfield Hospital:

EPO co-ordinators	(0116) 258 4252
Renal pharmacy.....	(0116) 258 8177
Renal planned care hub.....	(0116) 258 8044
Renal community team	(0116) 258 4120
Renal dietitians.....	(0116) 258 8002
Outpatients 3.....	(0116) 258 4425
Ward 27.....	(0116) 258 8082
Ward 30	(0116) 258 4127
Ward 37 (Transplant ward).....	(0116) 258 4126

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or call 111 for non-emergency medical advice**

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To give feedback about this information sheet, contact uhl-tr.informationforpatientsmailbox@nhs.net

What is renal anaemia?

Red blood cells carry oxygen. They do this by using a protein called haemoglobin. You get anaemia when blood cells are low and not enough oxygen is carried to different parts of the body. Symptoms of anaemia are feeling tired, looking pale (pale complexion) and shortness of breath.

In people with chronic kidney disease, anaemia is mainly caused by low levels of a hormone called erythropoietin (EPO for short). EPO is made by the kidneys. It tells the body to make red blood cells. Anaemia can also be caused by a shortage of iron as iron is used to make red blood cells. This is called iron deficiency.

What medicines are used to treat renal anaemia?

The main medicines used to treat anaemia in people with kidney disease are iron, Erythropoiesis stimulating agents (ESAs for short) **or HIF-PIF inhibitors**.

The body needs enough vitamins, iron, folic acid and B12 to help make the red blood cells and treat anaemia. Blood tests can check these vitamin levels. If they are low, you may need to take supplements or have vitamin injections.

Iron

Iron can be used to treat anaemia in people with low iron levels.

How do I take it?

You can take iron as tablets or injections given using a drip (iron infusions). Some people are able to take iron tablets to help with low iron levels. If the tablets work, they do not need to have iron infusions. But if iron tablets do not bring iron levels up or cause side effects, iron infusions can be given instead.

Are there any side effects?

Iron has quite a few possible side effects but not everyone gets them. Iron tablets can cause constipation, diarrhoea, stomach pain and make people feel sick. Iron injections can give people a metallic taste. It is very rare but iron injections can cause serious allergic reactions. For this reason, most people have iron injections in the hospital and they are closely monitored.

Erythropoiesis stimulating agents (ESAs)

Aranesp (darbepoetin) and Eprex (epoetin)

You can take ESA injections (also called EPO injections). ESAs work like natural erythropoietin (EPO) to help the body make more red blood cells.

How do I take it?

ESAs are given as injections under the skin. There are different types of ESA injections. Most people have their ESA injection every 1 to 2 weeks. Sometimes ESA injections are given more often (2 times a week) or less often (every month). How often you have the injections depends on the type of ESA you have and your blood test results. Blood tests will show how well the injections are working and your doctor may change your dose or how often you get them.

We will encourage you to learn to give yourself the injections. If you prefer, a family member or a carer can give you the injections. We use a company that will send a nurse to your home to show you how to give the medicine yourself. The best places to inject yourself are the top of your thighs and the tummy (abdomen). If someone else is injecting for you, they can also do this into back of your arms.

Are there any side effects?

ESA injections can cause high blood pressure. People having ESA injections need to have their blood pressure checked regularly. Sometimes people need to stop ESA injections for a while if their blood pressure is high. The injections can be started again when the blood pressure settles.

Some people can have pain, redness or a rash in the skin around the area after having the injection. You need to change the area of the body where you have your ESA injection if this happens to you. Talk to your doctors if this happens and if the skin does not get better.

Is there anything else I need to know?

Your kidney doctor will prescribe your ESA injections. They will be delivered to your house every few weeks. The ESA injections need to be kept in the fridge between 2 to 8°C. Your doctor will talk to the EPO team at the Glenfield Hospital. They will organise your deliveries of ESA injections. We will give you a separate leaflet with more information about the home delivery service.

Hypoxia-inducible factor prolyl hydroxylase (HIF-PH) inhibitors (Roxadustat and Vadadustat)

HIF-PH inhibitors can be used to treat anaemia in people with chronic kidney disease. They work by encouraging your body to naturally increase levels of EPO. This is a hormone that helps make red blood cells. Unlike some other anaemia treatments that need injections, HIF-PH inhibitors are taken by mouth. Many people prefer this. There are 2 medicines currently available, roxadustat and vadadustat. Vadadustat is only given to patients on dialysis.

How to take roxadustat

Roxadustat is taken as a tablet 3 times a week. The dose we give you depends on your blood results and how you respond to treatment. Try to take each dose on the same days each week, with or without food. Avoid taking 2 doses if you forget 1. Your team will regularly monitor your haemoglobin levels and iron. This is to make sure the medication is working safely and effectively.

How to take vadadustat

Vadadustat is taken as a tablet once a day. Try to take each dose around the same time each day, with or without food. Blood tests will show how well the tablets are working and your doctor may change your dose. They will make sure the medication is working safely and effectively.

Are there any side effects?

As with all medicines, HIF-PH inhibitors can cause side effects but not everyone gets them:

- There is a possible risk of getting blood clots like deep vein thrombosis (DVT). This side effect is described as common, which means it may affect between 1 in 100 and 1 in 10 people.
- There is a risk of blockage to the lung due to blood clot (pulmonary embolism). This is uncommon, happening in about 1 in 100 people.
- Some patients may also have sleep disturbances.
- Vadadustat can increase liver enzyme levels. Blood tests will be checked regularly at the start of treatment to monitor this.

Is there anything else I need to know?

You should not take roxadustat if you are allergic to **peanuts or soya**.

Vadadustat and roxadustat and other medicines

- Some medicines can affect how vadadustat and roxadustat are absorbed by the body and make them less effective. These medicines include phosphate binders (such as sevelamer, calcium acetate) or medicines containing calcium, magnesium, aluminium or iron. They need to be taken at a different time to vadadustat or roxadustat. If you are taking one of these medicines or if you are unsure, please talk to your doctor, nurse or pharmacist.

General information about your medicines

• What do I do if I have been given different advice?

The information in this booklet is a general guide. It may not apply to everyone. Sometimes you may be given different advice by your kidney doctor. Always follow your doctor's advice.

• How long do I take my medicines for?

You need to keep taking your medicines until your kidney doctor tells you to stop. If you think your medicines are making you feel unwell, tell your doctor, nurse or pharmacist.

• What do I do if I miss a dose?

Take it as soon as you remember. If it is nearly time for the next dose, do not take the one you have missed. Do not take 2 doses at the same time.

• Will I get side effects?

Medicines have some side effects but not everybody gets them. Most people feel fine. If you think you have an unpleasant side effect from any of your medicines, tell your doctor, nurse or pharmacist.



- **Can I drink alcohol?**

With most medicines you can drink alcohol in small amounts. Check with your doctor, nurse or pharmacist first.

- **Can I take other medicines?**

New medicines can affect how medicines you already take work. Check with your doctor or pharmacist before taking any new medicines, even over-the-counter, herbal, homeopathic or natural remedies. People with kidney disease should not take any new medicines without checking with the prescriber first.

Please remember:

- **Keep your medicine in the original containers.**
- **Keep all medicines away from children.**
- **Do not let anyone else take your medicines.**
- **Do not take someone else's medicines.**

Sources of advice and support

- Kidney Care UK, **0808 801 0000**: www.kidneycareuk.org
- Kidney Research UK, **0300 303 1100**: www.kidneyresearchuk.org
- Kids Kidney Research: www.kidskidneyresearch.org
- National Kidney Federation, **0800 169 0936**: www.kidney.org.uk

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