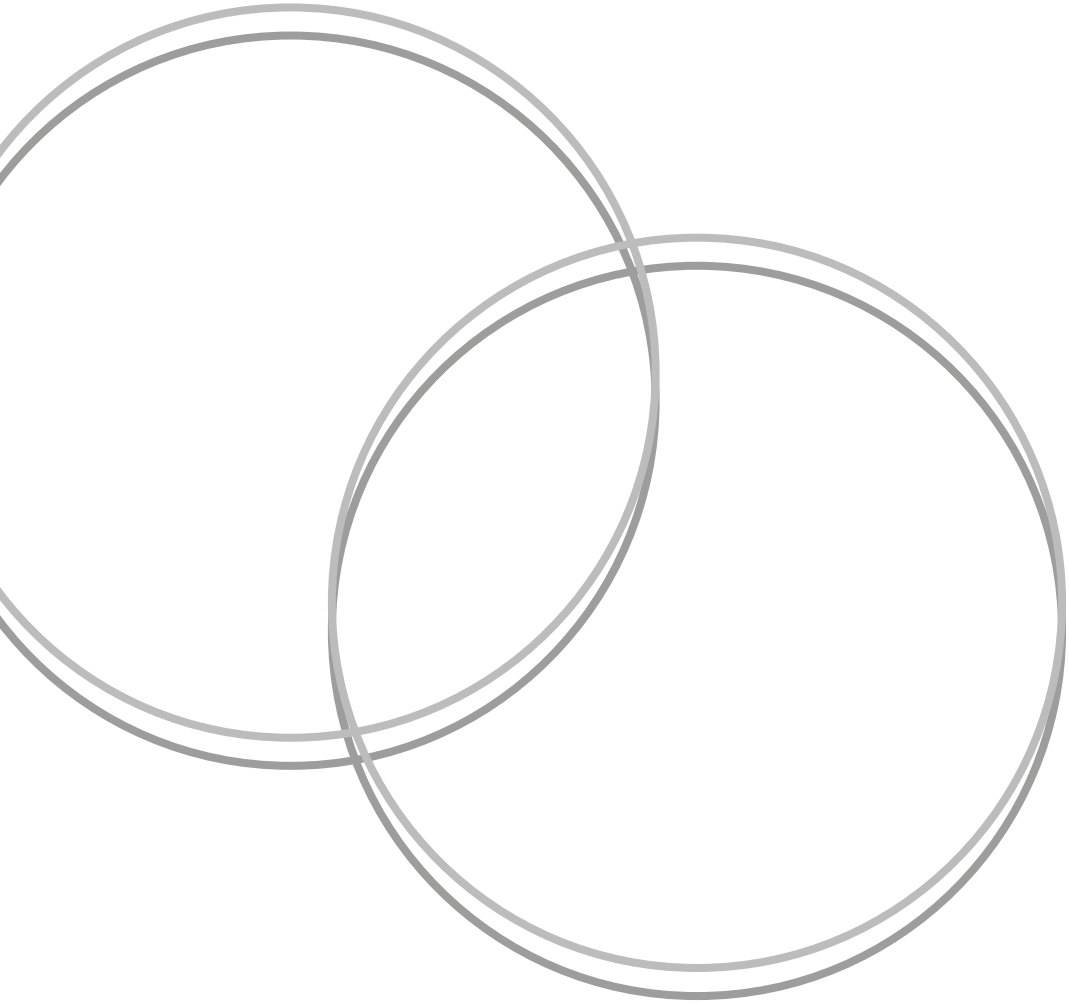
NHS
Oxford University Hospitals
NHS Foundation Trust

Taking Iron Supplements

Information for patients



What is iron deficiency?

Iron deficiency is when the body does not have enough iron to carry out its functions and is the leading cause of anaemia in the UK. Anaemia is a condition caused by a lack of red blood cells or low haemoglobin. Symptoms of iron deficiency and anaemia include fatigue, lack of energy and breathlessness, although many people have no symptoms of iron deficiency.

Why do I need iron?

Iron is an essential mineral for your body. It is needed to produce haemoglobin, which is a vital ingredient in red blood cells. Haemoglobin is important, as it carries oxygen from your lungs to the rest of your body. Your body absorbs iron from your food. People can become iron deficient if they are unable to absorb enough iron from their food, or if they lose iron from their body faster than they can absorb it. If you do not have enough iron in your body, you may not make enough red blood cells. This is known as "iron deficiency anaemia".

What happens if I have low iron levels?

If your iron level is low, you may experience the following symptoms:

- Tiredness
- Weakness
- Shortness of breath
- Disturbed sleep
- Mood swings
- Itching
- Restless legs
- Loss of sex drive

How is my iron level measured?

Your body stores iron by attaching it to proteins. The most important of these proteins is called ferritin. A low ferritin level usually indicates a low iron level.

Your doctor or nurse will check your iron level by taking a blood sample, to measure the amount of ferritin that is in your blood. You can ask the Doctor or nurse to explain the result. If your ferritin is low you may need some extra iron.

How are low iron levels treated?

Diet

A well-balanced diet is vital to make sure you receive enough iron. The most easily absorbed iron comes from red meat, fish, and poultry, fortified cereals, lentils and green leafy vegetables such as spinach.

Vitamin C can help your body to absorb iron from food; found in orange juice, other fruits and vegetables.

Some food can reduce your ability to absorb iron, so should be avoided around the time you eat iron rich foods and /or take your iron tablets. These include tea, coffee and calcium rich foods such as milk, other dairy products and dairy alternatives, some seeds, pulses and vegetables and many multi-vitamins tablets

For further information about iron rich foods and foods to avoid, please visit:

NHS website - Iron deficiency anaemia:

www.nhs.uk/conditions/iron-deficiency-anaemia/

Oral Tablets

Iron can be given as tablets. These are very effective at replacing the iron needed for haemoglobin levels to rise. Some iron tablets can also contain folic acid and vitamin C, which helps the absorption of iron from the gut (intestine).

What other types of iron supplements are available?

The main types of iron supplements used are:

- Ferrous sulphate (tablets)
- Ferrous fumarate (tablets or syrup)
- Ferrous gluconate (tablets)
- Sodium feredetate (Sytron) syrup

How do I take oral iron supplements?

How well iron tablets work is affected by how they are taken. The tablets should be taken once a day or every other day. Taking them more frequently does not replace your iron levels any faster and increases the likelihood of experiencing side effects.

The tablets should be taken:

- Preferably early in the morning or at the same time each day
- On an empty stomach
- With a glass of water or preferably orange juice
- One hour before food or other medications (especially antibiotics, antiepileptics and Parkinson's disease medications)

If you do not drink orange juice, then another drink containing vitamin C will also work. Your doctor will be able to advise you on alternate drinks. If you are diabetic and worried about fruit juice affecting your blood sugars, you can take your iron tablets with a vitamin C supplement available from the community pharmacy.

Why is the way I take iron tablets important?

Absorption of iron from the gut is reduced by food, tea, and milk, so these should be avoided for one hour before and after taking iron supplements.

Some medications also affect absorption of iron from the gut, particularly medications which reduce stomach acid (antacids) and certain antibiotics. Always check with your doctor or pharmacist whether any of your other medicines might affect how your iron supplements work.

The only factor that improves the absorption of iron is vitamin C, this is why we recommend that you take your supplement with a drink containing vitamin C.

What side effects might I get?

The following side effects are common:

- Tummy upset
- Nausea (feeling sick)
- Tummy pain
- Diarrhoea
- Constipation

These usually improve as your body gets use to the iron supplements. If you experience these side effects and they do not settle after a few days, you should try:

1. Reduce to alternate day dosing. You will still absorb a similar amount of iron but may need to set a reminder, so you do not forget doses.

2. Reduce the dose

3. Try a different type of iron tablet

If your symptoms improve, try to increase back to your original dose. Contact your healthcare professional that prescribed the iron tablets if you have concerns.

Intravenous iron

Why might I need intravenous iron?

You may need intravenous iron if you are:

- Unable to take iron tablets or liquid
- Unable to absorb iron tablets
- Unable to absorb enough iron due to the amount of blood that your body may be losing (e.g. if you have long-term slow bleeding or after the birth of your baby)
- In need of a rapid increase in your iron levels, to avoid complications or a blood transfusion
- Other specific indications for intravenous iron. For example, heart failure or chronic kidney disease, although there are others.

What will happen if I do not wish to have intravenous iron?

If you do not wish to have iron replacement you may remain anaemic. You may need to have blood transfusions to treat your anaemia. Blood transfusions are associated with some side effects and risks. For example, they can put strain on your heart or you may have an allergic reaction to the donor blood.

Is there any reason I should not have intravenous iron?

You should not receive intravenous iron if:

- You are known to be sensitive (allergic) to any of the ingredients used in the iron solution used for the intravenous treatment
- You have any new, worsening or severe infections
- You are less than 12 weeks pregnant
- You do not have iron deficiency

If you are a female you may also be asked the date of your last period and if you might be pregnant and you may be asked to do a pregnancy test. This is because intravenous iron should not be given during the first 12 weeks of pregnancy. After 12 weeks, intravenous iron can be given during pregnancy and may be recommended by your obstetrician.

What type of intravenous iron will I be given?

Currently we use:

- Ferric carboxymaltose (Ferinject)
- Ferric derisomaltose (Ferric Derisomaltose Pharmacosmos)
- Ferric derisomaltose (Diafer)
- Iron sucrose (Venofer)

The intravenous iron is a liquid solution given as an injection into a vein. It is usually given through a cannula (a small plastic tube) but may occasionally be given through a butterfly needle (a small temporary needle) if needed.

Before you receive an iron infusion

Make sure you read and understand the information contained in this information leaflet. Take down any questions about intravenous iron that you might want to ask.

Inpatient

The team of doctors, nurses and pharmacists that are looking after you will arrange for your iron infusion to be given to you on the ward you have been admitted to.

Outpatient

You will sit on a couch or chair when you have the treatment, and you can have a friend or family member there to keep you company if you wish.

Please visit our website before you bring a friend or relative as there may be some restriction on who can come with you due to COVID or other infection risk measures. Visit: **www.ouh.nhs.uk**

Are there any side effects or risks of intravenous Iron?

Most people do not experience any problems, however, there are some side effects you should be aware of in the table below. Sometimes side effects can start one to two days after the infusion. These will usually settle down without treatment over the next few days.

If you are worried, or the side effects are interfering with your daily activities please do contact your GP (General Practitioner) for advice.

If you have chest pain, difficulty breathing, dizziness or neck or mouth swelling, call an ambulance (dial 999).

Side Effects of Intravenous Iron

Side effects for all four different types of IV iron have been combined. Where there was a difference in side effect frequency between the types, the side effect appears in the category which was highest/most common side effects across the products:

Side Effects	Overall Summary	Treatment
Common (1 in 10 to 1 in 100)	Headache Dizziness Flushing High or low blood pressure Nausea (feeling sick) Injection site reactions Low phosphate Rash	Your treatment will be stopped for a short period and then restarted at a slower rate. If the side effects continue, the infusion will be discontinued.

Side Effects	Overall Summary	Treatment
Uncommon (1 in 100 to 1 in 1,000)	Abdominal pain Vomiting Cramps Breathlessness Joint or back pains Numbness A burning or prickling sensation that is usually felt in the hands, arms, legs, or feet Itching Chest pain Diarrhoea Fatigue High heart rate Change in taste Blurred vision Muscle aches Hypersensitivity or anaphylactoid reactions Temperature Swelling caused by fluid Chills Constipation Change in voice	The nurse will stop the treatment and will ask a doctor to see you. You willbe prescribed some medication to ease the symptoms. Another type of iron treatment may be offered instead next time.
Rare (1 in 1,000 to 1 in 10,000)	Swelling of the face Impaired consciousness Anxiety Difficulty breathing	The nurse will stop the iron infusion and emergency treatment for anaphylaxis will be administered.
Extremely Rare (Less than 1 in 1 million)	Anaphylaxis Discolouration of the skin Blood cell breakdown (haemolysis) Allergy induced chest pain	The nurse will stop the iron infusion and emergency treatment for anaphylaxis will be administered.

Specific risks of Intravenous Iron

Hypophosphatemia:. Hypophosphatemia is a condition in which your blood has a low level of phosphate. If you experience new muscle weakness, bone pain, or feel more tired report these symptoms to your GP or hospital consultant. They will then be able to perform a blood test to check for hypophosphatemia and can then treat.

Skin discolouration:

This is a brownish staining of your skin and can occur if any of the iron solution leaks out of the vein into the surrounding tissues under your skin where your needle has been sited. The staining could last for a long time or could be permanent. If the nurse looking after you is suspicious the iron solution could be leaking outside your vein, they will stop the treatment immediately and may need to move the location of the needle.

Anaphylaxis:

There has been an alert from the MRHA (Medicines and Healthcare Products Regulatory Agency) about the use of Intravenous iron. The MRHA is a department of health body that advises about the safe use of medicines and other healthcare products. The MRHA were concerned about the risk of severe allergic reaction (anaphylaxis) which can happen when intravenous iron is given. his is rare, however if the reaction is severe, it could be life threatening. This risk is present every time you have an iron infusion, even if you have not reacted to it previously.

How quickly will the iron treatment work?

It can take a couple of weeks before your red blood cell count (haemoglobin) starts to increase, and for any symptoms related to low iron stores to get better.

Your red blood cell count and ferritin level will be measured 4 to 6 weeks after starting iron replacement (tablets or intravenous). This will be measured with a blood test to check that the infusion has worked and can be done at your GP practice.

Information for patients on haemodialysis

Where should I have my iron treatment?

You will be asked to decide whether you want to have your IV iron in hospital or at home:

Option 1: IV iron treatment at home

You could opt to give yourself an IV iron product called Venofer during your dialysis at home. This usually needs to be given once every two weeks. Your dialysis nurse will teach you how to give yourself Venofer, by putting it into the venous chamber of your dialysis machine in the last hour of your dialysis treatment. You will need to have had a minimum of 2 or more doses in the hospital with no complications before you can administer iron at home. Before starting this treatment, you would need training on how to use an EpiPen, in the very unlikely event that you have a serious allergic reaction to the treatment. An EpiPen contains adrenaline, which is the emergency treatment for a severe allergic reaction. If you choose to have your IV iron treatment at home you would need to sign a consent form to confirm you understand the risks and are prepared to use the EpiPen.

Option 2: IV iron treatment in hospital, administered by a nurse.

You could opt to have an IV iron product called Diafer when you come to your routine dialysis session This usually needs to be given once every two weeks. Your dialysis nurse will give you Diafer by putting it into the venous chamber of your dialysis machine in the last hour of your dialysis treatment.

Who can I speak to for more information?

Your local Haemodialysis Unit or kidney doctor will be happy to answer any questions you might have.

Useful telephone numbers for the Haemodialysis Units:

Oxford (Main Unit): 01865 225 808

Oxford (Tarver Unit): 01865 225 695

Banbury: 01295 229 811Stoke Mandeville: 01296 316 997

High Wycombe 01494 426 347

Swindon: 01793 605 286

Milton Keynes: 01908 996 494

Information for patients with chronic kidney disease but not on haemodialysis

You could opt to have an IV iron product called Ferinject when you come to your scheduled clinic appointment. The IV iron is injected into a vein in the back of your hand, either through a butterfly needle (a small needle) or a cannula (a small plastic tube). It can also be given through your dialysis line or fistula (although you will not actually have dialysis at that appointment). It takes about 20 minutes for the dose of iron to be given, but you will need to be in the department (Renal Day Case Unit or your local Haemodialysis Unit) for 30 minutes after administration, in case you have a reaction to the IV iron. Your home dialysis nurse could organise for you to have this treatment alongside your regular visits.
You are likely to need it twice or three times a year.

Who can I speak to for more information?

If you are a peritoneal dialysis patient:

Please contact your local peritoneal dialysis nurse.

If you are not on dialysis:

Please contact your local Anaemia Team:

Stoke Mandeville: 01865 225 348
(Monday to Friday 8 am to 5 pm)

High Wycombe: 01865 225 348

Swindon: 01793 605 291

Milton Keynes: 01908 996 489

Banbury: 01865 226 657 or 228 921

Oxford: 01865 226 657 or 228 921

If we are not available please telephone:

Mobile: 07385 933 254
(only during working hours 8-5pm).

Email: ouh-tr.renalanaemiateam@nhs.net

For patients referred to the Iron Deficiency Management Service

We will arrange a follow-up appointment for you with the IDMS team at Bicester Community Hospital four to six weeks after the treatment.

At this appointment we will take a small amount of blood so that we can measure your red blood cell count and ferritin level.

We will contact you within 7 days to let you know the results. If your ferritin level is still low (less than 100mcg/L), we may advise that you have another intravenous iron treatment.

How to contact us:

If you need to change your appointment or have questions following this leaflet, please contact the outreach Iron Deficiency Management Service (IDMS) clinical specialist nursing team:

Tel: 07823 533 496 or 07795 401 968

If we are unable to take your call, please leave a message on the answering machine and the IDMS Lead Nurse or Specialist Nurse will call you back within 1 working day.

Working days are Monday to Friday. Most calls are responded to within 4 hours of receipt.

If your query becomes urgent whilst you await a response, please call your GP or NHS 111.

Further information

The following website has more information about serious reactions to intravenous iron.

www.gov.uk/drug-safety-update/intravenous-iron-and-serious-hypersensitivity-reactions

Iron treatment for people with Chronic Kidney disease

Your kidney doctor or nurse will check your iron level by taking a small blood sample, to measure the amount of ferritin that is in your blood.

If your ferritin is below 200µg/L (micrograms per litre) you may need some extra iron.

If you are receiving hospital haemodialysis, you will need a lot more iron (250-500µg/L (micrograms per litre). This is because some of your red cells are 'lost' naturally during the dialysis treatment.

One of our nurses will phone you to arrange an appointment for the iron treatment. They will let you know which type of iron is best for you, how long each treatment will take and how many treatments you will need. The iron treatment can be given in your local Renal Unit, Haemodialysis Unit, the Renal Day Case Unit or the Peritoneal Dialysis (PD) Unit.

If you are on haemodialysis, you may need iron injections regularly. These can be given through the dialysis machine during your treatments. How often you need the injections will depend on your ferritin level. Your nurse will let you know what the level is and how much iron you need.

If you are on haemodialysis, the iron injection is given during your dialysis treatment. It takes 6 minutes to go into the machine, so you won't need to stay in the unit any longer than your usual time.

Who can I speak to for more information?

If you are a home or hospital haemodialysis patient: Please speak to your dialysis nurse at your local Haemodialysis Unit.

If you are a peritoneal dialysis patient: Please contact your local peritoneal dialysis nurse.

If you are not on dialysis: Please contact your local Anaemia Team:

Stoke Mandeville: 01865 225 348
(Monday to Friday 8 am to 5 pm)

High Wycombe: 01865 225 348

Swindon: 01793 605 291

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Mobile: 07385 933 254 (only during working hours 8-5pm).

Email: ouh-tr.renalanaemiateam@nhs.net

Useful Links

Oxford Kidney Unit

Lots of information about the Oxford Kidney Unit for patients and carers.

Website: www.ouh.nhs.uk/okuKidney

Kidney Patient Guide

Information for patients with kidney failure and those who care for them.

Website: www.kidneypatientguide.org.uk

Kidney Care UK

A charity which has lots of practical support and information for people with kidney disease.

Website: www.kidneycareuk.org

Six Counties Kidney Patients Association

The SCKPA is run for patients by patients or family members. They offer support to people suffering from kidney disease or who are on dialysis. They work closely with the Oxford Kidney Unit and have branches in Oxfordshire, Northamptonshire, Buckinghamshire, and Milton Keynes, and parts of Wiltshire, Gloucestershire and Berkshire.

Website: www.sixcountieskpa.org.uk

National Kidney Federation

A charity which has lots of practical support and information for people with kidney disease.

Website: www.kidney.org.uk

Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

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