

Package leaflet: Information for the patient

Ferinject 50 mg iron/mL solution for injection/infusion

Ferric carboxymaltose

Read all of this leaflet carefully before you are given this medicine because it contains important information for you.

- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor.
- If you get any side effects, talk to your doctor. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet

1. What Ferinject is and what it is used for
2. What you need to know before you receive Ferinject
3. How Ferinject is administered
4. Possible side effects
5. How to store Ferinject
6. Contents of the pack and other information

1. What Ferinject is and what it is used for

Ferinject is a medicine that contains iron.

Medicines that contain iron are used when you do not have enough iron in your body. This is called iron deficiency.

Ferinject is used to treat iron deficiency when:

- oral iron is not effective enough.
- you cannot tolerate oral iron.
- your doctor decides you need iron very quickly to build up your iron stores.

The doctor will determine whether you have iron deficiency by performing a blood test.

2. What you need to know before you receive Ferinject

You must not receive Ferinject

- if you are allergic (hypersensitive) to ferric carboxymaltose or any of the other ingredients of this medicine (listed in section 6).
- if you have experienced serious allergic (hypersensitive) reactions to other injectable iron preparations.
- if you have anaemia **not** caused by iron deficiency.
- if you have an iron overload (too much iron in your body) or disturbances in the utilisation of iron.

Warnings and Precautions

Talk to your doctor or nurse before receiving Ferinject:

- if you have a history of medicine allergy.
- if you have systemic lupus erythematosus.
- if you have rheumatoid arthritis.
- if you have severe asthma, eczema or other allergies.
- if you have an infection.
- if you have liver disorders.
- if you have or have had low levels of phosphate in the blood.

Ferinject should not be given to children under 1 year of age.

Incorrect administration of Ferinject may cause leakage of the product at the administration site, which may lead to irritation of the skin and potentially long lasting brown discolouration at the site of administration. The administration must be stopped immediately when this occurs.

Other medicines and Ferinject

Tell your doctor if you are using, have recently used or might use any other medicines, including medicines obtained without prescription. If Ferinject is given together with oral iron preparations, then these oral preparations could be less efficient.

Pregnancy

There is limited data from the use of Ferinject in pregnant women. It is important to tell your doctor if you are pregnant, think you may be pregnant, or are planning to have a baby.

If you become pregnant during treatment, you must ask your doctor for advice. Your doctor will decide whether or not you should be given this medicine.

Breast feeding

If you are breast-feeding, ask your doctor for advice before you are given Ferinject. It is unlikely that Ferinject represents a risk to the nursing child.

Driving and using machines

Ferinject is unlikely to impair the ability to drive or operate machines.

Ferinject contains sodium

This medicine contains up to 5.5 mg sodium (main component of cooking/table salt) in each mL of undiluted solution. This is equivalent to 0.3% of the recommended maximum daily dietary intake of sodium for an adult.

3. How Ferinject is administered

Your doctor will decide how much Ferinject to give you, how often you need it and for how long. Your doctor will perform a blood test to determine the dose you need.

Adults and adolescents aged 14 years and older

Your doctor or nurse will administer Ferinject undiluted by injection, diluted by infusion, or during dialysis:

- By injection, you may receive up to 20 mL of Ferinject, corresponding to 1,000 mg of iron, once a week directly into the vein.
- By infusion, you may receive up to 20 mL of Ferinject, corresponding to 1,000 mg of iron, once a week directly into the vein. Because Ferinject is diluted with sodium chloride solution for the infusion, it may have a volume of up to 250 mL and will appear as a brown solution.
- If you are on dialysis, you may receive Ferinject during a haemodialysis session via the dialyser.

Children and adolescents aged 1 to 13 years

Your doctor or nurse will administer Ferinject undiluted by injection, or diluted by infusion:

- Your child will receive Ferinject directly into the vein. It will appear as a brown solution.
- If your child is on dialysis, Ferinject should not be administered.

Ferinject will be administered in a structure where immunoallergic events can receive appropriate and prompt treatment. You will be observed for at least 30 minutes by your doctor or nurse after each administration.

If you receive more Ferinject than you should

As this medicine will be given to you by trained medical staff it is not likely that you will be given too much of this medicine.

Overdose can cause accumulation of iron in your body. Your doctor will monitor iron parameters to avoid iron accumulation.

4. Possible side effects

Like all medicines, this medicine can cause side effects, although not everybody gets them.

Serious side effects:

Tell your doctor immediately if you experience any of the following signs and symptoms that may indicate a serious allergic reaction: rash (e.g. hives), itching, difficulty breathing, wheezing and/or swelling of the lips, tongue, throat or body, and chest pain which can be a sign of a potentially serious allergic reaction called Kounis syndrome.

In some patients these allergic reactions (affecting less than 1 in 1,000 people) may become severe or life-threatening (known as anaphylactic reactions) and can be associated with heart and circulation problems and loss of consciousness.

Tell your doctor if you develop worsening of tiredness, muscle or bone pain (pain in your arms or legs, joints or back). That may be a sign of a decrease in blood phosphorus which might cause your bones to become soft (osteomalacia). This condition may sometimes lead to bone fractures. Your doctor may also check the levels of phosphate in your blood, especially if you need a number of treatments with iron over time.

Your doctor is aware of these possible side effects and will monitor you during and after the administration of Ferinject.

Other side effects that you should tell your doctor about if they become serious:

Common (may affect up to 1 in 10 people): headache, dizziness, feeling hot (flushing), high blood pressure, nausea, and injection/infusion site reactions (see also section 2).

Uncommon (may affect up to 1 in 100 people): numbness, tingling or prickling sensation on the skin, a change in your taste sensation, high heart rate, low blood pressure, difficulty breathing, vomiting, indigestion, stomach pain, constipation, diarrhoea, itching, hives, redness of the skin, rash, muscle-, joint -and/or back pain, pain in arms or legs, muscle spasms, fever, tiredness, chest pain, swelling of the hands and/or the feet, chills, and a general feeling of discomfort.

Rare (may affect up to 1 in 1,000 people): inflammation of a vein, anxiety, fainting, feeling faint, wheeze, excessive wind (flatulence), rapid swelling of the face, mouth, tongue or throat which may cause difficulty in breathing, paleness, and skin discoloration at other areas of the body than the administration site.

Not known (frequency cannot be estimated from the available data): loss of consciousness and swelling of the face.

Flu-like illness (may affect up to 1 in 1,000 people) may occur a few hours to several days after injection and is typically characterised by symptoms such as high temperature, and aches and pains in muscles and joints.

Some blood parameters may change temporarily, which could be detected in laboratory tests.

The following change in blood parameters is common: decrease in blood phosphorus.

The following changes in blood parameters are uncommon: increase in certain liver enzymes called alanine aminotransferase, aspartate aminotransferase, gamma-glutamyltransferase and alkaline phosphatase, and increase in an enzyme called lactate dehydrogenase.

Ask your doctor for more information.

Reporting of side effects

If you get any side effects, talk to your doctor or nurse. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via:

By reporting side effects you can help provide more information on the safety of this medicine.

5. How to store Ferinject

Keep Ferinject out of the sight and reach of children.

Do not use Ferinject after the expiry date which is stated on the label. The expiry date refers to the last day of that month.

Store in the original package in order to protect from light. Do not store above 30 °C. Do not freeze. Once the Ferinject vials have been opened, they should be used immediately. After dilution with sodium chloride solution, the diluted solution should be used immediately.

Ferinject will normally be stored for you by your doctor or the hospital.

6. Contents of the pack and other information

What Ferinject contains

The active substance is ferric carboxymaltose, an iron carbohydrate compound. The concentration of iron present in the product is 50 mg per millilitre. Each vial of 10 mL contains ferric carboxymaltose corresponding to 500 mg iron. The other ingredients are sodium hydroxide (for pH adjustment), hydrochloric acid (for pH adjustment), and water for injection.

What Ferinject looks like and contents of the pack

Ferinject is a dark brown, non-transparent solution for injection/infusion.

Ferinject is supplied in glass vials containing:

- 10 mL solution. Pack sizes of 1, 2 or 5 vials.

Not all pack sizes may be marketed.

Marketing Authorisation Holder

Barsian Darou
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Bulk manufacturing site

IDT Biologika GmbH
Am Pharmapark
06861 Dessau-Rosslau
Germany

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The following information is intended for healthcare professionals only:

Monitor patients carefully for signs and symptoms of hypersensitivity reactions during and following each administration of Ferinject.

Ferinject should only be administered when staff trained to evaluate and manage anaphylactic reactions is immediately available, in an environment where full resuscitation facilities can be assured. The patient should be observed for adverse effects for at least 30 minutes following each Ferinject administration.

Step 1: Determination of the iron need

The individual iron need for repletion using Ferinject is determined based on the patient's body weight and haemoglobin (Hb) level. Refer to Table 1 for determination of the total iron need. 2 doses may be required to replenish the total iron need, see Step 2 for the maximum individual iron doses.

Table 1: Determination of the total iron need

Hb		Patient body weight		
g/dL	mmol/L	below 35 kg	35 kg to <70 kg	70 kg and above
<10	<6.2	30 mg/kg body weight	1,500 mg	2,000 mg
10 to <14	6.2 to <8.7	15 mg/kg body weight	1,000 mg	1,500 mg
≥14	≥8.7	15 mg/kg body weight	500 mg	500 mg

Step 2: Calculation and administration of the maximum individual iron dose(s)

Based on the total iron need determined, the appropriate dose(s) of Ferinject should be administered taking into consideration the following:

Adults and adolescents aged 14 years and older

A single Ferinject administration should not exceed:

- 15 mg iron/kg body weight (intravenous injection) or 20 mg iron/kg body weight (intravenous infusion)
- 1,000 mg of iron (20 mL Ferinject)

The maximum recommended cumulative dose of Ferinject is 1,000 mg of iron (20 mL Ferinject) per week. If the total iron need is higher, then the administration of an additional dose should be a minimum of 7 days apart from the first dose.

Children and adolescents aged 1 to 13 years

A single Ferinject administration should not exceed:

- 15 mg iron/kg body weight
- 750 mg of iron (15 mL Ferinject)

The maximum recommended cumulative dose of Ferinject is 750 mg of iron (15 mL Ferinject) per week. If the total iron need is higher, then the administration of an additional dose should be a minimum of 7 days apart from the first dose.

Children below 1 year of age

Ferinject is not recommended for use in children below 1 year of age.

Patients with haemodialysis-dependent chronic kidney disease

In adults and adolescents aged 14 years and older, a single maximum daily dose of 200 mg iron should not be exceeded in haemodialysis-dependent chronic kidney disease patients.

In children aged 1 to 13 years with chronic kidney disease requiring haemodialysis Ferinject is not recommended for use.

Method of administration

Ferinject must only be administered by the intravenous route: by injection, by infusion, or during a haemodialysis session undiluted directly into the venous limb of the dialyser. Ferinject must not be administered by the subcutaneous or intramuscular route.

Caution should be exercised to avoid paravenous leakage when administering Ferinject. Paravenous leakage of Ferinject at the administration site may lead to irritation of the skin and potentially long lasting brown discolouration at the site of administration. In case of paravenous leakage, the administration of Ferinject must be stopped immediately.

Intravenous injection

Ferinject may be administered by intravenous injection using undiluted solution. In adults and adolescents aged 14 years and older, the maximum single dose is 15 mg iron/kg body weight but should not exceed 1,000 mg of iron. In children aged 1 to 13 years, the maximum single dose is 15 mg iron/kg body weight but should not exceed 750 mg of iron. The administration rates are as shown in Table 2:

Table 2: Administration rates for intravenous injection of Ferinject

Volume of Ferinject required	Equivalent iron dose	Administration rate/Minimum administration time
2 to 4 mL	100 to 200 mg	No minimal prescribed time
>4 to 10 mL	>200 to 500 mg	100 mg iron/min
>10 to 20 mL	>500 to 1,000 mg	15 minutes

Intravenous infusion

Ferinject may be administered by intravenous infusion, in which case it must be diluted. In adults and adolescents aged 14 years and older, the maximum single dose is 20 mg iron/kg body weight but should not exceed 1,000 mg of iron. In children aged 1 to 13 years, the maximum single dose is 15 mg iron/kg body weight but should not exceed 750 mg of iron.

For infusion, Ferinject must only be diluted in sterile 0.9% m/V sodium chloride solution as shown in Table 3. Note: for stability reasons, Ferinject should not be diluted to concentrations less than 2 mg iron/mL (not including the volume of the ferric carboxymaltose solution).

Table 3: Dilution plan of Ferinject for intravenous infusion

Volume of Ferinject required	Equivalent iron dose	Maximum amount of sterile 0.9% m/V sodium chloride solution	Minimum administration time
2 to 4 mL	100 to 200 mg	50 mL	No minimal prescribed time
>4 to 10 mL	>200 to 500 mg	100 mL	6 minutes
>10 to 20 mL	>500 to 1,000 mg	250 mL	15 minutes

Monitoring measures

Re-assessment should be performed by the clinician based on the individual patient's condition. The Hb level should be re-assessed no earlier than 4 weeks post final Ferinject administration to allow adequate time for erythropoiesis and iron utilisation. In the event the patient requires further iron repletion, the iron need should be recalculated using Table 1 above.

Incompatibilities

The absorption of oral iron is reduced when administered concomitantly with parenteral iron preparations. Therefore, if required, oral iron therapy should not be started for at least 5 days after the last administration of Ferinject.

Overdose

Administration of Ferinject in quantities exceeding the amount needed to correct iron deficit at the time of administration may lead to accumulation of iron in storage sites eventually leading to haemosiderosis. Monitoring of iron parameters such as serum ferritin and transferrin saturation may assist in recognising iron accumulation. If iron accumulation has occurred, treat according to standard medical practice, e.g. consider the use of an iron chelator.