Package leaflet: Information for the patient

Ferinject 50 mg iron/mL solution for injection/infusion

Ferric carboxymaltose

▼This medicine is subject to additional monitoring. This will allow quick identification of new safety information. You can help by reporting any side effects you may get. See the end of section 4 for how to report side effects.

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

Ferinject is an antianaemic preparation, a medicine that is used to treat anaemia. It contains iron in the form of an iron carbohydrate. Iron is an essential element required for the oxygen-carrying capacity of haemoglobin in red blood cells and of myoglobin in muscle tissue. Moreover, iron is involved in many other functions necessary for maintenance of life in the human body.
Ferinject is used for the treatment of patients with iron deficiency, when oral iron preparations are ineffective or cannot be used. The aim of the therapy is to replenish body iron stores and to remedy anaemia, a lack of red blood cells due to iron deficiency.

Before administration, your doctor will perform a blood test to determine the dose of Ferinject you require.

2. What you need to know before you receive Ferinject

You must not receive Ferinject
- if you are allergic (hypersensitive) to the 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 14 years.
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.

How Ferinject is given
Your doctor or nurse will administer Ferinject undiluted by injection, during dialysis, or diluted by infusion. 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.

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.

Important information about some of the ingredients of Ferinject
This medicinal product contains 0.24 mmol (or 5.5 mg) sodium per millilitre of undiluted solution. This has to be taken into account by patients on a sodium-controlled diet.

3. How Ferinject is administered

Your doctor can administer Ferinject by three possible routes: undiluted by injection, during dialysis, or diluted by infusion.
- 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.
- If you are on dialysis, you may receive Ferinject during a haemodialysis session via the dialyser.
- 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 appear as a brown solution.

If you receive more Ferinject than you should
Your doctor will take responsibility for determining the appropriate dose and choosing the route, frequency and duration of your treatment.
Overdose can cause accumulation of iron in storage sites. Your doctor will monitor iron parameters such as serum ferritin and transferrin 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.

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

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 side effects (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 side effects (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, and chills.

Rare side effects (may affect up to 1 in 1,000 people): inflammation of a vein, a general feeling of discomfort, loss of consciousness, 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 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 the national reporting system listed in Appendix V*. 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 iron (as ferric carboxymaltose, an iron carbohydrate compound). The concentration of iron present in the product is 50 mg per millilitre. 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:
- 2 mL solution corresponding to 100 mg iron. Available in pack sizes of 1, 2 and 5 vials.
- 10 mL solution corresponding to 500 mg iron. Available in pack sizes of 1, 2 and 5 vials.
- 20 mL solution corresponding to 1,000 mg iron. Available in a pack size of 1 vial.

Not all pack sizes may be marketed.

Marketing Authorisation Holder and Manufacturer

To be completed nationally

This medicinal product is authorised in the Member States of the EEA under the following names:
Austria, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Netherlands, Norway, Poland, Portugal, Romania, Slovak Republic, Spain, Sweden, United Kingdom: Ferinject. Belgium, Luxembourg: Injectafer. Slovenia: Iroprem.

This leaflet was last revised in 30 November 2018.

<For any information about this medicine, please contact the local representative of the Marketing Authorisation Holder.>
{To be completed nationally}

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.

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 (see Table 1):

Table 1: Determination of the 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	500 mg	1,500 mg	2,000 mg
10 to <14	6.2 to <8.7	500 mg	1,000 mg	1,500 mg
≥14	≥8.7	500 mg	500 mg	500 mg

Iron deficiency must be confirmed by laboratory tests.

Calculation and administration of the maximum individual iron dose(s)
Based on the iron need determined above the appropriate dose(s) of Ferinject should be administered taking into consideration the following:

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.

A single maximum daily dose of 200 mg iron should not be exceeded in haemodialysis-dependent chronic kidney disease patients.
The use of Ferinject has not been studied in children, and therefore is not recommended in children under 14 years.

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. The maximum single dose is 15 mg iron/kg body weight but should not exceed 1,000 mg 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 administered by intravenous infusion, in which case it must be diluted. The maximum single dose is 20 mg iron/kg body weight but should not exceed 1,000 mg iron. 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.