

Home Infusion Guide

VPRIV® (velaglucerase alfa for infusion)

Gaucher disease, treatment and home infusion

Together with your treating physician, you have decided to start home infusion therapy with VPRIV®. This guide will provide you with all the necessary information on how to receive VPRIV® in your home.

Gaucher disease and treatment

Gaucher disease is an inherited genetic disorder. People with Gaucher disease have a faulty enzyme called glucocerebrosidase. This enzyme's job is to break down a fatty substance called glucocerebroside and when it does not work properly, this substance builds up in the cells of the body causing them to become enlarged. These enlarged cells clump together in a person's tissues and organs, particularly the spleen and liver. This accumulation makes the organs unable to function properly and causes the signs of Gaucher disease.^{1,2}

The active substance of VPRIV® is velaglucerase alfa, which is produced by gene activation technology in a human cell line that can replace the natural enzyme glucocerebrosidase which is faulty in patients with Gaucher disease. VPRIV® is used to treat patients who have a confirmed diagnosis of Type 1 Gaucher disease.

Refer to the VPRIV® patient information leaflet <http://www.medicines.ie/medicine/15606/PIL/VPRIV+400+Units+powder+for+solution+for+infusion/> for further information.²

Home infusion

Some people with Type 1 Gaucher disease treated with VPRIV® have opted to receive their infusions at home. The decision to receive infusions at home should be made by you and your treating physician after several well tolerated VPRIV® infusions (no infusion-related reactions) to ensure satisfactory tolerance of the infusions.

Home infusion with VPRIV® will enable you to do the following:

- Receive treatment in the comfort of your home
- Be more flexible with regard to treatment timing
- Avoid spending time travelling to and from the hospital and being hospitalised
- Attend school or work normally (if applicable)
- Facilitate arranging treatment around friends and family and organise social activities

A homecare nurse, with the appropriate training, will train and assist you and/or you caregiver to progressively administer the infusion. However, should you prefer full support to receive your infusion at home, your homecare nurse will carry out the entire procedure for you.

If you experience side effects with the treatment you must immediately seek the attention of your treating physician or your homecare nurse.

The most commonly observed symptoms of infusion-related reactions were: headache, dizziness, hypotension (low blood pressure), hypertension (high blood pressure), nausea, fatigue/weakness, and pyrexia (body temperature increased). In patients who had not used VPRIV® before, the majority of infusion-related reactions occurred during the first 6 months of treatment. Additional infusion-related reactions of chest discomfort, dyspnoea (difficulty breathing), and pruritus (severe skin itching) have been reported since VPRIV® was marketed.

Although rarer, hypersensitivity reactions, including symptoms consistent with anaphylaxis (severe allergic reaction), have been reported in patients using VPRIV®. The most frequently reported symptoms of hypersensitivity include nausea, rash, dyspnoea (difficulty breathing), back pain, chest discomfort or tightness, urticaria (hives), arthralgia (pain in the joints), and headache. If you experience a reaction suggestive of hypersensitivity, subsequent testing for velaglucerase alfa antibodies is advised.

If an infusion-related reaction occurs, including a hypersensitivity reaction, **discontinue the infusion immediately**, and seek the attention of your treating physician or your homecare nurse. Subsequent infusions may need to occur in hospital.

NOTE: The dose and rate of infusion administered at home should follow the guidelines provided by your treating physician as noted in the Infusion Diary, and should not be changed without the agreement of the treating physician and supervision of the homecare nurse.

Organisation requirements

Patient

- You and/or your caregiver must agree to receive the treatment at home.
- The home environment should be conducive to the provision of the home infusion including a clean environment with electricity, water, telephone, refrigerator and physical space to store VPRIV® and additional infusion supplies.
- You must be physically and mentally able to undergo the infusions at home. The treating physician is ultimately responsible for the indication to receive VPRIV® infusions at home.
- You have accessible blood veins that allow the insertion of an infusion needle. If you have a central venous access device, you should be able to insert the infusion needle into the septum.
- You and/or your caregiver have been fully informed by the treating physician about the treatment to be provided at home, the associated risks, the possible side effects and infusion-related reactions, and the provision of medical assistance at home.
- You and/or your caregiver have an understanding of Gaucher disease and are able to recognise side effects and how they differ from the disease and understand the procedures to follow and who should be contacted should they occur.
- You and/or your caregiver have been adequately trained in the procedures of VPRIV® reconstitution and infusion (if applicable).
- You and/or your caregiver understand the importance of keeping the infusion diary up to date and agree to complete each entry at each infusion (if applicable).

Homecare nurse

- The homecare nurse is qualified to give intravenous (IV) infusions.
- The homecare nurse has been trained in administering VPRIV® and is aware of the possible side effects and the necessary actions to be taken should they occur.
- The homecare nurse will establish with you and/or your caregiver the level of support required.
- The homecare nurse will coordinate together with the treating physician and you and/or your caregiver in organising treatment in your home.
- The homecare nurse will strictly follow the prescribed dose and rate of administration as determined by the treating physician and given in the infusion diary.
- The homecare nurse will record each administration of VPRIV® in the infusion diary.
- In the event of an infusion-related reaction, the homecare nurse/you and/or your caregiver should discontinue the infusion immediately and telephone the treating physician and the country-specific national emergency number provided in the Infusion Diary.

Treating physician

- The treating physician is ultimately responsible for the initiation of all necessary administrative actions allowing other stakeholders (pharmacy, homecare nurse, patient and caregiver) to proceed.
- The treating physician is ultimately responsible for determining the dose and infusion rate to be added to the Infusion Diary. Any changes must be communicated to the patient and updated in the Infusion Diary.

Caregiver/third party

- It is preferable for a caregiver/third party to be present during home infusion.

Infusion Diary

- The Infusion Diary serves as a means of communication for everyone involved in administering VPRIV® at home.
- The Infusion Diary should be kept at your home and will be maintained and kept up to date by you (the patient or caregiver) or the homecare nurse.
- You (the patient or caregiver) must take the Infusion Diary along to the hospital at each appointment for a check-up and bring it home afterwards.
- In the Infusion Diary, the treating physician clearly states the dose and the infusion rate, as well as any subsequent changes.
- You (the patient or caregiver) or the homecare nurse will strictly follow the prescribed dose and rate of infusion of VPRIV® as stated in the Infusion Diary.
- The homecare nurse records the details and actions from the initial consultation and you, your caregiver or the homecare nurse notes all relevant information from subsequent visits in the Infusion Diary.
- You (the patient or caregiver) or the homecare nurse will record each administration of VPRIV® in the Infusion Diary.
- In the Infusion Diary, the patient or caregiver or homecare nurse clearly describes what actions have been taken for any infusion reactions or infusion-related side effects based on the advice of the treating physician or the homecare nurse.

Pharmacy and infusion equipment

- Treatment and all necessary equipment will be provided, dependent on local arrangements and regulation.

Will I and/or my caregiver be trained on how to administer the infusion?

- Yes. Your healthcare professional will discuss the procedure with you and provide instructions.
- In principle, the initial instructions will be given in the hospital or clinic. The level of support required from the homecare nurse will be discussed and agreed by you and/or your caregiver and your treating physician.
- Should you prefer full support to receive your infusion at home, your homecare nurse will carry out the entire procedure for you.
- Should you prefer to carry out the procedure yourself, or with the assistance of your caregiver, you and/or your caregiver will receive training from the homecare nurse while the infusion is being prepared.
- Your homecare nurse will explain and demonstrate the complete infusion procedure to you and/or your caregiver.
- At subsequent visits, the homecare nurse will be present to assist if required, but you and/or your caregiver will gradually transition to performing more of the administration under the homecare nurse's supervision until you feel confident with the entire infusion procedure.

What is the difference between a clinic infusion and a home infusion?

- Apart from the location, there are very few differences between a clinic infusion and a home infusion.
- A homecare nurse will come to your home and administer or assist you/your caregiver to administer VPRIV® in the same way as in the clinic using similar equipment.
- You are not expected to react to VPRIV® in a different way than you have during and after your initial clinic infusions. In fact, because you are at home you may feel more relaxed.

What will happen during a home infusion?²

- Before you receive your VPRIV® infusion, the homecare nurse will need to ask you a few questions about your general health and well-being and record this information in the infusion diary. If you have been unwell, the homecare nurse may decide that it is best to postpone your infusion until you are feeling better. The homecare nurse may need to take a blood sample to see if you are producing antibodies against VPRIV®. Your doctor will have discussed these requirements with you beforehand. If you have any questions, please ask your doctor or homecare nurse.
- VPRIV® is dosed according to body weight. Your homecare nurse may need to weigh you before the infusion. Your doctor will have provided your homecare nurse with the necessary information for calculating the correct dose in the Infusion diary.
- VPRIV® is supplied as a powder and must be reconstituted immediately before use. The homecare nurse will mix the required amount of powder with the appropriate amount of sterile water. To make sure that no VPRIV® is wasted, the homecare nurse will ask you to be present when he/she prepares the medication. If you are not able to start the infusion right away, reconstituted VPRIV® can be stored in a fridge at 2–8 °C for up to 24 hours.

- The homecare nurse will mix the reconstituted VPRIV® with a bag of saline solution and attach the bag to the IV administration set.
- The VPRIV® infusion will take about an hour, the homecare nurse will monitor you regularly and will make further notes in the infusion diary.
- Patients did not have to take any special medications before receiving infusions of VPRIV® in clinical trials. Your homecare nurse might give you an antihistamine and/or corticosteroid before your infusion to help prevent an allergic reaction from happening.
- The homecare nurse will record the details of the infusion in the infusion diary.

What happens if I develop an infusion reaction?

- In most cases, an infusion reaction is mild and the homecare nurse may:
 - Continue the infusion at a slower rate
 - Treat with medications such as antihistamines, antipyretics and/or corticosteroids
 - Stop the medication and then restart with a longer infusion time
- In the case of a severe infusion reaction, the homecare nurse will:
 - Stop the infusion immediately
 - Initiate the appropriate medical treatment
 - Contact your doctor and/or specialist centre
 - You may be required to go to the hospital/specialist centre

What happens after a home infusion?

- In the 24 hours following a VPRIV® infusion you may experience mild infusion-related reactions such as:
 - Headache
 - Dizziness
 - Low blood pressure (hypotension)
 - High blood pressure (hypertension)
 - Nausea
 - Fatigue/weakness (asthenia)
 - Increased body temperature (pyrexia)
- These mild infusion-related reactions tend to reduce and may even stop after 6 months of treatment.
- Since VPRIV® has been marketed, additional infusion-related reactions have been reported:
 - Chest discomfort
 - Difficulty breathing (dyspnoea)
 - Severe skin itching (pruritus)

What happens if I have had a mild infusion reaction? Does this mean I can no longer have home infusions?

- No, in most cases having had a mild infusion reaction will not prevent you from having a home infusion, although the homecare nurse may take some extra steps as a precaution:
 - The homecare nurse may administer antihistamines, antipyretics and/or corticosteroids before your next infusion(s)
 - The next infusion(s) may take longer

What happens if I have had a serious infusion reaction? Does this mean I can no longer have home infusions?

- Not necessarily, your doctor will discuss options with you. Usually, if a patient has had a severe infusion reaction the next three infusions will be performed in the clinic.
 - The homecare nurse may administer antihistamines, antipyretics and/or corticosteroids before your next infusion(s)
 - The next infusion(s) may take longer
 - In some cases, if these infusions go well for three consecutive treatments, home infusions may be reintroduced.
 - Your safety is important, in some cases your doctor may insist that you receive your VPRIV® infusions in the clinic.

How do I and/or my caregiver administer VPRIV®?

In this section you will be given information and instructions on:

- the medication and materials needed for the infusion,
- how to get ready for the infusion, how to dilute the VPRIV® vials with sterile water for injection and mix the medication in NaCl 0.9% IV bag,
- how to prepare the infusion line and how to insert the needle in the vein (if you do not have a central venous access device),
- how to administer the medication.

Prior to infusion³

Patient assessment

Only perform an infusion if you are physically well. If you feel unwell and are unable to have your infusion, contact your healthcare provider.

What do I need?

Medication and materials will be supplied by the hospital/pharmacy to you or to a third party with the appropriate prescription:



Medication

- Appropriate number of vials of VPRIV® (400 U per vial) for your prescribed dose; VPRIV® vials should be stored in a refrigerator at a temperature between 2°C and 8°C.

Materials (Not all shown on picture)

- Sterile water for injections to reconstitute VPRIV®
- NaCl 0.9% intravenous solution, one (1) to two (2) 100ml bag(s) for IV administration
- NaCl 0.9% intravenous solution, two (2) 50ml bags or vials to flush infusion line pre- and post-infusion
- Chlorhexidine 0.5% in alcohol 70% (antiseptic solution)
- Appropriate number of 5ml and 50ml syringes depending upon dose of VPRIV®
- Sterile hypodermic needles and one (1) butterfly needle
- Tourniquet
- One (1) in-line low protein-binding 0.2 micron filter
- One (1) infusion set **or** one (1) combined infusion set with filter
- Hypodermic needle tray; Micropore tape; Mediswabs; Sharps bin; Hand wash
- Additional material may be needed if you have a central venous access device for the delivery of VPRIV®. You and/or your caregiver will be shown how to care for the device.
- If required, pre-medication (antihistamines and/or corticosteroids) to be given as per your healthcare provider's instructions. To be prescribed and used on an individual patient basis.

How to get ready for infusion

1. Approximately 30 minutes before the infusion, remove the appropriate number of vials from the refrigerator to reach room temperature.
2. Your healthcare provider will tell you how many vials to use to provide the correct dose. **DO NOT** alter this dose.
3. Confirm that each vial is within the expiry date, which is printed on the vial and outer carton (the expiry date refers to the last day of the month indicated). **DO NOT** use after the expiry date.
4. Before you begin, ensure that the area where you will prepare VPRIV® is thoroughly cleaned.
5. Lay out the material.
6. Wash your hands and keep the area clean and germ-free while preparing the solution.

How to dilute VPRIV® with sterile water for injection^{2,3}

1. Remove the flip-off cap from the VPRIV® vial.
2. Disinfect the rubber stopper of the VPRIV® vial with chlorhexidine and allow to air dry.
3. Open the sterile water for injections.
4. Using a 5ml syringe, draw 4.3ml of sterile water for injections.²
5. Gently inject the sterile water for injections to one (1) vial of VPRIV® by directing the flow toward the side of the vial.
6. If additional vials are needed for your prescribed dose, repeat steps 4 and 5. Use a different needle for multiple sticks through stoppers.
7. Upon reconstitution, mix vials gently. **DO NOT SHAKE.**¹ Small bubbles may appear after mixing.
8. Let the solution settle to allow any bubbles present to disappear.
9. Prior to dilution, visually inspect the solution in the vials. The solution should be clear to slightly opalescent and colourless and must not be used if it is discoloured or if foreign particles are present.²

PLEASE NOTE: that the patient should be available for immediate infusion after reconstitution. If you are not able to start the infusion right away, reconstituted VPRIV® can be stored in a fridge at 2–8 °C for up to 24 hours.



How to mix the medication in NaCl 0.9% IV infusion bag^{2,3}

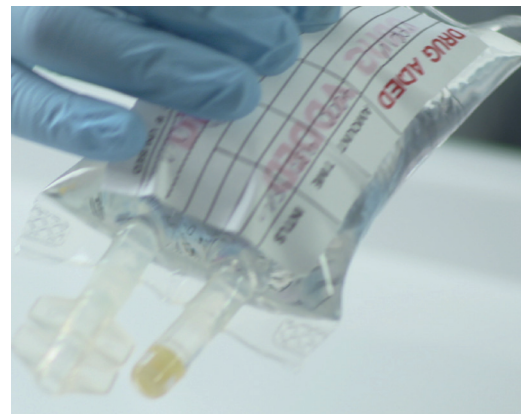
1. Disinfect the cap/opening of one or two bags of NaCl 0.9% solution using chlorhexidine and allow to air dry.
2. The amount of VPRIV[®] solution to be withdrawn from each vial will be 4ml. Calculate the quantity of reconstituted VPRIV[®] solution for your prescribed dose and draw the same quantity from the NaCl 0.9% IV bag solution, thus creating enough space to add the reconstituted VPRIV[®] solution.
 - For instance, if the prescribed dose is four (4) vials of VPRIV[®] remove 16ml (4 x 4ml) of NaCl solution from the 100ml bag of NaCl solution.
 - Never remove more than half (50ml) of liquid from the content of the 100ml bag of NaCl to ensure that at least half the diluted solution consists of NaCl.
3. Using a 5ml syringe withdraw the calculated volume of VPRIV[®] from the appropriate number of reconstituted vials. Some solution will remain in the vial. Use a different needle for multiple sticks through stoppers.
4. Gently inject the total volume of the reconstituted VPRIV[®] solution into the bag of NaCl 0.9% solution.
5. Mix gently. **DO NOT SHAKE.**

How to prepare the infusion set

1. Remove the infusion set from the package and close it using the roller clamp.
2. Connect the spike in the NaCl 0.9% IV bag and fill the infusion line by holding the drip chamber upside down and opening the clamp.
3. Fill the entire line, remove any air bubbles that may be present and close the roller clamp.
4. Connect the infusion bag containing VPRIV[®] to the infusion set.
5. The diluted solution should be filtered through an in-line low protein-binding 0.2 micron filter during administration. If the infusion set does not already contain a filter, attach the filter to the injection set as your doctor or nurse has shown you.

How to insert the needle in the vein (if you do not have central venous access device)

1. Ensure that the infusion system (infusion line connected to IV bag containing VPRIV[®]) is within reach and that swabs, plasters, chlorhexidine and medical tape are close by.
2. Remove the butterfly needle from the packaging.
3. Sit down and rest one arm on a table (preferably on a clean cloth).
4. Apply a tourniquet above the site of the infusion.
5. Prepare the infusion site by carefully wiping the skin with a disinfection swab. Allow the skin to dry before inserting the butterfly. Always use a new sterile needle for the infusion. Never re-use needles or syringes.
6. Remove the cap from the butterfly needle and, as instructed by your healthcare provider, insert the needle into a vein at as shallow an angle as possible.
7. Loosen the tourniquet and make sure that the needle is in a vein by pulling back the plunger gently (you should see backflow of blood into the butterfly tube).
8. To avoid needle movement during the infusion, tape the winged adapter to your skin using medical tape.



How to administer the medication?

If you have a central venous access device (in-dwelling central line) you and/or your caregiver have been shown how to care for the device so proceed to step 1.

1. Attach the infusion line to the butterfly needle or to your in-dwelling central line as your doctor or nurse has shown you.
2. Attach the IV bag containing VPRIV® to the drip stand and open the valve. Set the infusion rate determined by the treating physician. Sit down and relax.
3. Monitor the infusion regularly for infusion-related reactions (see safety information).
4. At the end of the infusion, to ensure that the total treatment dose is administered, rinse the tubing using a 50ml bag of 0.9% NaCl, without increasing the infusion rate. **In case of failure to gain venous access; if you develop excessive bleeding, pain, swelling or severe bruising; or if you fail to infuse VPRIV® into a vein correctly, please contact your healthcare provider immediately.**
5. Remove the butterfly needle and discard in an infectious waste disposal container. For a central venous access device, follow the technique for proper care as shown to you by your healthcare provider or nurse.
6. Any unused solution should be disposed of in accordance with local requirements as indicated by your healthcare provider or nurse.
7. Document the following in the infusion diary: date, dose, route of administration, injection site, time infusion started and stopped and patient response to infusion.
8. If you become aware that a mistake was made while preparing and/or administering the drug, please contact your healthcare provider. If the error occurred during the preparation step, do not administer the drug. If the error occurred during the administration, check with your healthcare provider before giving another infusion.



PLEASE NOTE: that in light of microbiological safety, the medication should be used immediately. If not used immediately, in-use storage times and conditions prior to use are the responsibility of the user and must not exceed 24 hours at 2–8 °C.

References

1. National Library of Medicine. National Institutes of Health. Gaucher disease. <http://www.nlm.nih.gov/medlineplus/ency/article/000564.htm>
2. VPRIV® Patient Information Leaflet
3. VPRIV® Summary of Product Characteristics