Training Guide for Berinert[®] (C1 esterase inhibitor, Human) Self-Administration



Biotherapies for Life[®] CSL Behring

Introduction

The Berinert[®] home-based IV (intravenous) selfadministration program is intended to train patients in self-infusion techniques.

The program enables you to self-administer IV doses of C1-esterase inhibitor (Berinert[®]) according to the instructions provided by your doctor.

This training course and the materials associated with this course are to be provided by a trained healthcare professional.

Table of Contents

Included in this training guide:

•	How to get your Berinert [®] from your hospital	4
•	Your training requirements	5
•	How to store your Berinert [®]	6
•	Traveling with Berinert [®] – Tips	7
•	The Step By Step Guide to self-administering Berinert [®]	8
•	Safety first	27
•	The common side effects of Berinert [®]	29
•	Emergency procedures	30
•	Tools and resources	33

My Healthcare Team

Contact	Name	Contact Number
Clinic Nurse		
Doctor		
Emergency Department		
Blood Bank		
Other Relevant Contacts		

Getting your Berinert®

Berinert[®] is a plasma-derived C1-esterase inhibitor which is typically distributed by the Blood Bank.

Instructions may differ at each center as to where and how to pick up your Berinert[®] supply. Please follow the instructions outlined by your healthcare professional to obtain your Berinert[®] supply.

Training Requirements

Certain training requirements should be met before attempting self-administration of Berinert[®] at home. The following are some of the requirements:

- Attend training session(s) given by a healthcare professional.
- Master the following techniques:
 - Clean/aseptic technique.
 - Proper handling and storage.
 - Insertion of an intravenous (IV) butterfly needle.
 - ability to independently insert IV butterfly into a vein on each arm.
 - Prepare and infuse Berinert[®].
 - Proper waste disposal.
 - Recording infusion.

How to Store Berinert®

Store Berinert[®] in the refrigerator or at room temperature (at +2 °C to +30 °C). Do not use the product after the expiration date.

Keep Berinert[®] in its original carton until ready to use. Do not freeze. Protect from light.

Avoid extreme temperatures (outside the range indicated above).

See some examples of extreme temperatures:



Traveling with Berinert®

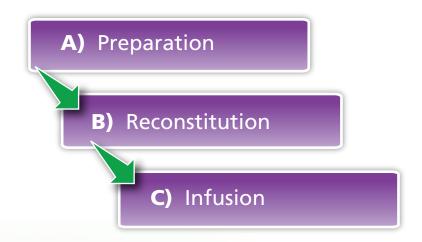
Tips

- Take an adequate quantity of Berinert[®] product and supplies (for example: Syringes, Mix2Vial[®], etc...) to cover treatment during your traveling period. Discuss with your healthcare professional how many doses you should always keep with you.
- The product must be kept at +2°C to +30°C:
 - It must be protected from temperature extremes.
- Take a copy of your prescription for Berinert[®] with you (if required).
- Also take any other documentation you may need such as:
 - Wallet Card. <u>https://www.allabouthae.ca/docs/</u> <u>HAE_WalletCard.pdf</u>
 - Infusion diary/log sheets.
- Ask your healthcare professional for a travel letter.
- Always keep your Berinert[®] in your carry-on bag, not in your checked luggage.

The ABC's of Berinert[®] SELF-ADMINISTRATION

Your prescribing physician will discuss with you when to infuse your C1-Inhibitor concentrate and the appropriate dose to use.

This Step by Step Guide will teach you the proper techniques for self-administering Berinert[®]:



A. PREPARATION

- Prepare a clean, even, flat surface, such as an infusion mat.
- Clean surface with antiseptic wipe.
- Ensure that the diluent and product vials are at room temperature.
- Prepare syringes (use the syringe provided with the product), infusion sets and other supplies for the infusion.



A. PREPARATION

1. Assemble Supplies

- ✓ Berinert[®] + Diluent (Sterile Water for Injection) Vials.
 - Ensure that the diluent and Berinert[®] vials are at room temperature.
- ✓ Mix2Vial[®].
- Disposable syringe(s). Use syringe that was provided with the product.
- Butterfly infusion set(s).
- ✓ Tourniquet.
- Disinfection swabs:
 - ✓ such as alcohol swabs.
- ✓ Sterile gauze pads.
- Surgical / paper tape (if required).
- 1 bandage (if required).
- Sharps/Biohazard container.
- HAE patient diary/log sheets.



Berinert[®] 500 Package



- 500 IU Vial of Berinert[®]
- 10 ml Vial of Sterile Water for Injection (Diluent)
- Mix2Vial[®] filter transfer set
- Inner Carton which contains: one syringe and one infusion set



Berinert[®] 1500 Package



A. PREPARATION

2. Prepare supplies

- Ensure that the diluent and Berinert[®] vials are at room temperature.
- Prepare syringes (use the syringe provided with the product), infusion sets and other supplies for the infusion.

3. Clean hands

- Clean your hands by rubbing them with an alcoholbased formulation (hand sanitizer containing 70% alcohol is preferred for routine hand hygiene), if hands are not visibly soiled.
- When hands are visibly dirty, wash your hands with soap and water (Figure 1).



1. Clean Stoppers

- Inspect each product vial.
- Check expiration date.
- Ensure the caps are secure.
- Remove the flip caps from both vials (Berinert[®] and diluent).



 Wipe rubber stoppers with an antiseptic and allow the rubber stopper to dry (Figure 2).

2. Open the Mix2Vial[®] Package

- Peel away the lid (Figure 3).
- To maintain sterility, leave the Mix2Vial[®] set in its clear outer package.



3. Prepare Diluent/Sterile Water Vial

- Place the diluent vial on an even flat surface and hold the vial tightly.
- Grip the Mix2Vial[®] keeping it in the package.
- Push the plastic spike of the blue end of the Mix2Vial[®] set firmly through the center of the diluent vial stop



center of the diluent vial stopper (Figure 4).

• The blue end locks onto the diluent vial with a "click".

4. Remove the Mix2Vial[®] Packaging

- While holding the diluent vial, carefully remove the outer packaging from the Mix2Vial[®] set.
- Make sure to pull off only the package, not the Mix2Vial[®] set (Figure 5).



5. Transfer Diluent/Sterile Water into Berinert[®] Vial

- Place the product vial on an even flat surface and hold the vial tight.
- Invert the diluent vial with the Mix2Vial[®] set attached to it and push the plastic spike of the clear end of the Mix2Vial[®] end firmly through the stopper of the Berinert[®] vial (Figure 6).
- The transparent end locks onto the product vial with a "click".





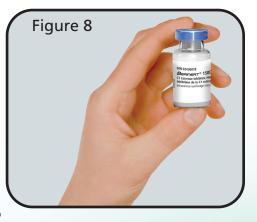


 The diluent will transfer into the Berinert[®] vial automatically.

6. Dissolve Berinert®

- With the diluent and Berinert[®] vial still attached to the Mix2Vial[®] set, gently swirl the Berinert[®] vial to ensure the product is fully dissolved (note: Berinert[®] 1500 may take longer than Berinert[®] 500 to dissolve) (Figure 7).
- Do not shake the vial.
- The reconstituted solution for
 Berinert[®] 500 should be colourless and clear. The reconstituted solution for Berinert[®]

Figure 7



1500 should be colourless, clear to slightly opalescent.

- Inspect Berinert[®] visually for particulate matter and discolouration prior to administration (Figure 8).
- Do not use if the solution is cloudy or contains particulates.

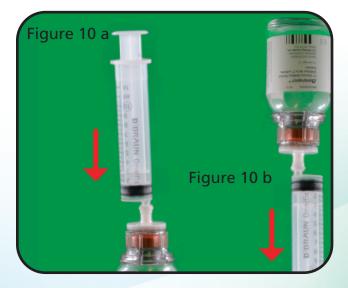
7. Unscrew Empty Diluent/ Sterile Water Vial

- With one hand, grip the clear end of the Mix2Vial[®] set and with the other hand grip the blue end of the Mix2Vial[®] set (Figure 9).
- Unscrew the set into two pieces.



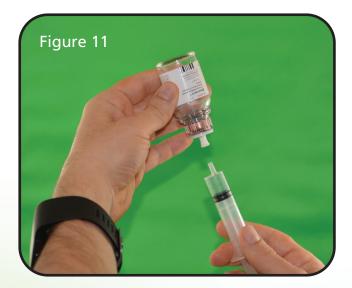
8. Load the Syringe

- Draw air into an empty, sterile syringe. Use the syringe provided with the product.
- With the Berinert[®] vial upright, screw the syringe to the Mix2Vial[®] set.
- Inject air into the product vial (Figure 10 a).
- Keeping the syringe plunger pressed, invert the Berinert[®] vial and draw the solution into the syringe by pulling the plunger back slowly (Figure 10 b).



9. Prepare administration set equipped with microbore tubing (butterfly infusion set)

Once the solution has been transferred into the syringe, firmly grip the barrel of the syringe (keeping the plunger facing down) and unscrew the syringe from the Mix2Vial[®] set (Figure 11). Attach the syringe to an infusion set or another suitable administration set.



B. RECONSTITUTION – troubleshooting

If you lose the vacuum within the sterile environment or if the Mix2Vial[®] is not available; please contact your training nurse educator.

Your healthcare professional will teach you how to safely infuse Berinert[®]. It is important that Berinert[®] is injected directly into a visible vein. Do not inject into surrounding tissues or into an artery. Once you learn how to selfinfuse, follow the instructions provided.

Assemble Supplies

- Syringes filled with Berinert[®].
- Butterfly needle infusion set.
- Tourniquet.
- Alcohol swab.
- Sharps/biohazardous container.
- Treatment diary/log book.
- Other supplies as recommended by your healthcare professional.



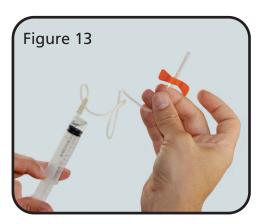
Prepare the infusion site:

- Apply a tourniquet on the arm above the site of the injection.
- Prepare the injection site by wiping the skin well with an alcohol swab. Use a circular motion starting from the center and working outward. Your healthcare professional may recommend allowing the site to dry completely before proceeding to the next step (Figure 12).



Infuse product as instructed by your healthcare professional:

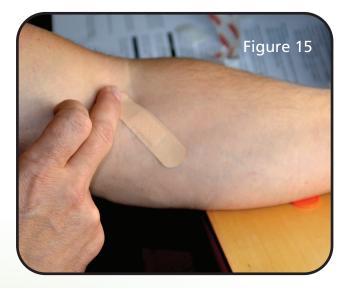
- Remove the air from the tubing (Figure 13).
- Insert the butterfly needle of the infusion set into your vein (Figure 14).
- Remove the tourniquet.
- If necessary, use tape or transparent dressing to hold the needle in place.
- Inject the Berinert[®]
 500 solution slowly at a rate of approximately 4 mL per minute or inject the Berinert[®]
 1500 solution as a slow intravenous injection.





Complete Infusion

- After infusing Berinert[®], remove the infusion set and apply pressure on the site, if recommended by your healthcare professional.
- Cover the infusion site with a bandage.



Clean-up

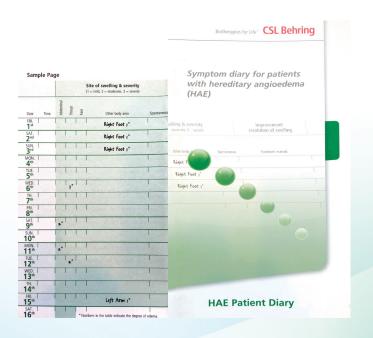
• Dispose of all unused solution, the empty vials, and the used needles and syringe into an appropriate container.

Record Treatment

Enter each infusion in your Patient Diary/log book.

- Record the lot number from the Berinert[®] vial label.
- Write down the date and time of your infusion, and any other important details.

Be sure to tell your doctor about any problems you have during your infusions. Your doctor may also ask to see your Patient Diary, so take it with you each time you visit your doctor's office.



Record Treatment

- You may also use the HAERO app to track and record your treatments.
- Download the HAERO app from the App store or Google play to track your attacks and treatment.





SAFETY FIRST

The following section describes the potential side effects associated with Berinert[®] and what to do in case of an emergency.

Remember, you are not alone. If at any point you do not feel you can infuse your product, go to your hospital for assistance.

CLINICAL USE

Berinert® is used:

Berinert[®] (C1 Esterase Inhibitor, Human) is used for the treatment of acute facial, abdominal and laryngeal hereditary angioedema (HAE) attacks of moderate and severe intensity* in pediatric and adult patients.

The safety and efficacy of Berinert[®] for prophylactic therapy has not been established.

When it should not be used:

Berinert[®] should not be used if you had previous severe allergic or body reactions to C1-INH products used to treat HAE or any components of Berinert[®]

*An HAE attack of moderate intensity is characterized by a degree of discomfort caused by clinical HAE symptoms that results in some interference with daily activities. An HAE attack of severe intensity is characterized by a degree of discomfort caused by clinical HAE symptoms that makes it impossible to perform daily activities.

WARNINGS AND PRECAUTIONS

Serious Warnings and Precautions

Products made from human plasma may contain infectious agents such as viruses and the agent responsible for the variant Creutzfeldt-Jakob disease (CJD).

- Thrombotic events have been reported with the use of Berinert[®] at the recommended dose following treatment of HAE attacks.
- The development of thrombosis has been reported in association with Berinert[®] when used (off-label) and at higher than labeled doses (greater than 90 IU/kg body weight) in newborns and young children with congenital heart anomalies during or after cardiac surgery under extracorporeal circulation.

BEFORE you use Berinert[®] talk to your doctor or pharmacist if:

- You have any special heart conditions.
- You have experienced severe allergic reactions or other reactions with products used to treat your HAE condition <u>or</u> if you have experienced allergic reactions to this drug or its ingredients or components of the container.
- You are pregnant or if you are breastfeeding.

Very common and common side effects

SIDE EFFECTS*, HOW OFTEN THEY HAPPEN AND WHAT TO DO ABOUT THEM

Symptom / effect	Talk with your do	ctor or pharmacist		
	Only if severe	In all cases	your doctor or pharmacist	
Headache	\checkmark			
Abdominal pain ⁺	\checkmark			
Nausea ⁺	\checkmark			
Muscle spasms	\checkmark			
Pain				
Diarrhea ⁺	\checkmark			
Vomiting ⁺	\checkmark			
Back pain	\checkmark			
HAE		\checkmark		
Edema Peripheral		\checkmark		
Abdominal distention		\checkmark		
Upper respiratory tract infection		\checkmark		
Dysgeusia		\checkmark		

NOTE: This is not a complete list of side effects; for a complete list please refer to part III of the Berinert[®] Product Monograph.

* Reported in a key clinical study, related or not related to Berinert®.

[†] Symptoms were considered to be related to the underlying disease. Any increase in intensity or new occurrence of these symptoms after study medication administration was considered to be an AE.

For more information and a complete risk/benefit profile, please contact your Healthcare Professional or Customer Service at 1-866-773-7721 ext. 2386 or refer to the Product Monograph available on our website at www.cslbehring.ca.

EMERGENCY PROCEDURES

In case you can't self-infuse Berinert®

- If you are unable to start your self-infusion of Berinert[®] please proceed to the Emergency Department or other designated place provided by your healthcare professional in order to get assistance with the infusion of your product.
- Your healthcare professional may recommend taking the vials of Berinert[®] with you to the Emergency Department.
- Your healthcare professional may also recommend taking your wallet card.

Additional Emergency procedures:

EMERGENCY PROCEDURES Continued

In case of drug overdose, contact a healthcare professional, hospital Emergency Department or regional Poison Control Centre immediately, even if there are no symptoms.

Additional Emergency procedures:

EMERGENCY PROCEDURES Continued

Emergency Wallet Cards

https://www.allabouthae.ca/docs/HAE_WalletCard.pdf

Emergency Management of Hereditary Angioedema (HAE)

PATIENT IDENTIFICATION

Name: _

Date of Birth:

Health System #: _



Supported by the Canadian Hereditary Angjoedema Network (CHAEN) / Réseau Canadien d'Angjoédème Héréditaire (RCAH) (www.haecanada.com)

DIAGNOSIS

HAE is a rare potentially life threatening disease usually caused by C1-esterase inhibitor deficiency associated with tissue swelling (see description on back page of this wallet card).

PROMPT TREATMENT

PROMPT TRIAGE & ASSESSMENT:

To determine the severity of the swelling.

PROMPT TREATMENT:

Will rapidly initiate onset of relief of the angioedema in this patient and decrease morbidity.

AIRWAY OBSTRUCTION:

The risk of dying from airway obstruction if left untreated is significant². Consider <u>early</u> <u>intubation</u> in progressive laryngeal edema².

RECOMMENDED TREATMENT

C1-INH (IV): 20 U/Kg, 4mL/min # of Vials: _____ of C1-INH 500 units

(available at Blood Bank)

Other:

If above not available, consider: solvent detergent treated plasma (SDP) or less safe fresh frozen plasma² (2 Units).

Angioedema attacks usually do not respond to treatment with glucocorticoids, antihistamines nor epinephrine².

This patient may require prophylaxis before surgery or dental procedures in order to prevent an angioedema attack¹.

EMERGENCY CONTACTS

CLINICAL CHARACTERISTICS OF HAE

Recurrent non-pruritic edema of skin and submucosal tissue associated with pain, nausea, vomiting, diarrhea, and life-threatening airway swellings².

- Laryngeal / airway swelling: May result in asphyxiation
- Facial / neck swelling
- Facial / neck swelling
- Abdominal attacks (abdominal pain, cramping, diarrhea, nausea / vomiting)
- Peripheral edema (other regions)

Supported by: HAE Canada Inc (the Hereditary Angioedema Patient organization) (www.haecanada.org)



HEALTHCARE TEAM

In case of Emergency, Contact my Physician:

MD/specialty: _____ Hospital: _____

Other Clinic / Physicians

MD / specialty: _____

77

Physician signature

Date of Recommendation: / / Day / Month / Year References:

Please Contact:

Relationship: _

7

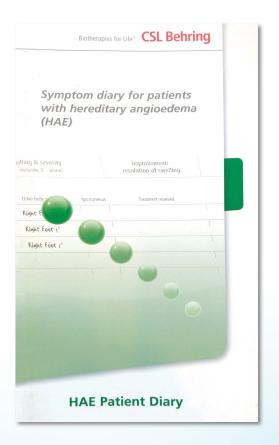
Other Recommendations / comments:

Name: ____

1. CHAEN/RCAH WEBSITE FOR EMERGENCY TREATMENT www.haecanada.com/files/TreatmentChart110602.pdf 2. CHAEN/RCAH WEBSITE FOR PROPHYLAXIS www.haecanada.com/files/ProphylaxisChart110602.pdf

RESOURCES

Patient Diary



RESOURCES

Mix2Vial® resources





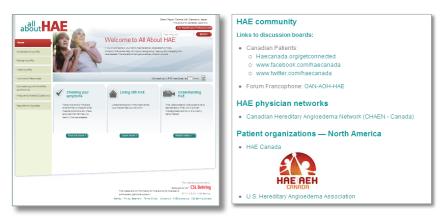
Mix2Vial® instructions sheet



RESOURCES

Web site: allabouthae.ca

Links to the HAE community*



*CSL Behring Canada is not responsible for the information content/ recommendations of these resources, which are provided for supplementary information only.

Additional Berinert[®] Information

For more information and a complete risk/benefit profile, please contact Customer Service at 1-866-773-7721 ext. 2386 or refer to the Product Monograph available on our website at http://labeling. cslbehring.ca/PM/CA/Berinert/EN/Berinert-Product-Monograph.pdf

Notes:

Berinert[®] is a registered trademark of CSL Behring GmbH.

Berinert[®] is manufactured by CSL Behring GmbH and distributed by CSL Behring Canada, Inc.

Biotherapies for Life[®] is a registered trademark of CSL Behring Canada, Inc.

Mix2Vial[®] is a registered trademark of West Pharma. Services IL, Ltd., a subsidiary of West Pharmaceutical Services Inc.

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