Home Treatment Guide

For people with bleeding disorders
Revised by the Canadian Association of Nurses in Hemophilia Care (Western Division) in December 2009.

Colleen Buehler RN
Nora Schwetz RN BSc
Rose Jacobson RN
Janice Karasevich RN BN
Morna Brown RN
Carol Spitzer RN
Nancy Hodgson RN
Chelsie Fraser RN BN
Wilma McClure RN
Caroline Farmer RN
Erica Purves RN MN NP (p)
Deb Gue RN MSN
Kam McIntosh RN BSN

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This Home Treatment Guide was developed by hemophilia nurses working with patients and families affected by hemophilia. The main goal of this project was to assist patients in the safe home treatment of bleeding disorders by providing basic information in an easy-to-use format.

Although the information in this booklet was current when it was written, information may change with time. This guide was also written to meet the needs of all Canadian patients, please note that there may be local adaptations in some areas. It is important to check the accuracy of this guide with your Hemophilia Treatment Center (HTC) on a regular basis.

This booklet is not intended to replace regular contact with your HTC. It is meant to encourage families and care providers to work together to provide the best home treatment experience.
Contributors

Reviewers: Christine Keilback and Dr. John Wu

Illustrated by: Pam Johnston

Graphs by: Dr. Don Houston

Edited by: Erica Purves and Nora Schwetz

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In Canada, home treatment programs for people with bleeding disorders have existed since the late 1960s. Aspects of the treatment programs, such as treatment products, have changed dramatically over the years, but the main principle (to assist people with bleeding disorders to receive treatment outside of the hospital) has remained the same.

Home treatment allows affected individuals and families to rely less on hospital care by increasing independence and promoting early treatment of bleeds. Home treatment can decrease costly and time consuming emergency room visits, and allow for a more normal home life with preventative (prophylactic) treatment.

Whether you have a bleeding disorder yourself or you are caring for an affected person, this book will help guide you in treating your bleeding disorder safely at home. You will learn some assessment and treatment skills used by your Hemophilia Treatment Centre (HTC) staff, but you must also understand that safe home treatment is dependent on knowing your limits. You may encounter some situations where additional medical care is necessary, so it is important to always be in close contact with your hemophilia team while you are in this program. Learn as much as you can and don’t be afraid to ask questions. As we begin this program, you will become familiar with the benefits and risks of home treatment, as well as the new roles and responsibilities you will be taking on as you become more independent with your care.
Benefits and risks

Benefits

Home treatment allows you to:

✔ Treat bleeds more quickly.
✔ Rely less on hospital-based treatment, which means less time away from home, school, or work.
✔ Take part more easily in prophylactic treatment programs set up to prevent joint damage.
✔ Participate in normal activities, including most sports, and enjoy more independence.

Risks

The risks of home treatment include:

● Unnecessary pain, suffering, and disability due to delayed treatment.
● Inadequate factor dose, failure to recognize serious bleeds, or failure to notify your Hemophilia Treatment Centre (HTC).
● Failure to recognize any adverse reaction to factor concentrate.
● Loss of potency in factor concentrate caused by improper storage or outdated product.
● Infection or damage to veins, ports, or other Central Venous Access Devices (CVADs).
● Injuries caused by improper needle disposal.
Working with the team

There are a number of ways in which you can help minimize the risks of home treatment. These include:

1. Having a good understanding of your/your child’s bleeding disorder and recommended treatment.
2. Taking part in ongoing training with your HTC to improve your assessment and treatment skills.
3. Working closely with all members of your HTC. This includes discussing concerns about assessment and home treatment, including venipuncture (the insertion of needles into veins).
4. Recording all home treatments and reviewing these records with your HTC at regularly scheduled times.
5. Attending your clinic on a regular basis.

Keeping Records

Record each treatment on the recording sheets or the electronic record your HTC has instructed you to use. Ensure the following information is included:

1. The date and time of treatment.
2. Reason for treatment (trauma, spontaneous, or prophylaxis).
3. The bleed location (including information on pain, movement, swelling).
4. The name of the factor concentrate.
5. The product’s lot number.
6. The number of total units you gave.
7. Comments on the treatment’s effectiveness.
8. Other useful information, such as description of first aid, other medications, or measurement of the affected limb at the site of the bleed.

All of this information helps your HTC make sure that you are receiving the best treatment for your needs. It also assists in keeping track of the product you received in case of a recall.
Roles and responsibilities

In the Home Treatment Program, your Hemophilia Treatment Centre will provide you and your family with the following:

- Information about your bleeding disorder, the treatment it requires, and the treatment products available to you.
- Information about safe home treatment, including how to order products, store them properly, and dispose of used equipment safely.
- Teaching sessions on preparing and giving factor concentrate safely, including venipuncture technique or the use of CVADs.
- Ongoing teaching in bleed assessment and treatment, including instruction on when to contact your HTC.

Before starting the program, you must show that you can:

- Describe your bleeding disorder accurately.
- Describe the symptoms of different types of bleeds, and the best ways to treat them.
- Prepare and give factor concentrate safely.
- Store factor concentrate properly.
- Dispose of used equipment safely.
- Describe when it is necessary to contact your HTC to discuss bleeding episodes.
- Keep a regular routine of attending clinics at your HTC.
- Keep accurate treatment records and submit them at agreed intervals.

I have read the above, understand the benefits and risks of home treatments, and agree with the roles and responsibilities described therein.

Participant, Parent or Guardian Date

Medical Director Date

Nurse Coordinator Date
Assessing Bleeds

Common bleeds

Soft Tissue/ Muscle Bleeds

What to look for:

- A bleed that is increasing in size. Use a tape measure to measure the area of concern every few hours. Compare the right and left sides of the body also. If you do not have a tape measure, check every few hours to see if the area is growing larger.

- A bruise that is increasing in size. Use a pen to mark the outline of the bruised area, and check every few hours to see if the bruise is growing larger.

- A muscle that is becoming more firm, tense, or tight. Compare the right and left sides to assess for differences. Can you feel a specific lump? How big does it feel? Can that limb still be moved normally or is movement limited?

- Pain in a particular area that gets worse with time, even without visible signs to help you locate bleeding.

What to do:

- Have the affected person reduce or stop his or her activities.

- Treat with R.I.C.E. and factor concentrate according to your clinic’s guidelines.

- Watch closely for signs of improvement, including less swelling, bruises changing colour to green or yellow, and less pain.

- Notify your HTC if the bleed isn’t any better after 24 hours.

If for any reason you have doubts about how to assess a bleed, contact your HTC for advice or proceed to the nearest hospital emergency room. Asking for help is a good way for you to learn more about your child’s bleeding disorder and its management.
Joint Bleeds

Caregivers can assess the movement of joints, such as knees, ankles, and elbows, by observing, touching gently, and measuring. Do joint checks daily, especially for young children who may not be able to tell you that a joint hurts. Encourage older children to tell you right away if they have any of the symptoms listed below.

What to look for:
- A joint with less movement than normal. Compare left and right joints for movement.
- Pain or stiffness in a joint, with or without bruising present.
- Swelling and warmth in a joint, with or without bruising to the area.
- Unusual fussing and crying in an infant or young child and/or refusing to use a limb in a way they previously could (e.g. crawling with one straight leg, when previously both were bent when crawling).

What to do:
- Have the affected person reduce or stop his or her activities.
- Treat with R.I.C.E. and factor concentrate according to your clinic’s guidelines.
- Report all joint bleeds to your HTC.
- Notify your HTC if the bleed isn’t any better after 24 hours.

Point of interest: Do you know how to keep your joints healthy?
1. Prevention of bleeding through good activity choices.
2. Treating bleeds promptly and properly.
3. Resting and rehabilitating bleeds.
**Mucous Membrane Bleeds**

**Mouth Bleeds**

**What to look for:**
- Obvious bleeding from the gums or tongue
- Bruising on the gums
- Continual or very frequent swallowing
- A salty or metallic taste in the mouth

**What to do:**
- Keep calm – if the person is a child, try to distract him or her.
- Have the person eat cold foods, like popsicles or ice chips.
- **Treat with factor concentrate** according to your clinic’s guidelines.
- **Give antifibrinolytics** (tranexamic acid, medicines that help to hold a new clot in place) – this is very important in mouth bleeding.
- **Seek medical attention immediately** if the mouth bleed happened because of significant trauma, if it doesn’t stop within 20 minutes of treatment, or if bleeding episodes continue.
- Avoid eating spicy foods, as they can irritate gums, especially gums that have already been bleeding.
- Avoid eating foods with sharp edges (such as taco chips) and using drinking straws, as they can both cause gum bleeds or re-injure gums that have already been bleeding.
- Watch for pale skin, trouble breathing with exercise, dizziness, and black or dark bowel movements.
Nosebleeds

What to look for:
- Bleeding from one or both nostrils
- Blood on paper tissue when blowing nose
- Continual or very frequent swallowing
- A salty or metallic taste in the mouth

What to do:
- Keep calm – if the person is a child, try to distract him or her.
- Have the person sit with his or her head tilted slightly forward.
- Pinch the nose firmly below the bridge (the bony part). Keep pinching for at least 10 minutes after treating with products.
- Put a cold cloth on the back of the neck, and replace it when it starts to feel warm.
- Treat with factor concentrate according to your clinic’s guidelines.
- Give antifibrinolytics (medicines that help to hold a new clot in place), as your clinic directed you.
- Watch for pale skin, trouble breathing with exercise, dizziness, and black or dark bowel movements.
- Seek medical attention immediately if the nosebleed happened because of trauma (physical injury), if it doesn’t stop within 20 minutes of treatment, or if more nosebleeds occur within a few hours and don’t stop within a few minutes.
Limb-threatening bleeds

Muscles contain vast numbers of blood vessels. A pinch, a hit, or a sudden movement can tear muscle tissue, resulting in bleeding from these vessels. Because muscles stretch easily, a lot of blood can leak from injured vessels into surrounding tissues before any signs or symptoms of bleeding are noticed. Given the amount of bleeding that can happen in some cases, and the location of the bleeding, severe damage can result.

A muscle bleed becomes “limb-threatening” when swelling in the injured area causes pressure on blood vessels or nerves supplying the limb. Pressure on blood vessels prevents normal blood circulation and can lead to tissue death in the affected limb, while pressure on nerves interferes with movement and feeling (sensation). This is known as “compartment syndrome”. If severe, this can lead to needing surgery to release vessel and nerve compression in order to prevent permanent damage to the limb.

Limb-threatening bleeds are most likely to occur in the forearm muscles, the calf muscles, and the psoas muscle.

What to look for:

- A “tight feeling” in the injured muscle or limping
- A feeling of numbness or tingling at or near the affected area
- Swelling, shiny, or firm skin
- Pain
- Area below bleed pale compared to other side
- Unusual warmth in the affected area or unusual cold compared to other side

What to do:

If any of these symptoms appears, treat with factor concentrate according to your clinic’s guidelines for serious bleeds, notify your HTC, and go to the nearest emergency room immediately with your Factor First card.

Bleeding deep in forearm muscles may compress the ulnar nerve, leading to clawhand deformity
A large bleed into the calf muscle raises the heel of the foot on the affected side. This is because the blood irritates the muscle, resulting in difficulty stretching and causing the injured person to walk on the toes of that foot.
Psoas Muscle Bleeds

The psoas (pronounced with a silent “p”) muscles are found deep inside the right and left sides of the lower abdomen at the pelvis. These muscles are attached to the lower spine at the back of the body, and to the femurs (thigh-bones) at the front (see illustration). They support your hips when you are standing straight, and are also the main muscles you use when you raise your thigh or bend forward at the hip. Some major nerves and blood vessels that supply the legs are located beside the psoas muscles.

Bleeds into psoas muscles can cause swelling, which in turn puts pressure on major nerves and blood vessels. This type of bleed can quickly become limb-threatening and often needs hospitalization for strict bed rest and intensive physiotherapy involvement.

What to look for:

- Walking or standing in an unusual way, such as up on the toes of one foot, with the body twisted to one side, or with the body bent forward and buttocks raised.
- Inability to lay flat on the back with the leg straight out.
- Pain in the back, hip, groin, or front of the thigh on the person’s affected side.
- A sensation of numbness or tingling in the person’s outer thigh.
- You will not see swelling, discoloration, or bruising, nor will you feel increased warmth with this type of bleed, because the psoas muscles are located so deep inside the body.

What to do:

- Stop the person’s usual activities immediately, and have him or her rest in bed.
- Treat with factor concentrate according to your clinic’s guidelines for serious bleeds, notify your HTC, and go to nearest emergency room immediately with your Factor First card.
Posture of a person with a psoas bleed
**Life-threatening bleeds**

**IMPORTANT NOTE:** Bleeds into any of the following areas may be life-threatening and need immediate medical attention.

### Head

The brain is the master-control for all of the major body functions, so a bleed into the head is very serious. These bleeds can cause brain damage or even death.

**What to look for:**
- Headache
- Abnormal vision
- Nausea or vomiting
- Mood or personality changes
- Drowsiness
- Loss of balance
- Loss of fine-motor coordination
- Loss of consciousness
- Seizures
- Specific to infants: increased head circumference in a short period of time (within days), along with increased irritability and bulging fontanelles (the soft spots on the top of an infant’s skull)

**What to do:**

If any of the above symptoms appear, **treat with factor concentrate** if able in a timely manner according to your clinic’s guidelines for serious bleeds. **Also: notify your HTC and go to the nearest emergency room immediately** with your Factor First card and product.
If left untreated, **eye injuries** can result in **permanent loss of vision**. Please contact your HTC or report to the ER for an eye exam for any direct blow to the eye or surrounding tissue.

**Neck**

Because there are so many blood vessels in the nose, mouth, and throat, bleeds into these areas can easily result in tissue injury or infection. Also, as tissues in these areas swell with blood, they can press on the airway leading to the lungs. The airway may become narrower, making breathing difficult, or it may be closed completely, making breathing impossible.

**What to look for:**
- Pain in the neck or throat
- Swelling
- Swallowing difficulties
- Breathing difficulties

**What to do:**
- If any of the above symptoms appear, **treat with factor concentrate** according to your clinic’s guidelines for serious bleeds, **notify your HTC**, and **go to the nearest emergency room immediately** with your Factor First card and product.

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Playing contact sports can increase your risk of having a life-threatening bleed.
Chest
This body cavity contains the lungs, heart, and major blood vessels. A chest injury may cause bleeding in the lung tissue, forcing blood into spaces that normally contain air. This can result in serious breathing difficulty.

What to look for:
- Pain in the chest
- Breathing difficulties
- Coughing up blood
- Pale skin colour
- Lack of energy

What to do:
If any of the above symptoms appear, treat with factor concentrate according to your clinic’s guidelines for serious bleeds, notify your HTC, and go to the nearest emergency room immediately with your Factor First card.

Abdomen
Organs found in this cavity include the stomach, spleen, liver, kidney, and intestines. Injury to this area can result in massive bleeding from an organ or major blood vessel. Such bleeding can be fatal without treatment and medical care.

What to look for:
- Pain in the abdomen or lower back
- Nausea or vomiting
- Blood in urine
- Black or bloody stool

Playing contact sports can increase your risk of having a life-threatening bleed.
Treating Bleeds
Treating Bleeds

This section contains information on how to give basic first aid, calculate correct doses of factor concentrate, and give treatment product by venipuncture.

General treatment principles

When treating any bleed, there are a number of general principles to keep in mind:

1. Give treatment at the first sign of bleeding. The earlier treatment starts, the faster the bleed will get better. When in doubt, infuse factor concentrate.

2. Along with giving factor concentrate for a bleed, always use R.I.C.E. (see page 21) to give the bleed the best chance to get better.

3. Use the right amount of factor for the type of bleed, as directed by your HTC.

4. When treating a bleed, call your HTC to discuss a treatment plan, including first aid measures, product dose, how often to give treatment, and when to come in for a follow up.

5. Check your supplies. Most factor VIII products come in vial sizes of about 250, 500, 1000, 1500, or 2000 units but may vary based on brand of product or lot number. Always use a complete vial for a treatment unless your clinic advises you to do otherwise.

6. If you suspect there is a problem with the product because it does not dissolve or the solution is coloured, do not use the product. Notify your clinic and make a note that the vial was wasted in your records.
If for any reason you feel unsure about how to proceed or about the success of a treatment, contact your HTC for advice or go to your emergency department for help.

We recommend you never treat a bleed alone. However, if treating alone, know how to get help in case of an emergency.

Keep your home care skills up to date. Your HTC will provide you with advice and new information during your regular clinic assessments.

Keep accurate home care records. Ensure you are recording time and date, the bleed location, treatment reason (ie. bleed, prophylaxis, follow-up treatment number of units infused, and lot number).

Wear your “MedicAlert” identification bracelet at all times.

Carry your Factor First card at all times.

When in doubt, call your HTC or the haematologist on call for assistance.
Basic first aid for bleeds: **R.I.C.E.**

Basic first aid is helpful when a bleed occurs in a joint, soft tissue, or muscle. If such a bleed should occur, use R.I.C.E. *(Rest, Ice, Compression, and Elevation)* as needed to reduce pain and bleeding.

- **REST:** Avoid using the injured limb. This may mean using crutches or a sling.

- **ICE:** Never apply ice directly to the skin. Instead, use either crushed ice or a package of frozen vegetables (like peas or corn) wrapped in a moist towel.

- **COMPRESSION:** Wrap the injured body part with an elastic bandage. Start at the lower part of the limb and work your way up in a criss-cross pattern. Watch for feelings of coolness or numbness, or for any change in the colour of fingers or toes. If any of these symptoms occur, remove the bandage and re-wrap it less tightly.

- **ELEVATION:** Raise the injured limb above the level of the heart to prevent further swelling.
Calculating doses

The correct dose of factor concentrate depends on the weight of the person, as well as the type of treatment you are giving (prophylaxis, minor treatment, major treatment.)

For factor VIII concentrates, the yield (or increase in the amount) of factor in the bloodstream is about 2% per unit of factor given for each kilogram of the person’s weight. In mathematical terms, that means the yield for factor VIII is 2%/u/kg.

The yield for factor IX, on the other hand, is 0.6-1.2%/u/kg.

Don’t worry too much about calculating doses. Your treatment dose has been calculated for you and is found on your Factor First card.

If your clinic provides you with these guidelines, keep a copy in the back pocket of this booklet.
Rate of factor level decrease after treatment

To understand more about factor concentrates and treatment guidelines, it is important for you to understand how long these products last in the body once administered (survival time).

Factor levels after a single dose of product

![Graph showing the rate of factor level decrease after treatment](image-url)

- **Factor Vlll: 25 units/kg**
- **Factor IX: 62 units/kg**
Graph 1 shows what happens in the body over time after you give a single dose of factor VIII or IX.

- Factor VIII: In this case, the dose of factor VIII given is 25 units per kg, raising the level of factor VIII to 50%. Approximately twelve hours after you give such a dose, the factor VIII level is 25%, meaning that half the factor VIII is gone after 12 hours. This is commonly known as the half-life. According to the literature, the half-life of factor VIII is usually between 8 and 12 hours, as shown in the graph.

- Factor IX: The dose here is 62 units per kg, an amount that, on the average, raises the factor IX level to 50%. According to the literature, the half-life of factor IX is between 18 and 24 hours, as shown in the graph.

Consider both the half-life of the treatment product you are using and how severe the bleed is when you calculate how much factor concentrate to give and how often to give it.

To recap: the graph shows that 12 hours after treatment, the level of factor VIII is 25%. At 24 hours, the factor VIII level is 12%; at 36 hours, the factor VIII level is 6%; and by 48 hours, it returns to baseline. This baseline may be 0% in a person with severe hemophilia, 3% in a person with moderate hemophilia, or 10% in a person with mild hemophilia. The level will remain at baseline until another treatment is given.
**Regular dose of Factor VIII**

**Plasma levels after the administration of Factor VIII**
(25 units/kg body weight)

Graph 2 shows the levels of factor VIII in the body over time when given every 12 hours, once daily, and 3 times per week.

- **Treatment every 12 hours** gives you excellent protection, even for large bleeds. Serious joint bleeds that are treated late often need several treatments. Your HTC will give you specific instructions on the treatment schedule. Treatment may be as frequent as every 12 hours for the first 2 or 3 treatments.

- **Treatment once daily** with Factor VIII provides good protection lasting until the next treatment.

- **Treatment 3 times per week** offers good protection on the treatment day, some protection on the second day, minimal protection the night of the second day, and no protection by the morning of the third day. Re-bleeding after injury can occur easily when the factor VIII level drops below 25%, so take caution if the affected person’s factor level is in the yellow zone on the graph.

*Please be sure to review this information with your nurse when determining your doses.*
Regular dose of Factor IX

Plasma levels after the administration of Factor IX (62 units/kg body weight)

Graph 3 shows the levels of factor IX in the body over time when you give it daily and twice per week.

- Daily treatment provides good protection lasting until the next treatment. Most bleeds that you can manage at home will get better when treated daily.

- Treatment twice per week with factor IX offers good protection on the treatment day, some protection on the second and third days after treatment, minimal protection on the night of the third day, and no protection by the morning of the fourth day.

Please be sure to review this information with your nurse when determining your doses.
Infusing factor concentrate

Preparation for a factor infusion

Be sure to have all these supplies on hand before trying venipuncture:

- Tourniquet
- Alcohol wipes
- At least two butterfly needles, as you may need extras in case of any failed attempts
- Tape
- Syringe
- Gauze or cotton ball
- Clean surface for preparation
- Factor concentrate
- Sharps container
- Infusion log

Note: Other supplies may be necessary if you are infusing factor into a port-a-cath or implanted venous device.

Clean technique

In order to prevent infection from entering the blood stream or site of injection, it is extremely important to follow these guidelines for clean technique when infusing:

1. Always wash your hands well. Soaping and rubbing your hands for at least 30 seconds is important. If using alcohol hand sanitizers, allow adequate time for your hands to dry (at least 30 seconds).

2. Know what is clean and what is dirty and keep them separate. If you suspect something is contaminated, clean it if possible or discard it. When in doubt, discard.

3. Your clean area should be protected in order to stay clean.

4. Open supply packages as you were taught by your HTC nurse.
Venipuncture

1. **Wash your hands** with soap and running water, and dry them well with a clean towel.

2. **Apply a tourniquet** above the site you want to use.

3. **Clean the skin with alcohol and let it dry.** It is important to clean the skin to prevent germs from entering the vein during venipuncture.

4. **Hold on to the wings of the butterfly needle** with the bevel facing up. Insert the needle into the vein at a 20- to 30-degree angle, as shown in the illustration. You may feel a pop and see a flash of blood in the tubing – these signs mean that the butterfly needle is in the vein.

5. **Level off the needle until it is flat to the skin surface,** and insert it slightly (1-2 millimetres). The needle does not have to be inserted right to the end of the butterfly wings.

6. **Apply a piece of tape** to secure the needle in place.

7. **Check that the needle is properly positioned** by gently pulling back on the syringe’s plunger. If you see blood return in the tubing while doing so, you are ready to begin the infusion.

8. **Remove the tourniquet.**

9. **Begin to infuse the factor product** by gently pushing the plunger of the syringe with smooth, steady pressure. The concentrate should be given at the rate described in the package insert. Check for puffiness in the area, which may indicate that you have gone right through the vein.

10. When you have infused all of the product, **remove the butterfly needle** and apply pressure over the area with a dry gauze or cotton ball for a minimum of 5 minutes.

11. **Discard all of the needles into the sharps container,** and dispose of the bottles and syringes as instructed by your HTC.

12. **Record the treatment immediately** after disposing of the used materials.
Helpful hints for successful venipuncture

Your chance of success with venipuncture will improve with proper preparation and technique. Take time to set yourself up for success.

1. Use appropriate distraction and coping techniques when required for children.
2. Ensure the arms/hands are warm.
3. Ensure good hydration.
4. Ensure you have good lighting (consider doing the infusion near a window or pulling over a floor lamp and taking off the lamp shade).
5. After applying the tourniquet, lower your arm and squeeze your hand to make a fist a few times, or squeeze a soft ball. This will help to make your veins easier to see and feel, but only do it for a short time.
6. Avoid leaving the tourniquet on too long. If you leave it on for more than 2 or 3 minutes, the veins will shrink. If this happens, release the tourniquet and start again.
7. The veins on the top of the hand or the wrist often roll or move during venipuncture attempts. If this happens, flexing the hand or wrist downward will help stretch the veins for easier access. Have young children hold the empty factor bottle to produce the desired result in their hand veins (see illustration).
8. Try to pick straighter parts of veins rather than curved parts (see illustration).
9. Consult your HTC for further information on venipuncture tips.
10. Try to pick veins that feel full of blood (like tubes under the skin), or have some bounce.
A young child’s hand positioned for venipuncture. The wrist is flexed to stretch the vein that runs along the wrist at the base of the thumb. Firmly holding an empty concentrate vial enlarges the vein, while allowing the child to help with the treatment.

*Hint: Avoid using veins located near the artery at the wrist. Discuss this in detail with your HTC nurse.*

A young child’s hand is held ready for venipuncture. Gently pulling the skin on the child’s fingers downward with your thumb stretches the veins in the back of the child’s hand, so they will not roll away as the needle is inserted.

*Hint: It is easier to insert a needle into a straight vein, so avoid curved or branching parts of veins when choosing a venipuncture site.*

Veins in the elbow crease (the antecubital space) are often used for venipuncture, but care must be taken to avoid puncturing the arteries beneath these veins.

*Hint: Your HTC nurse can help you choose the safest venipuncture sites.*
Troubleshooting problems with venipuncture

Swelling where you insert the needle. Pain. You are simply unable to infuse the treatment.

**STOP the infusion. Remove the butterfly needle. Apply pressure for at least 5 minutes. Attempt to access another vein, preferably on the other hand.**

*The needle is inserted at an angle of less than 20 degrees. The bevel scrapes the outer surface of the vein wall, failing to puncture it.*

Flash of blood in the tubing, then nothing but air. Vein bruises.

**You have gone through the vein and the needle is now underneath it. Remove the butterfly needle. Apply pressure for 5 minutes. Try to access another vein.**

*The needle is inserted at an angle greater than 30 degrees. It punctures through both sides of the vein.*

You can’t achieve a successful venipuncture after your third attempt.

**CONTACT YOUR HTC OR GO TO THE NEAREST EMERGENCY ROOM (or treatment centre) for assistance and take the unused labelled product with you.** If possible also bring the product information.

*Failure to hold the vein in place while inserting the needle under the skin allows the vein to roll to one side. The angle of the needle is correct, but it misses the vein completely.*
Special Considerations
Allergic reactions

Although allergic reactions are rare, they can occur at any time during or after a dose of factor. This is a major reason why you should always have a responsible adult nearby either when treating yourself or when giving treatment to an affected child.

Notify your HTC of any reaction you or your child may experience during or after an infusion. Here are different types of symptoms that may occur, and what you should do in each case.

Mild symptoms

- Itching
- A few hives, slightly raised
- Slight fever or chills

What to do:

- Stop the infusion.
- Give antihistamines as your HTC has directed you.
- Contact your HTC or your family physician.
- Record the reaction.
- Record the factor concentrate’s lot number and check with your HTC before using any more product from this batch.
Special Considerations

Moderate to serious symptoms

- Swelling
- Many hives
- Itching of palms on hands or soles of feet

Life-threatening symptoms

- Swallowing difficulties
- Tongue feels thick
- Shortness of breath
- Paleness
- Wheezing
- Swelling of face and neck

What to do:

- **Stop** the infusion.
- Call an ambulance to go to the nearest hospital.
- Contact your HTC as soon as possible.
- Record the reaction.
- Record the lot number and **don’t use any more concentrate from that batch.**
Inhibitors

If you are treating a bleed and the factor doesn’t seem to be helping, or if the bleed doesn’t get better, contact your HTC.

An inhibitor is a type of antibody formed when the body’s immune system makes a mistake. Normally, the body’s immune system produces millions of antibodies, which protect the body by attacking and killing harmful germs and viruses.

Sometimes, though, the immune system wrongly treats the factor you are infusing as if it were one of these germs or viruses. It then makes an inhibitor – an antibody programmed to attack the factor and stop it from doing its job.

In such cases, factor cannot work and the bleed you are treating doesn’t get better. Please ask your HTC healthcare providers more about inhibitors if you are worried about it or feel you need more information. Inhibitors can be detected by a blood test.
Medications to avoid

Acetylsalicylic acid, better known as ASA or by the brand name "Aspirin," is a common medicine, which also prevents blood from clotting. Many over-the-counter medicines contain ASA, especially cold remedies and pain medicines.

Read medicine labels carefully: Ask a pharmacist about ingredients in medications that may increase bleeding tendencies before purchasing them. People with bleeding disorders are recommended not to take ASA or any medicines that contain ASA (ie. ibuprofen).

Some other medicines used for joint pain and inflammation should not be used by people with bleeding disorders. Some of these are available without a prescription and are now also available for children. They can cause severe bleeding, especially in the stomach, if taken by children or adults with bleeding disorders.

Some herbal teas have also been known to affect clotting.

Always check with your HTC or your pharmacist before taking any new medicine, including those you can get without a prescription.