Continuous Infusion with Your Dosi-Fuser®

This information describes your Dosi-Fuser and explains what to do during your continuous infusion with your Dosi-Fuser. It also tells you how to disconnect your Dosi-Fuser after your infusion.

Your Dosi-Fuser will be connected to your central venous catheter (CVC). There are 3 main types of CVCs: tunneled chest catheters, peripherally inserted central catheters (PICCs), and implanted ports (such as Medi-Ports®). If you’re not sure which type of CVC you have, ask your doctor or nurse.

About Your Dosi-Fuser

Your Dosi-Fuser is a small, lightweight device that will put chemotherapy into your bloodstream at a steady rate. This is called a continuous infusion of chemotherapy. Your Dosi-Fuser has many parts (see Figure 1).
Figure 1. Parts of your Dosi-Fuser

- The **balloon** holds the chemotherapy.
- The **plastic container** protects the balloon and chemotherapy.
- The **indicator scale** shows how much chemotherapy is in the balloon.
- The **level indicator** is used to read the indicator scale.
- The **Luer-Lock inlet** is the port where the chemotherapy is put into the balloon. The **inlet cap** protects the Luer-Lock inlet.
- The **belt clip** can be used to attach the Dosi-Fuser to your waistband or beltloop during your infusion.
- The **infusion line** carries chemotherapy from the balloon to your CVC tubing.
- The **air and particle filter** filters the chemotherapy before it’s infused into your body.
• The **capillary element** helps control how quickly the chemotherapy is infused.

• The **Luer-Lock connection** is where the Dosi-Fuser infusion line connects to your CVC tubing.

• The **infusion line cap** covers the Luer-Lock connection when it’s not connected to your CVC tubing. It’s removed when the Dosi-Fuser is connected to your CVC tubing.

During your continuous infusion, the chemotherapy will flow from the balloon, through the infusion line, and through your CVC tubing into your bloodstream. As this happens, the balloon will slowly get smaller (deflate) and the level indicator will move down the indicator scale towards 0.

**Starting Your Continuous Infusion**

Before your continuous infusion, your nurse will give you information about the chemotherapy you’re getting and the side effects you may have. Be sure to read the information and talk with your doctor or nurse about your questions.

Your nurse will start your infusion by connecting your Dosi-Fuser to your CVC. They will also tape the capillary element to your skin. **It’s important that the capillary element is touching your skin at all times during your infusion.**

Once your Dosi-Fuser is connected, you can go home. Your continuous infusion will keep happening the whole time your Dosi-Fuser is connected. Follow the instructions in the “During
Your Continuous Infusion” section while your Dosi-Fuser is connected to your CVC.

After your continuous infusion is finished, your Dosi-Fuser will need to be disconnected from your CVC. Read the section “After Your Continuous Infusion” for more information.

**During Your Continuous Infusion**

**Wearing your Dosi-Fuser**

Keep your Dosi-Fuser in the area between your lower chest and hips. You can carry it in the fanny pack your nurse gives you, or you can use the belt clip to attach it to your waistband or belt loop.

At bedtime, keep your Dosi-Fuser next to your side. You can keep it uncovered or in its fanny pack. **Don’t hang your Dosi-Fuser on your bedpost or put it on the floor.**

If you have a pet, make sure to keep your pump and tubing out of its reach. You may want to keep pets out of your bedroom at night during your continuous infusion.

**Activities and exercise**

You can do most of your usual daily activities during your continuous infusion. You can do light exercise, such as walking. You can also engage in sexual activity.

Avoid activities that can raise or lower your body temperature. This can make the chemotherapy flow too fast or too slowly.
• Don’t put heating pads, electric blankets, or hot water bottles directly on your Dosi-Fuser.

• Don’t take hot or very cold showers or baths.

• Don’t swim, go in a sauna, or use a hot tub.

• Don’t expose yourself or your Dosi-Fuser to direct sunlight or very cold weather.

• Don’t do anything else that would raise or lower your body temperature, such as running, jogging, and other strenuous exercises or activities that make you sweat.

Don’t play contact sports during your continuous infusion.

Magnetic resonance imaging (MRI) scans
Don’t have an MRI scan while your Dosi-Fuser is connected to your CVC. If you’re scheduled to have an MRI while your Dosi-Fuser is connected, tell your doctor or nurse right away.

Showering

• **If you have an implanted port, don’t get your implanted port access site wet.** The access site is the place where the needle is in your implanted port.

• **If you have a tunneled chest catheter or PICC, don’t get the catheter exit site wet.** The exit site is the place where the catheter leaves your body.

• Try not to get your Dosi-Fuser or any part
of the Dosi-Fuser system wet.

When you shower, use a handheld shower head (a movable shower head that you can hold). This will help you direct the water away from your access site or exit site and Dosi-Fuser system. If you don’t have a handheld shower head, use a clean wet sponge or washcloth to give yourself a sponge bath.

Before you shower or bathe, cover your implanted port access site or catheter exit site with a waterproof dressing (such as AquaGuard®). This will keep your access site or exit site from getting wet. Your chemotherapy nurse or the nurse who works with your doctor can tell you where to buy a waterproof dressing. Watch the video *Showering While You Have a Central Venous Catheter* (www.mskcc.org/pe/shower_cvc) for instructions on how to apply the waterproof dressing.

You should also put your Dosi-Fuser and particle filter in a plastic bag (such as a Zip-Loc® bag) when you shower or bathe. Try not to get the plastic bag wet.

**Use Hibiclens® skin cleanser**

Hibiclens is a skin cleanser that kills germs for up to 24 hours after you use it. You should clean your body with Hibiclens every day while there’s a needle in your implanted port access site or your tunneled chest catheter or PICC is in place. This can help prevent an infection. You can buy Hibiclens at your local pharmacy without a prescription.

Don’t use Hibiclens if you’re allergic to chlorhexidine. If you
have any irritation or an allergic reaction when you’re using Hibiclens, stop using it and tell your doctor or nurse.

To use Hibiclens:

1. Use your normal shampoo to wash your hair. Rinse your head well.

2. Use your normal soap to wash your face and genital area. Rinse your body well with warm water.

3. Open the Hibiclens bottle. Pour some solution into your hand or a clean washcloth.

4. Move away from the shower stream or point the water from the handheld shower head away from your body to avoid rinsing off the Hibiclens too soon.

5. Rub the Hibiclens gently over your body from your neck to your feet. Don’t put the Hibiclens on your face or genital area.

6. Rinse off the Hibiclens with warm water.

7. Dry yourself off with a clean towel after your shower.

8. Don’t put on any lotion, cream, deodorant, makeup, powder, perfume, or cologne after your shower.

Watch the video *Showering While You Have a Central Venous Catheter* (www.mskcc.org/pe/shower_cvc) for instructions for how to shower using Hibiclens.
Checking the flow of chemotherapy

As the chemotherapy flows out of your Dosi-Fuser and into your bloodstream, the level indicator will move down (see Figure 2).

Figure 2. Level indicator moving down

Check your Dosi-Fuser’s level indicator every day at the same time to make sure the chemotherapy is flowing correctly. Your nurse will teach you how to do this.

The chemotherapy will flow very slowly. Wait at least 12 hours before you check the level indicator for any change.

If the level indicator hasn’t moved in the past 12 hours:

1. Check to see if your CVC tubing is pinched in one of the yellow clamps. If it is, open the clamp to release the tubing, then close the clamp so it’s not pinching the tubing (see Figure 3).

2. Make sure there are no kinks in the infusion line. If there are, straighten the infusion line to remove the kinks.
3. Call your nurse or doctor to tell them.

Call your doctor or nurse if the level indicator hasn’t moved in the past 12 hours, the balloon stops getting smaller, or the level indicator moves down faster than expected.

Checking your infusion line, CVC tubing, and implanted port access site or catheter exit site

Check your Dosi-Fuser infusion line, CVC tubing, and implanted port access site or catheter exit site every day. To do this:

- Make sure the Dosi-Fuser capillary element is taped against your skin. If it comes off your skin, call your doctor or nurse.
- Make sure your CVC tubing is outside of the yellow clamps and the clamps are closed (see Figure 3). If the CVC tubing is pinched in a clamp, open the clamp, move the tubing out of the way, then close the clamp so it’s not pinching the tubing. Then, call your doctor or nurse.
- Check for fluid on your skin around your implanted port access site or catheter exit site. If you see fluid, this could be a sign that the chemotherapy is leaking. Follow the instructions in the resource *Safe Handling of Chemotherapy and Biotherapy at Home* ([www.mskcc.org/pe/safe_handling_chemo_bio](http://www.mskcc.org/pe/safe_handling_chemo_bio)) that your
nurse gives you.

- Look for signs of infection, such as redness, pain, swelling, or drainage. If you see any of these signs, call your doctor or nurse.

- If you have an implanted port, make sure the needle is in place in the access site. To do this, press down on the needle gently with your index finger. You should feel it touch the back of your implanted port. If the needle seems like it’s out of place, call your doctor or nurse.

- If your nurse gave you other instructions, follow those.

Cleaning up leaks or spills

Your nurse will give you the resource Safe Handling of Chemotherapy and Biotherapy at Home (www.mskcc.org/pe/safe_handling_chemo_bio). If your Dosi-Fuser is leaking or your chemotherapy spills out of your Dosi-Fuser, follow the instructions in that resource. Then, call your doctor or nurse.

After Your Continuous Infusion

Your infusion is finished when your Dosi-Fuser’s level indicator reaches 0 on the indicator scale (see Figure 4).

Your infusion should finish close to the date and time written below.
It’s possible that your infusion will finish slightly earlier or later than the time written above. Your nurse will talk with you about what to expect. If it seems like your level indicator is moving down much faster than it should, call your doctor’s office.

**Disconnecting your Dosi-Fuser**

Once your infusion is finished, your Dosi-Fuser needs to be disconnected from your CVC. You may disconnect your Dosi-Fuser yourself, or you may have an appointment at MSK so your nurse can disconnect it.

- If you have an appointment so your nurse can disconnect your Dosi-Fuser, try to arrive as close to your scheduled disconnect time as possible. This is to make sure you get the full dose of chemotherapy.

- If you’re disconnecting your Dosi-Fuser yourself and have an implanted port, follow the instructions in the next section.

- If you’re disconnecting your Dosi-Fuser yourself and have a tunneled chest catheter or PICC, your nurse will give you instructions for disconnecting it.

**Instructions for disconnecting your Dosi-Fuser from your implanted port**
Follow the instructions in this section to disconnect your Dosi-Fuser from your implanted port and remove the needle from your port. You can also watch the video below.

Please visit www.mskcc.org/pe/disconnect_dosi to watch this video.

Get your supplies ready

1. Prepare a clean area to set up your supplies, such as your kitchen table. Don’t disconnect your Dosi-Fuser in the bathroom.

2. Gather your supplies. You will need:
   - 1 (10 mL) syringe prefilled with normal saline
   - 1 (5 mL) syringe prefilled with 500 units (5 mL) of heparin
   - 1 pair of nonsterile gloves
   - Alcohol pads
   - 1 gauze pad
   - A bandage (such as a Band-Aid®)
   - A heavy plastic container with a screw-on top (such as a plastic coffee container). Label the container “Chemotherapy”.
     - Make sure the container is strong enough that needles can’t poke through the sides.
     - Don’t use plastic or paper bags.
3. Clean your hands well with soap and water or an alcohol-based hand sanitizer.

4. Put on the nonsterile gloves.

5. Open the gauze pad and take it out of its wrapper. Set it down on your clean workspace.

6. Get your normal saline and heparin prefilled syringes ready. To do this:
   1. Pick up the normal saline syringe. Hold it with the tip facing up.
   2. Loosen the cap, but don’t take it off.
   3. Push the plunger gently to push any air out of the syringe.
   4. Retighten the cap.
   5. Set the syringe down on your clean workspace.

   Repeat these steps with the heparin prefilled syringe.

**Flush your implanted port**

7. Starting at your Dosi-Fuser, follow the infusion line until you reach the capillary element that’s taped to your skin. Gently remove the tape and capillary element from your skin.
8. You will see 2 yellow clamps (see Figure 5). Close the clamp closest to your Dosi-Fuser. This is the clamp below the clave (clear injection port) with the orange disinfectant cap.

- Make sure the yellow clamp is closed so it’s pinching the clear tubing.
- Don’t close the second clamp (the one above the clave, closest to your body) yet.

9. Take the orange cap off the clave by unscrewing it counterclockwise (to the left). If the orange cap fell off or is missing, clean the end of the clave with an alcohol pad for 15 seconds. Let it dry for 15 seconds.

10. Take the cap off the normal saline syringe. Attach the saline syringe to the clave by pushing it into the clave and screwing it in clockwise (to the right).

11. Once the saline syringe is attached to the clave, use the push/pause method to flush the tubing with the saline. Inject $\frac{1}{3}$ of the saline at a time. To do this:
1. Push down on the plunger to quickly inject about $\frac{1}{3}$ of the saline into the clave.

2. Pause.

3. Inject the next $\frac{1}{3}$ of the saline.

4. Pause.

5. Inject the last $\frac{1}{3}$ of the saline.

12. Twist the empty saline syringe counterclockwise to remove it from the clave.

13. Clean the clave with an alcohol swab for 15 seconds. Let it dry for 15 seconds.

14. Take the cap off the heparin syringe. Attach the heparin syringe to the clave the same way you attached the saline syringe.

15. Once the heparin syringe is attached to the clave, use the push/pause method to flush the tubing with the heparin. Inject $\frac{1}{3}$ of the heparin at a time. Do this the same way you injected the saline.

16. Twist the empty heparin syringe counterclockwise to remove it from the clave.

17. Close the second yellow clamp (the one above the clave, closest to your body) so it’s pinching the clear tubing.

**Take the needle out of your implanted port**

18. Remove the dressing over your implanted port. Peel the tape off of your skin.
19. Take the needle out of your implanted port. To do this:

1. Hold the safety hinged base against your skin with 2 fingers of your non-dominant hand (the hand you don’t write with).

2. Gently push the base down, against your port.

3. Use your other hand to firmly pull the textured handle up until you feel a firm stop and the needle locks into the safety position (see Figures 6 and 7).

![Figure 6. Pulling the textured handle up](image1)

![Figure 7. Needle in locked safety position](image2)

20. Hold a gauze pad over the area where the needle was and press down gently for 3 minutes. After 3 minutes, place a bandage over the area.

Your Dosi-Fuser is now disconnected.

**Clean up**

21. Put the needle with the Dosi-Fuser still attached into the heavy plastic container.
22. Put all dirty supplies (such as the empty syringes, dirty gloves, and used gauze and alcohol pads) in the container with the needle and Dosi-Fuser. Close the lid tightly.

23. Bring the container to your chemo nurse at your next visit. Don’t throw it in the trash.

**Call your doctor or nurse if:**

- You have any of the side effects listed on the information your nurse gave you.
- The level indicator decreases faster than it should.
- Your Dosi-Fuser infuser empties earlier than you were told it should.
- The level indicator doesn’t move, the balloon doesn’t deflate, or both.
- Your Dosi-Fuser doesn’t seem to empty like it should.
- You see fluid on your skin around your implanted port access site or catheter exit site.
- You have redness, pain, swelling, or drainage near your implanted port access site or catheter exit site.
If you have any questions, contact a member of your healthcare team. After 5:00 PM, during the weekend, and on holidays, call 212-639-2000.

For more resources, visit www.mskcc.org/pe to search our virtual library.