

Care of a Hickman Line

Contents

The Hickman line	1
Why is a Hickman line used?	1
Infections	3
Signs of infection	3
To prevent infection	3
Supplies	4
Storing supplies	4
Getting your supplies	4
Checking for blood	5
Maintaining positive pressure	5
Hickman line dressing change	6
How to change your dressing	6
Changing your adaptor and flushing your Hickman line	9
Hickman line care.....	12
Example of Hickman line care schedule for triple lumen	13
Safety issues when caring for a Hickman line	13

Care of a Hickman Line

The Hickman line

A Hickman line (catheter, or flexible tube) is a special intravenous (IV) that goes into a large vein near your heart. It is made of silicone.

Your Hickman line may have 1, 2, or 3 lumens (tubes). These lumens act like separate IV lines.

If your Hickman line has 3 lumens, each one will be a different colour: red, blue, or white. The red lumen is used for taking blood samples or for giving blood products. The white and blue lumens are used for giving medications and IV fluids. Medications and IV fluids can also be given through the red lumen if needed.

Part of the Hickman line is “tunnelled” under the skin of your chest. The tip of the line rests in a large vein just above your heart. The end of the Hickman line leaves the body from a small incision (opening) on your chest. This is called the exit site. A “cuff” under your skin helps to keep the Hickman line in place. This cuff may feel like a small bump just under your skin next to the exit site. **Even with this cuff, it is possible to accidentally pull the catheter out, so handle your Hickman carefully!**

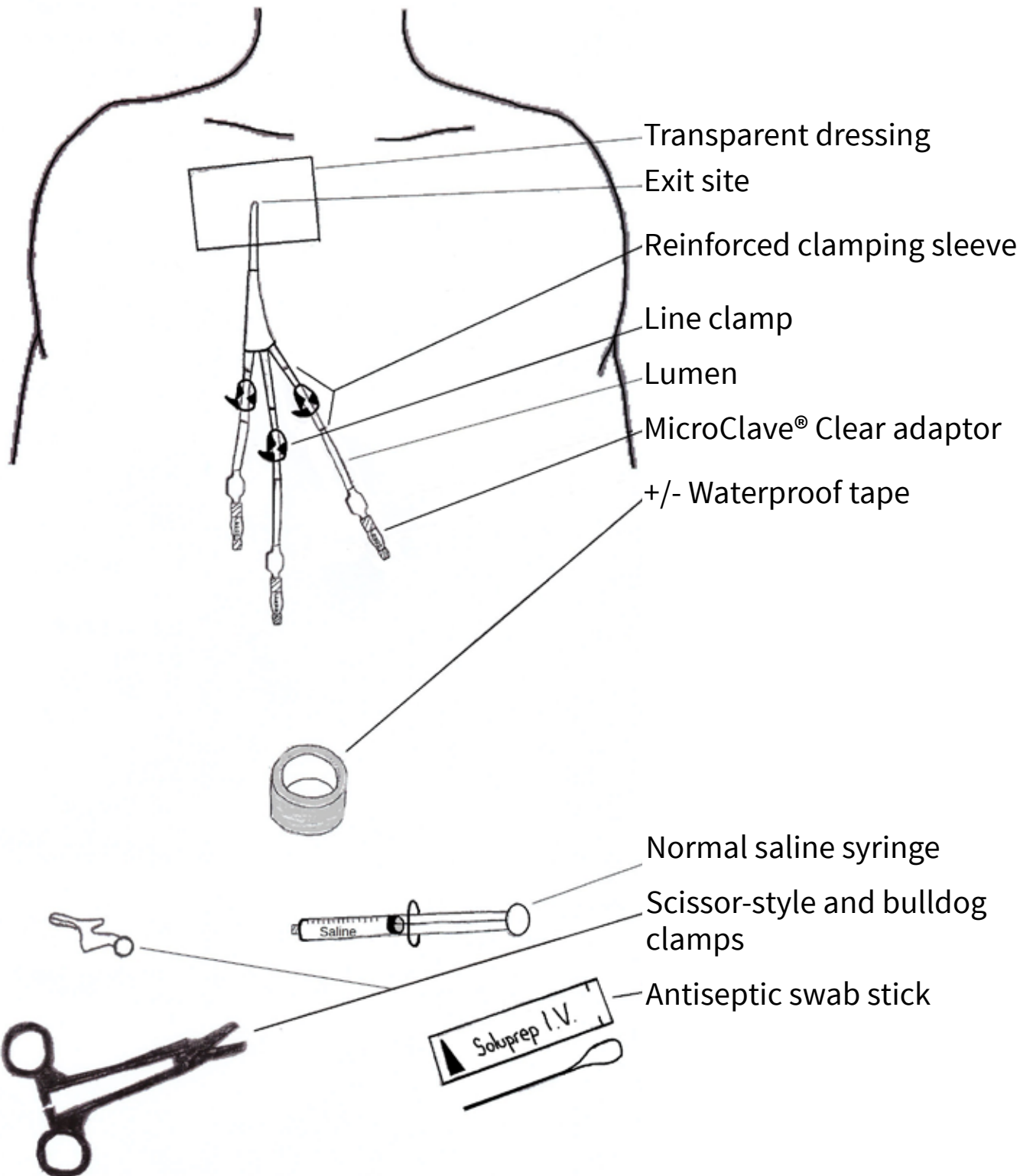
Why is a Hickman line used?

1. A Hickman line lowers the number of needle punctures needed for IV medications and blood taking;
2. It can be used for a much longer time than usual IV lines; and
3. It lets you move around more easily.

What are your questions? Please ask.

We are here to help you.

Triple Lumen Hickman Line



Infections

One of the most important things about caring for and using your Hickman line at home is keeping your line and supplies as clean as possible. This will lower your risk of getting an infection. **If you get an infection, you will need medical treatment and your Hickman line may need to be changed or removed.**

You should check the skin around your catheter every day for signs of infection.

Signs of infection

- › Skin around the exit site is hot or warm to the touch.
- › Redness, swelling, drainage, or pain around the exit site or along the area where the line is tunneled.
- › Fever, chills, shaking, feeling that your heart is beating quickly while you are at rest, or feeling unwell for an unknown reason.

To prevent infection

1. Always wash your hands well before caring for your line.
2. Always care for your line by following the instructions you've been given.
3. Use only sterile (germ-free) supplies.
4. Keep your sterile supplies clean and free from germs by following your instructions about what parts you can or cannot touch.
5. Follow your instructions on how to store your supplies.
6. Use a sterile item, such as a syringe, only once. **Do not reuse disposable supplies.**
7. Change your dressing if it gets loose, wet, or dirty.
8. If you or your partner has a cough or cold, wear a mask when caring for your Hickman line.

If you think you may have an infection, see page 14 for more information and advice about what to do.

Supplies

Storing supplies

Most of your supplies have been sterilized and placed in paper or plastic packages to keep them sterile. It is important to store your supplies in a clean, dry place where the packaging will not be opened or damaged. A cupboard or closet out of the reach of children and pets is usually a safe place.

Check all paper and plastic covers before use. If they are wet, ripped, or have a dried water stain, do not use them; throw them away. If solutions (liquids) are cloudy, do not use them; take them back to the pharmacy.

Check the expiry date on flushing solutions. If they are past their expiry date, return them to the pharmacy as soon as you can for a replacement.

Do not use out-of-date supplies.

Getting your supplies

If you need supplies, call Lawton's Home Health Care, 5991 Spring Garden Road (902-423-9356) and ask for the Home Health Care Department, or Shoppers Drug Mart at the Halifax Infirmary site (902-473-7096). You will not need a prescription unless your supplies are covered by your insurance plan.

Your healthcare provider will give you a list of the Hickman supplies you will need every week. The list includes pre-filled saline syringes, adaptors, transparent dressings, SoluPrep™ swab sticks and alcohol swabs. Clamps are sold separately. It is a good idea to always have a spare clamp available. It should be smooth-edged to avoid cutting into the catheter.

Checking for blood

Checking for blood is done when flushing the catheter to make sure it is still in the right spot in your vein. To do this, pull back gently on the plunger of the saline syringe. Watch for a small amount of blood drawn into the syringe. When you see blood, continue along to the next step in the flushing procedure.

If you do not see blood when you draw the plunger back, try changing your position. Try raising your arms above your head, turning your head, taking deep breaths and coughing. Try to draw back on the plunger again.

If there is still no blood, try flushing with a small amount of the saline in the syringe. Try to draw back on the plunger again. If there is still no blood, finish injecting the saline solution. Close the clamp on the lumen as you are flushing the last one ml of saline. Disconnect the syringe.

Never use force to inject the saline solution.

If you are **able to inject the saline solution without difficulty but did not see blood when you pulled back on the plunger**, you must still call the Medical Day Unit or your primary healthcare provider right away because the line may be partially blocked and should be checked.

If you do **not get blood return** and are also **unable to inject the saline** solution, you must contact Medical Day Unit staff, your primary healthcare provider, or other identified resource for further instructions.

Maintaining positive pressure

This is a special way of closing the clamps on your Hickman line. It helps to prevent blood from backing up into the lumen where it may clot and stop the lumen from working.

To maintain positive pressure when you are flushing your Hickman line with saline, **always close the clamp on the lumen** as you are flushing the last one ml of saline and then disconnect the syringe.

Always close the clamp over the reinforced clamping sleeve, as shown by your nurse.

Hickman line dressing change

The dressing is changed once a week to help prevent infection. If you or your partner is changing the dressing, you don't need to wear a mask unless one of you has a cough or cold.

Chlorhexidine Gluconate 2% with Isopropyl Alcohol 70% is the cleaning solution used. SoluPrep™ is the brand name. SoluPrep™ should not be used on broken skin. Check with your nurse if you have any concerns. Do not use bleach (such as Javex®) on fabrics exposed to SoluPrep™ as it may cause a brown discolouration on the cloth.

How to change your dressing

1. Wash and dry your work area.
2. Wash your hands with soap and water, and dry them with clean paper towel. You may also use an alcohol-based hand sanitizer to clean your hands.
3. Gather supplies:
 - › 3 SoluPrep™ swab sticks
 - › Mask (if needed)
 - › 4 inch by 4 inch transparent (clear) dressing
 - › Plastic bag for garbage
4. Loosen the edges of your old dressing on all 4 sides. Remove old dressing by gently pulling upwards toward the exit site. Be careful not to tug or pull on the catheter. Do not touch the exit site with your hands. Place the old dressing in plastic garbage bag.
5. Wash your hands again.
6. Look for signs of infection such as redness, pain, drainage or swelling at the exit site and over the catheter. If you see any of these signs, place a gauze dressing over the exit site and call the Medical Day Unit or your healthcare provider.
7. Open the 3 Soluprep™ swab stick packages, so each swab stick is easy to get when you are ready to use it.
8. With one hand holding the ends of your Hickman line, lift the catheter away from your skin. Keep it away from your skin until you are finished cleaning your skin and the catheter.

9. Using one side of a SoluPrep™ swab stick, start cleaning from side to side with gentle friction. Clean an area of about 4 inches around the exit site.
10. Using the other side of the swab stick, clean the same area with an up and down motion. Throw away this swab stick.
11. Take a new swab stick from an opened package. Begin at the exit site and clean the skin, moving outward to cover a circle of about 4 inches, always going in the same direction.
12. Using the other side of this swab stick, clean the same area, but moving in the opposite direction. Throw away this swab stick.
13. Take a new swab stick from the package and clean the catheter from the exit site outward for about 4 inches.
14. Using the other side of this swab stick, clean the underside of the catheter in the same way. Throw away this swab stick.
15. Let it dry. Be sure you have cleaned all sides.
16. Set the catheter down on your skin. Allow skin to air dry completely.
17. Open your clear dressing package. Touch only the outer edges of the dressing.
18. Peel the backing away from the clear dressing.
19. Place the new dressing over your catheter by centering it over the exit site. Try not to cover your nipple area – this area can be more sensitive when removing your dressing.
20. Peel the paper edge frame off the clear dressing.
21. Gently press along the edges of your dressing to get the edges to stick well to your skin. Attach the bulldog clamp to your catheter and clip to your clothing to help keep it secure.
22. Throw away used dressings and swabs in the plastic garbage bag.
23. Wash your hands.

If your skin gets irritated by the transparent dressing, use a large 4 inch by 4 inch gauze dressing instead. Change the gauze dressing every 2 days as long as there is no drainage from the exit site. If there is drainage, the gauze dressing should be changed every day and you should call the Medical Day Unit or your healthcare provider for advice about the drainage. If your Hickman has been in place for longer than 6 weeks and the site is well-healed, you may be able to stop using a dressing on your line. It may be safer for you to continue using a dressing on your Hickman line if your immune system is not working well. **Please talk about this with your healthcare provider.**

Dressing change day will be: _____

Flushing your Hickman line

Your Hickman line must be flushed to keep it working well. If it is not being used regularly, flush each of the lumens with 20 ml of saline **once a week**. You will use 2 of the 10 ml pre-filled saline syringes for each lumen flush. Try to do the flushing on the same day each week. The adaptor (cap) attached to the end of each lumen must also be changed **once a week and should be done at the same time, but before doing the flush.**

Remember:

1. Never flush your Hickman with a syringe size that is smaller than 10 ml.
2. Adaptors are changed once a week.
3. Always flush your new adaptor with a small amount of saline before changing it.
4. Always flush your lumen after changing the adaptor.
5. Always close the clamp on the lumen as you are flushing the last one ml of saline, then disconnect the syringe.
6. Always use a stop/start motion to flush your lumens with saline. Start by flushing about 3 ml of saline solution, stop, flush another 3 ml of saline, stop again. Flush the rest of the saline and close the clamp on the lumen as you are flushing the last one ml of saline. This is called 'turbulent flushing' and helps to keep the line working better.
7. Always clean connections with an alcohol swab for 15 seconds before changing adaptor or attaching the syringe to flush the lumen.

Changing your adaptor and flushing your Hickman line

1. Getting ready:

- a. Wash and dry your work area.
- b. Wash your hands well with soap and water or an alcohol-based hand sanitizer.
- c. Gather equipment:
 - › 2 pre-filled saline syringes for each lumen
 - › 1 MicroClave[®] Clear adaptor for each lumen
 - › Alcohol swabs
 - › Waterproof tape (optional)
- d. Check sterile packages. They should not be torn or soiled.
- e. Check expiry dates on the saline syringes.
- f. Check syringes. Do not use if saline is cloudy, discoloured, or has particles in the liquid.

2. Change adaptor:

- a. Remove tape (if present) from lumen of Hickman line.
- b. Open adaptor package. Open 3 alcohol swab packages.
- c. Open pre-filled saline syringe package. Remove white cap from tip of syringe. With tip pointing up, push air out of syringe. Be careful not to touch syringe tip.
- d. While holding syringe in one hand, remove alcohol swab and adaptor from package.
- e. Clean end of new adaptor with alcohol swab for 15 seconds, and let it air dry. Throw away swab.
- f. Attach tip of syringe to end of adaptor. Flush adaptor with small amount of saline.
- g. While still holding syringe, pick up new alcohol swab and clean the area where the old adaptor and lumen join for 15 seconds.
- h. Check that the clamp on the lumen is closed.

- i. While still holding the lumen, remove the old adaptor by turning it counterclockwise and throw it away.
- j. Be careful not to touch the exposed open end of the lumen or the part of the adaptor that connects to the lumen.
- k. Remove small cap protecting the tip of new adapter and attach adaptor to lumen, turning it clockwise until snug. Clean connection with alcohol swab for 15 seconds. Tape if needed.

3. Flush with pre-filled saline syringe:

- a. Open the clamp on the lumen. Pull back on the plunger of the saline syringe, check for blood.*
- b. Inject the saline using a stop start/motion.**
- c. Close the clamp as you are flushing the last ml of saline.
- d. Remove the syringe from the adaptor by turning the syringe counter-clockwise.
- e. Repeat the flush with the second syringe of saline.
- f. You will not need to clean the adaptor again with the alcohol swab before flushing with a second saline syringe unless you touched the adaptor or set the lumen down.
- g. Throw away used items as instructed.

* See next page

** See next page

Repeat the procedure on pages 8-10 for all lines. You may find it easier to remember which lumens you've already flushed if you flush in this order: red, white and blue.

*** If you do not get blood when pulling back on the plunger:**

- Changing your position may help. Try bending over from side to side and forward, raising your arms, taking a deep breath. Try again to pull back on the plunger of the syringe. Try flushing with a small amount of the saline in the syringe. Try to draw back on the plunger again.
- If there is still no blood, inject the saline using the stop/start method. Close the clamp as you flush the last ml of saline. Disconnect the syringe.
- Call the Medical Day Unit (902-473-5492) for advice as the lumen may be partially blocked. If it is outside of office hours, you may need to leave a message or follow the instructions on the voice mail.

**** If you are unable to inject saline:**

- You must call the Medical Day Unit (902-473-5492) for instructions because your lumen is probably blocked. If it is outside of office hours, you may need to leave a message or follow the instructions on the voice mail.
- Never use force to flush your Hickman line.

Hickman line care

- Change all adaptors once a week.
- Flush all lumens with saline once a week (after changing the adaptor).
- Change dressing once a week.
- Check your Hickman every day for signs of infection.

Try to do all routine care on the same day.

My adaptor change, flush and dressing day will be: _____

Check the following every day:

Date:																				
Time:																				

The exit site is:

› Red																				
› Swollen																				
› Painful																				
› Seems OK																				

Other:

Swelling of arm, hand, or neck on the side of line insertion																				
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Example of Hickman line care schedule for triple lumen

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
	Dressing change Normal saline x 3 MicroClave® Clear x 3					

Safety issues when caring for a Hickman line

¹³ Watch for signs of problems every day.

If possible, do your Hickman care during daytime hours when help is most available if needed.

Contact numbers:

- Medical Day Unit (902-473-5491), QEII Health Sciences Centre, VG site, Monday-Friday: 7:30 a.m. to 3:30 p.m.; weekends and holidays: 7:30 a.m. to 3:30 p.m.
- Nova Scotia Cancer Centre (902-473-6000), QEII, VG site, Monday-Friday: 7:30 a.m. to 4:30 p.m.
- Hematology Clinic (902-473-6605), Monday-Thursday: 8:30 a.m. to 3:30 p.m.; Friday: 8 a.m. to 3 p.m.
- To speak to your Hematologist or specialist after hours, call the QEII switchboard at 902-473-2700 and ask to speak to the Hematologist or specialist on call.
- **After hours: Go to the nearest Emergency Department.**

Problems	Possible cause(s)	What to do	Preventative measures
Redness, swelling, heat, pain, discharge at the catheter exit site	Infection	<ul style="list-style-type: none"> • If discharge at exit site, clean with SoluPrep™ swabs and apply a gauze dressing. • Check your temperature. • Call Medical Day Unit or other identified resource (if you were told to). • Go to the nearest Emergency Department. • Watch for signs of spreading infection. • If you are a hematology patient with a fever, bring your yellow laminated “Fever Card” to the Emergency Department. 	<ul style="list-style-type: none"> • Follow all instructions when caring for your Hickman line. • Always wash your hands well before caring for your line. • Store supplies as directed. • Change dressings as shown in your workbook. • Change dressing if it gets dirty or wet.
Rise in temperature, increased heart rate, chills, shaking, feeling unwell	Infection in the blood stream	<ul style="list-style-type: none"> • Go to the nearest Emergency Department. • If you are a hematology patient, bring your yellow laminated “Fever Card” to the Emergency Department with you. 	<ul style="list-style-type: none"> • Same as above.

Problems	Possible cause(s)	What to do	Preventative measures
<p>Unable to draw back blood when flushing with saline</p>	<p>Catheter kinked or resting against wall of vein. Blood at tip of catheter. Clamp on lumen still closed.</p>	<ul style="list-style-type: none"> • Check to see if clamp is open. • Change the position of your clamp as shown. • Change your position. • Raise hands over head. • Cough. • Turn head. • Take a deep breath. • Try to pull back on the plunger. If there is still no blood, flush with a small amount of saline and try again. If you are unable to see blood or unable to flush saline, the lumen is partly or completely blocked. Call Medical Day Unit or other identified resource or QEII Emergency Department, if after hours. • If outside Halifax area, go to the nearest hospital. 	<ul style="list-style-type: none"> • Flush lumens regularly as shown in your workbook.

Problems	Possible cause(s)	What to do	Preventative measures
<p>Blood or clear fluid leaking from catheter.</p>	<p>Tear or hole in catheter.</p>	<ul style="list-style-type: none"> • Hold your breath or bear down (as if having a bowel movement), then clamp the catheter with scissor-style clamp between exit site and hole. • Do not use catheter for saline flush. • Call Medical Day Unit, or other identified resource or QEII Emergency Department (if after hours). If outside Halifax area, go to your nearest hospital. • If available, wrap gauze dressing around hole and tape in place. 	<ul style="list-style-type: none"> • Avoid activities and sports that could damage your catheter. • Tape the line securely to your skin so it does not dangle. • Avoid using scissors, pins, or needles around catheter.
<p>Abnormal or odd feelings such as tingling, pain at exit site. *You may notice catheter has moved further outside the exit site.</p>	<p>Pull on catheter causing it to move out of position.</p>	<ul style="list-style-type: none"> • Do not use catheter. • Call Medical Day Unit, or other identified resource or QEII Emergency Department, if after hours. If outside Halifax area, go to your nearest hospital. 	<ul style="list-style-type: none"> • Avoid pulling on catheter. • Avoid activities which could dislodge (pull out) your catheter.

Problems	Possible cause(s)	What to do	Preventative measures
Blood leaking from adaptor.	Possible loose adaptor.	<ul style="list-style-type: none"> • Check that clamps are closed. • Replace with new adaptor. • Flush with 20 ml saline. 	<ul style="list-style-type: none"> • Screw adaptor on securely. • Tape adaptor to catheter joint.
Cough, shortness of breath, chest pain.	Possible air in the blood. Air may be drawn into the vein if catheter is not clamped during adaptor change.	<ul style="list-style-type: none"> • Check that the clamps are closed. • Go immediately to the Halifax Infirmary Emergency Department, or your nearest hospital. 	<ul style="list-style-type: none"> • Always check that lumen is clamped when changing adaptor. • Avoid puncturing (getting a hole in) your catheter.
Swelling of arm, hand, or neck on the side of the Hickman line insertion. Pain and redness at the insertion site.	Clot formation at tip of catheter or along the inside of the catheter.	<ul style="list-style-type: none"> • Call Medical Day Unit or other identified resource. • Go to Halifax Infirmary Emergency Department, if after hours. • If outside Halifax area, go to nearest hospital. 	None

Problems	Possible cause(s)	What to do	Preventative measures
Catheter falls out.	Accidental pulling on catheter.	<ul style="list-style-type: none"> • Hold breath or bear down (as if having a bowel movement). • Place hand over site and hold for 5-10 minutes. • Apply a gauze dressing covered with waterproof tape. • Call Medical Day Unit or other identified resource. • Go to the Halifax Infirmary Emergency Department, if after hours. • If outside Halifax area, go to the nearest hospital. • Bring catheter with you to hospital. 	<ul style="list-style-type: none"> • Avoid pulling on catheter and activities that could dislodge the catheter.
Questions or worries about Hickman line care.	Lack of understanding of information given or practice about how to care for the Hickman line.	<ul style="list-style-type: none"> • Contact your nurse or resource in Clinic to talk about concerns. 	<ul style="list-style-type: none"> • Adequate teaching and practice to build up confidence before doing self care. • Talk about any concerns with your nurse in the Centre before discharge.

Looking for more health information?

Find this pamphlet and all our patient resources here: <http://library.nshealth.ca/PatientGuides>
Contact your local public library for books, videos, magazines, and other resources.
For more information go to <http://library.novascotia.ca>

*Nova Scotia Health Authority promotes a smoke-free, vape-free, and scent-free environment.
Please do not use perfumed products. Thank you!*

Nova Scotia Health Authority
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The information is not intended to be and does not constitute healthcare or medical advice.
If you have any questions, please ask your healthcare provider.

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The information in this pamphlet is to be updated every 3 years or as needed.