

For more information please visit us online at: <http://www.osmh.on.ca/diagnostics/>

If you or your support person do not clearly understand the procedure, please ask for clarification



## HEMODIALYSIS CATHETER<sup>1,2</sup>

### What is it?

To receive hemodialysis, you need a way for blood to leave and return to your body, called an "access." A hemodialysis catheter, or central venous catheter (CVC), is one type of access. It's a thin tube placed into a large vein, typically in the neck or chest. It can also be placed in the groin. It can also be placed in the groin.

There are two types of catheters: one inserted directly into the vein for immediate use and another **tunneled** under the skin for long-term dialysis. These catheters have two ends (lumens) that stay outside the body and are capped when not in use, with clamps to close them off.

### Why do I need it?

You may require a hemodialysis catheter for the following reasons:

- Acute kidney injury
- Uremic encephalopathy
- Pericarditis
- Life-threatening hyperkalemia
- Refractory acidosis
- End-Stage Renal Disease (ESRD)
- Failure to thrive and malnutrition
- Peripheral neuropathy
- Intractable gastrointestinal symptoms
- Any toxic ingestion
- Hypervolemia causing end-organ complications (e.g., pulmonary edema)



## HOW IS THE PROCEDURE PERFORMED?

### Before

For specific questions regarding the clinical need for this procedure, please contact your ordering provider.

#### Patient Preparation:

You should wear loose-fitting clothing that is easy to change out of. **It is recommended for someone to drive you home after the procedure.** One support person (spouse, friend, caregiver, family member) may accompany you on the day of your appointment, but not into the procedure room.

Please bring a list of the medications you are currently taking and a list of any drug/medication allergies you may have.

You can eat and drink normally before the procedure. You may take your usual medications prior to the procedure. See next page if you take blood thinners.

Please phone the Diagnostic Imaging booking line at **705-325-2201 ext. 3505** for cancellations or rebooking if you are unable to attend your appointment.

#### Bloodwork:

Your doctor or healthcare provider will order bloodwork and it must be completed **within 1 week before** your scheduled procedure to ensure we receive your results before your appointment (**or as directed by Main Dialysis**). Unavailable bloodwork results may cause a delay or rebooking of your procedure.

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### Before (Continued)

#### Medication:

Your doctor or healthcare provider may require you to stop any blood thinners you take (also known as anticoagulation or antiplatelet medications). Talk to your doctor or healthcare provider about which medications you might need to stop prior to the procedure, for how long, and when you can safely start them again.

If your doctor or healthcare provider wants you to stop your blood thinners, then we recommend following the below timeline for the number of days to withhold medication. **Do not stop any medications until you have first spoken with your doctor or healthcare provider.**

Medication		Number of Days to Hold
Enoxaparin	(Lovenox)	Withhold 1 dose before procedure
Dalteparin	(Fragmin)	Withhold 1 dose before procedure
Apixaban	(Eliquis)	Withhold 3 days before procedure
Rivaroxaban	(Xarelto)	Withhold 3 days before procedure
Dabigatran	(Pradaxa)	Withhold 4 days before procedure
Warfarin*	(Coumadin)	Withhold 5 days before procedure until target INR $\leq 1.8$
Clopidogrel	(Plavix)	Withhold 5 days before procedure
ASA	(Aspirin™)	Withhold 5 days before procedure

\*Patients on **Warfarin (Coumadin)** require a new INR drawn 1 day before the procedure.

### Coming To The Hospital

You must first sign-in with **Centralized Patient Scheduling & Registration (CPSR)**, which is located immediately to your left when you enter the hospital from the main entrance (off Dunlop Street, across from the gift shop). You will receive a patient wristband and be directed to the **Diagnostic Imaging department**.

**Please bring to the hospital your OHIP card and a list of current medications you are taking.**

### During

Hemodialysis catheters are inserted in the Interventional Radiology Department of Diagnostic Imaging.

**The duration of your appointment time will vary from 45 minutes – 90 minutes.**

1. You will change from above the waist into a hospital gown.
2. A medical radiation and imaging technologist (MRIT) will explain the procedure and answer any questions you have.
3. You will lie on your back on a procedure table and will be awake while the hemodialysis catheter is placed.
4. This is an aseptic procedure, and as such a region of your neck and chest will be cleaned using a hospital-approved cleansing agent, and sterile drapes applied.
5. A radiologist will administer a numbing agent, called Lidocaine, at various times. This freezes the area where the hemodialysis catheter goes in. This should be the only pain or discomfort during the procedure.
6. The radiologist will use a combination of ultrasound and x-rays, to insert the hemodialysis line.
7. The hemodialysis line will be placed under the skin and exit below your collarbone on the chest. It will be secured with stitches and covered with a clear bandage to help prevent infection.

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## WHAT TO EXPECT AFTER



### Recovery & Going Home

You will most likely have a dialysis appointment immediately after. If you do, you may be there for up to **4 hours**. Your hemodialysis catheter is ready for use after the procedure. If you do not have a dialysis appointment then you may leave once the procedure is completed, as long as you are feeling well.

**We recommend having someone drive you home after the procedure.**

Don't drive if you are taking strong pain medicine. If you were given medication to help you relax or manage pain during the procedure (not common), then you cannot drive for the next 24 hours.



### Diet & Activity

- Rest for the day and take it easy for 1–3 days (as needed).
- Have an adult family member, caregiver, or friend stay with you the night after the procedure in case you need help.
- Resume your normal diet, but if you feel nauseous, try bland, low-fat foods like rice, chicken, toast, or yogurt.
- Avoid wearing tight clothing that puts pressure on the hemodialysis catheter.
- Avoid activities that may cause the catheter to be pulled on or moved
- Limit arm and upper body movements that might strain the incision during the first week.
- Refrain from lifting over 4.5 kilograms (10 pounds) or doing vigorous arm activities in the first week after insertion.



### Wound Care<sup>1</sup>

Your hemodialysis catheter will be stitched to your skin and covered with a clear dressing (Tegaderm). A dialysis nurse will show you how to care for it to reduce the risk of infection.

- Keep the dressing on your dialysis catheter.
- Check your catheter site for bleeding. **If there's no bleeding by the evening of your procedure**, you can restart your blood thinners.
- If you notice bleeding:
  - i. **Do not restart your blood thinners.**
  - ii. Apply direct pressure to the site for **15 minutes** to stop the bleeding.
  - iii. If the bleeding stops, contact your doctor or dialysis unit for advice on when to restart your medication.
  - iv. If the bleeding continues after 15 minutes, keep applying pressure and go to the nearest Emergency Department.

### How to care for the catheter and dressing:

- Keep the dressing clean, dry, and intact at all times.
- Avoid touching the catheter to reduce infection risk.
- Do not pull, twist, or move the catheter, and keep it secured with tape or holders.
- Keep the catheter clamped and caps attached when not in use.
- Avoid using sharp objects near the catheter (razors, scissors, etc.).
- Do not swim or soak in water; follow your doctor's advice for bathing or showering.

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- Wear loose clothing to avoid catching the catheter and for easier access during dialysis.
- During dressing or cap changes, wear a mask, and ensure the medical staff do the same.
- The dialysis team will change the dressing unless you've been taught to do it yourself.

**Additional tips:**

- Avoid contact sports or rough activities.
- Keep lotions and creams away from the catheter site.
- Have an emergency dressing kit at home and learn how to change dressings if needed.
- Contact your care team if the catheter area becomes sore, red, swollen, or if the dressing becomes loose or wet.
- Only your care team should use the catheter for blood draws or medications.

**Check your catheter daily.**

- **LOOK** in a mirror: Ensure the dressing is **clean, dry, and covering the exit site**. If it isn't, **do not** proceed to "FEEL." See "When to Seek Help" section (last page)
- **FEEL** over the dressing without removing it: The dressing should be dry, and there should be no pain under the area.



**Bathing**

- A tub bath is the best way to keep your catheter dressing dry, but it may not work for everyone.
- **Do not shower unless your doctor or healthcare provider has approved it** and your catheter has been in place for at least **2 months without recent infections**.

**If showering is approved:**

- Shower right before your hemodialysis session.
- Ensure the catheter caps are securely in place.
- Cover the catheter site and dressing with plastic wrap or a plastic bag, taping it tightly to your skin.
- A handheld shower head works best.
- After showering, gently pat the area dry, then remove the plastic covering before drying the rest of your body.



**Medication**

- **Check your catheter site for bleeding. If there's no bleeding by the evening of your procedure, you can restart your blood thinners.**
- Otherwise, resume your normal medication schedule.
- If you **normally** take acetylsalicylic acid (Aspirin™) or another blood thinner medication, ask your doctor or healthcare provider when to start taking it again. Make sure that you understand exactly what they want you to do;



**Questions?**

If you have any questions before your dialysis catheter insertion or need to reschedule your appointment, please contact:

**Orillia Soldiers' Memorial Hospital, PATIENT SCHEDULING – 705-325-2201 ext. 3505**

If you have questions or concerns after your dialysis catheter insertion then contact Main Dialysis at:

**Orillia Soldiers' Memorial Hospital, MAIN DIALYSIS – 705-325-2201 ext. 3129**

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**WHEN TO SEEK HELP<sup>1,2</sup>**



**Call 911:**

If you believe you require emergency care – **call 911**.

Reasons to call 911 include:

- You pass out, feel very dizzy, weak, or less alert.
- You have severe trouble breathing or a fast/uneven pulse.
- You experience sudden chest pain, shortness of breath, or coughing.
- There is significant bleeding from the catheter site (bright red blood that won't stop).
- Your catheter is **damaged** (hole, leak, or cap falls off). If this happens then **close the clamp** between the damaged area and your chest; if there's no clamp, **kink the catheter**.
- The catheter falls out - if this happens, then **lie down**, apply pressure to the site (i.e the hole where it came out) and the base of your neck with a clean cloth or gauze for at least 15 minutes. Call 911 if bleeding continues.
- You feel sudden chest, neck, or shoulder pain – if this happens, **close the clamps, lie on your left side with your head down**, and call 911.



**Call your doctor, healthcare provider, or Health Connect Ontario immediately if you experience<sup>1</sup>:**

- Increased pain, swelling, warmth, or redness in your face, chest, neck, or arm side where the hemodialysis catheter is placed.
- A fever (more than 100°F / 38°C).
- Chills, with or without fever.
- Bright red blood has soaked through the dressing
- You have new or worse pain at the hemodialysis catheter insertion site.
- Bruising or swelling at the insertion site that is getting bigger.
- An upset stomach and you can't keep fluids down (you're throwing them up).
- Your hemodialysis catheter is leaking, cracked, or clogged.
- Signs of a blood clot, such as bulging veins near the hemodialysis catheter.
- A partially pulled out hemodialysis catheter (i.e. cuff exposure) or the catheter appears to be getting longer outside your skin – if this happens, then apply firm pressure to the site (i.e the hole where it came out) and the base of your neck and go to the **Emergency Department**.
- Any other concerns.

**Health Connect Ontario may be reached 24-hours a day, including weekends, by:**

- Calling 8-1-1
- Calling 1-866-797-0007 (TTY – *teletypewriter service*)
- Visiting <https://healthconnectontario.health.gov.on.ca/> and selecting “Chat with us”

**BRING THIS INFORMATION PACKAGE WITH YOU SHOULD YOU URGENTLY NEED TO SEE YOUR DOCTOR OR GO TO THE EMERGENCY DEPARTMENT OF YOUR NEAREST HOSPITAL.**

*Use this material for your information only. It does not replace advice from your doctor or other health care professionals. Do not use this information for diagnosis or treatment. Consult with your health care provider about a specific medical condition.*

**References:**

1. Hemodialysis catheter placement (Patient Education - Disease and Procedure). Accessed October 8, 2024. Lexi-Comp Online. <https://online.lexi.com/>
2. Murdeshwar HN, Anjum F. Hemodialysis. [Updated 2023 Apr 27]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK563296/>
3. Hemodialysis Catheters: How to Keep Yours Working Well. Accessed October 8, 2024. National Kidney Foundation. [Hemodialysis Catheters: How to Keep Yours Working Well | National Kidney Foundation](https://www.kidney.org/healthy-living/hemodialysis/catheters)

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