

# INFORMATION ABOUT THE TYPES OF VASCULAR ACCESS FOR HAEMODIALYSIS



**USER GUIDE**  
G-3028

You have recently started or will soon begin a course of haemodialysis treatments to compensate for a kidney dysfunction. The purpose of this guide is to inform you about the various access points available to receive this treatment.

### WHAT IS HAEMODIALYSIS?

- Haemodialysis is a process of cleansing the blood of waste, extra fluids and minerals that your kidneys are unable to filter out or to eliminate.
- Haemodialysis treatment consists in filtering your blood through an artificial kidney via a dialysis machine.
- To perform this haemodialysis treatment, we must access your blood which is why it is called a vascular access.

### TYPES OF VASCULAR ACCESS:

1. The arteriovenous fistula (AVF)
2. The central venous catheter (CVC)

### WHAT IS AN ARTERIOVENOUS FISTULA?

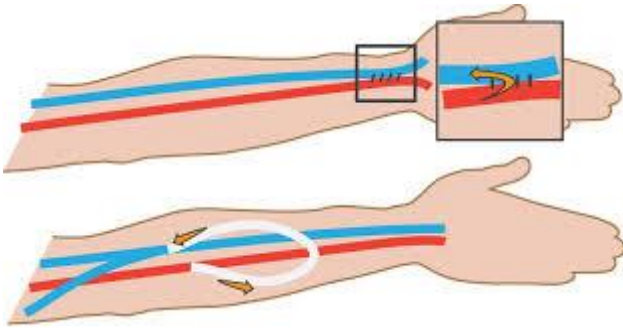
- An arteriovenous fistula is the creation of a connection between an artery and a vein made under the skin by a vascular surgeon.
  - The arteriovenous fistula consists in connecting a vein to an artery. The procedure is performed under the skin, by a vascular surgeon.
- As a result of this connection to the artery, the vein grows larger and thicker.
- A period of 8 to 12 weeks is necessary before the vein is sufficiently developed to accommodate the needles used for dialysis, ensuring appropriate blood flow.

### WHERE IS THE ARTERIOVENOUS FISTULA LOCATED?

The fistula is usually placed in the non-dominant arm (the arm you use less), either at the wrist or in the elbow. The vascular surgeon or nurse will determine the fistula location after analyzing your mapping test.

## ■ TYPES OF ARTERIOVENOUS FISTULAS

- The native arteriovenous fistula: the artery is connected to the vein using your own blood vessels. (1)
- The synthetic fistula (AV graft): the artery is connected to the vein using a small tube inserted under the skin. The surgeon may opt for this if your veins are small. (2)



**In the event that you should have this surgery, it is important to stop having blood drawn or intravenous fluids (IV) in your non-dominant arm. It is preferable to present only the top of your hand for drawing blood or IVs.**

**The arteriovenous fistula is the vascular access of choice for:**

- Ease of use
- Low risk of infection
- Long-lasting period of efficiency, sometimes several years
- Dialysis treatment are more efficient

## ■ DISADVANTAGES OF THIS VASCULAR ACCESS:

- Installation of needles for each treatment.
- Possibility of bruises in the fistula arm, occasionally.
- Potential need for X-rays to keep the fistula functional as long as possible.
- Risk of bleeding when needles are removed.

## WHAT ARE THE STEPS OF THE PROCEDURE?

- The vascular nurse will meet with you to get your health profile, complete the requested tests and to give you directives for the surgery.
- The admission desk will call to inform you about the date and time of your procedure.
- The procedure is usually performed in an operating room by a vascular surgeon, usually under regional anaesthesia (regional brachial plexus block).
- This is an outpatient surgery and the procedure requires approximately 1 hour.
- Make sure that you have someone who can drive or accompany you home after the surgery since you will not be able to drive your car.
- If you are taking anticoagulants (coumadin, plavix, xarelto), you must stop a few days before surgery following the recommendations of your surgeon.
- If you are under dialysis, inform the staff of the date of the surgery so that you can prepare accordingly and adjust your dialysis schedule.
- After the surgery, you will receive a pamphlet outlining how to care for your fistula and what to watch for.

## WHAT IS A CENTRAL VENOUS CATHETER?

- A central venous catheter is a flexible tube inserted in a large vein, such as the jugular located at the base of the neck.
- This catheter is required to access your blood and must be left in place if you do not have a functional fistula in place for a future haemodialysis treatment.



## BENEFITS OF THIS VASCULAR ACCESS:

- This catheter can be used immediately or in the following days for the purpose of haemodialysis.
- There is no need to insert a needle in your arm.

## ■ DISADVANTAGES OF THIS VASCULAR ACCESS:

- Discomfort of having a catheter at the base of the neck.
- Risk of infection 10 times higher than with an arteriovenous fistula.
- Precautions must be taken to protect against the higher risk of infection (no showers, spa, pool, etc.).
- Dialysis is less efficient than with a fistula because the machine can stop frequently during the treatment.
- Can cause irritation in the central veins.
- Potential of blood clots blocking the catheter or the central veins.

## ■ STEPS LEADING TO THE INSERTION OF A CENTRAL VENOUS CATHETER:

- The Radiology Department will inform you about the date and time of the procedure as well as the required preparation. If you are taking anticoagulants (coumadin, plavix, xarelto), you will need to stop a few days before the procedure.
- On the day of the procedure, you may be asked to visit the Outpatient Clinic to be administered an antibiotic intravenously prior to the insertion of the catheter.
- Shortly after, the venous catheter will be inserted by a radiologist, under local anaesthesia (approximately 45 minutes), at the Radiology Department. After the procedure, you will return to the Outpatient Clinic to remain under observation for a few hours.
- Make sure that someone is there to accompany you back home.
- A nurse from the dialysis unit will let you know about the date and time that your haemodialysis treatment will be scheduled.
- You will receive a pamphlet outlining care and monitoring guidelines for your central venous catheter.
- The central venous catheter is an emergency access used until an arteriovenous fistula can be created and ready for use.

## ■ WHO CAN I CONTACT?

If you have questions or concerns, do not hesitate to contact your dialysis centre:

**Nurse in charge of vascular follow-up**  
**450 432-2777, extension 23085**

[www.santelaurentides.gouv.qc.ca](http://www.santelaurentides.gouv.qc.ca)

**Hôpital de Mont-Laurier : 819 623-1234**

2561, chemin de la Lièvre Sud, Mont-Laurier (QC) J9L 3G3

**Hôpital de Saint-Eustache : 1 888 234-3837**

520, boul. Arthur-Sauvé, Saint-Eustache (QC) J7R 5B1

**Hôpital Laurentien : 1 855 766-6387**

234, rue Saint-Vincent, Sainte-Agathe-des-Monts (QC) J8C 2B8

**Hôpital régional de Saint-Jérôme : 1 866 963-2777**

290, rue De Montigny, Saint-Jérôme (QC) J7Z 5T3

**Hôpital d'Argenteuil : 450 562-3761**

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