

Cardiac Catheterization & Angioplasty Information



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*This package is for patients who will undergo a cardiac catheterization procedure (also known as coronary or cardiac cath) and/or angioplasty (PCI) procedure. *** see selection below*

Booking instructions:

❑ Cardiac Catheterization (Angiogram)

Blood work and ECG to be done within 60 days prior to your appointment. *** ***Please contact your referring doctor if you need a lab requisition – this office cannot provide one.***

❑ Cardiac Angioplasty (Percutaneous Coronary Intervention/PCI)

Blood work and ECG will be done in the hospital the day of procedure.

Medications:

- Take your usual medications with a sip of water on the morning or day of your procedure.
- Please bring all your prescription medications in their original containers or blister packs with you to the hospital.

Exceptions:



- Hold **Coumadin & Metformin** and any other medications as instructed by your physician.
- Stop Coumadin (Warfarin) 5 days prior to your procedure

- Stop Metformin 12 hours before and 48 hours after your procedure _____

Two (2) days prior to your procedure STOP



Dabigatran (Pradaxa) or
Rivaroxaban (Xarelto) or
Apixaban (Eliquis) or
Lixiana (Edoxaban)

Last Dose is on:

Continue taking as usual your:



Aspirin
Clopidogrel (Plavix)
Ticagrelor (Brilinta)
Prasugrel (Effient)

Pre-procedural instructions:

- Fill out PRE-PROCEDURE QUESTIONNAIRE and RELEASE OF RESPONSIBILTY forms included in this package.
- In case of an emergency and/or you are UNABLE to come to your appointment, please call your cardiologist's office immediately.
- Please continue to keep in touch with your cardiologist/internist. If your symptoms change or if you have any other concerns about your medical condition, contact them directly.
- If you are not able to keep your appointment for any reason, please contact the Cardiac Catheterization Triage Office at (519)749-6541.
- You will need a responsible adult to drive you home after the procedure. This will be 3-6 hours after the procedure. **Your procedure will be cancelled if you do not have someone to drive you home.**
- A responsible adult should stay with you overnight after your procedure when you go home.

- If you need help to change your clothes you should have a care partner with you at the hospital before and after your procedure. Care partner will be asked to stay in our waiting room.
- Only one care partner
- Do not bring valuables to the hospital. Leave jewellery, credit cards and money at home. St. Mary's is not liable for any losses or damages. Cell phones are permitted.
- Remove nail polish.
- Do not use any scented products when you come to the hospital.
- **Do not eat or drink anything 2 hours before** your procedure. This is the same time as your arrival time.
- **No caffeine** on the morning of your procedure.

Please bring the following items with you:

- Your glasses or contact lenses, as well as the case.
- Your dentures and hearing aids
- Health card or health insurance coverage information
- All of your medications in their original containers or blister pack(s). This includes any herbals, naturopathic, or vitamin products and inhalers.
- The name and phone number of the adult who will drive you home.
- A book or magazine to read while you are waiting for your procedure.
- Cellphones and tablets are allowed.

Please note that your procedure time is approximate only. Cardiac Catheterization Lab deals with many emergencies and these emergencies may bump scheduled appointments. This means there may be unavoidable delays. Any delays will be communicated to you and your loved ones through our nursing staff.

What is coronary artery disease?

Human heart is a muscle about the size of your fist that functions as a pump. It lies slightly to the left of the middle of your chest cavity, behind your breastbone.

The heart pumps continuously to supply blood to all parts of the body. Blood carries oxygen and nutrients that your body needs.

The heart muscle itself needs a good supply of blood to keep pumping. **Coronary arteries** supply the heart muscle with blood.

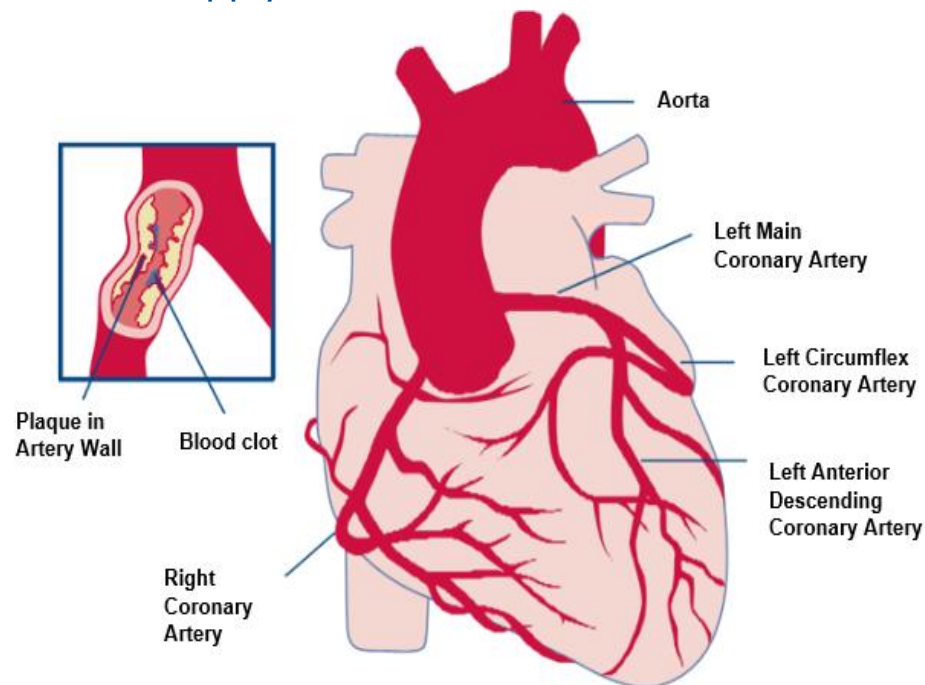


Figure 1: Coronary Arteries

Coronary artery disease (CAD) is a condition in which one or more of the coronary arteries become narrowed or blocked. This process is called **atherosclerosis**. It is caused by a build-up of cholesterol and calcium on the inner lining of the arteries. This build-up is called **plaque**. It narrows the passage of blood through the arteries and blood flow becomes restricted.

When the blood flow is reduced, the heart muscle receives less oxygen. This is called **ischemia**. Many people feel chest tightness or pain (**angina**) when ischemia occurs.

Why do I have coronary artery disease?

It is still not clear what triggers CAD. Several factors, known as 'risk factors', have been shown to increase plaque build-up. Some risk factors, like family history of heart problems, cannot be changed. Others, you can modify or change and can improve your future health.

Your doctor may recommend that you take steps to help reduce your risk factors by:

- Not smoking
- Controlling your diabetes
- Controlling your blood pressure with regular checkups and/or medications
- Choosing food low in fat and cholesterol
- Exercising regularly
- Maintaining an ideal body weight

If you do not correct 'risk factors' such as smoking, obesity, lack of exercise and a high-fat diet, your other vessels may become blocked in the future.

What is cardiac catheterization?

A **cardiac catheterization** is a special x-ray study of the heart. It is done to get information about the coronary arteries, structure, and function of your heart.

The study uses thin, flexible tubes, called catheters. These catheters are placed within the major blood vessels of the body and the heart. This procedure will require a small cut in the skin.



X-ray dye (contrast) is injected through catheter. This allows the doctor to see the chambers, valves, and coronary arteries on an x-ray monitor screen. Heart pressures are measured, and blood samples may be taken.

Your heart has 3 main coronary arteries (refer to picture on page 6). Each one is responsible for blood flow to specific section of heart muscle. This test will show if there are any important narrowings or blockages in these arteries. This will help the doctor form a treatment plan based on the findings.

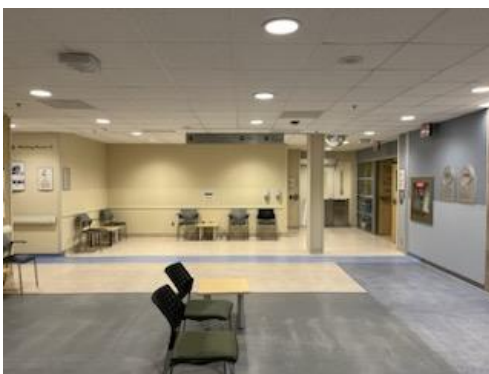
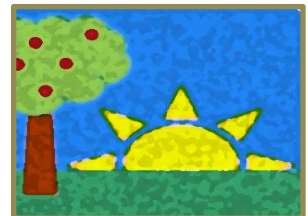
Night before your procedure:

- Avoid caffeine (e.g., coffee, or tea) as of midnight before your procedure.
- Take a shower or bath the night before and on the morning of your procedure.
- Do not use any scented products.



Day of your procedure:

- You may have a light meal (e.g. juice with toast) up to 2 hours before your procedure time.
- Take your usual medications the morning of your procedure unless you were told otherwise.
- For your comfort, wear loose clothing.
- Wear your dentures, eyeglasses, and hearing aids as needed.
- DO NOT bring valuables to the hospital.



Your family will be asked to wait in the 2nd floor waiting room. They will be provided with a privacy code, to protect your privacy and sensitive health information. The doctor will talk to your family after your procedure.

Arriving to the cath lab

A cath lab nurse will review information about your medications, diet, activities, and allergies with you. Be sure to mention if you have any allergies or if you had an allergic reaction during or after an x-ray when dye was used.

An intravenous (IV) line may be inserted into a vein in your arm. This will be used to give you fluids and medications before, during and after your procedure.

Shortly before your procedure the doctor will speak with you, review the procedure, and answer any questions. The doctor will discuss the risks of the procedure and ask you to sign a consent.

You will be given a chance to use the bathroom before the procedure.

You will be given medications to help you relax, but you will stay awake during your test.

Based on the type of procedure completed and the final results, you may be discharged home the same day. Some people will need overnight hospital stay. This will be decided by the doctor at the end of your procedure.

Cardiac catheterization/angiogram procedure

Once you are moved into the procedure room, you will be asked to lie on a narrow table under an x-ray camera. This camera will move in different positions over your upper body.

The area where the catheter is inserted will be cleansed with cold antiseptic solutions. Do not touch this area to prevent an infection. The nurses will cover you with sterile drapes.

The doctor will put freezing medication into your arm or groin area. You may feel a sharp sting. After freezing starts working, you will only feel pressure. If you start to feel pain at any time, let your doctor know.

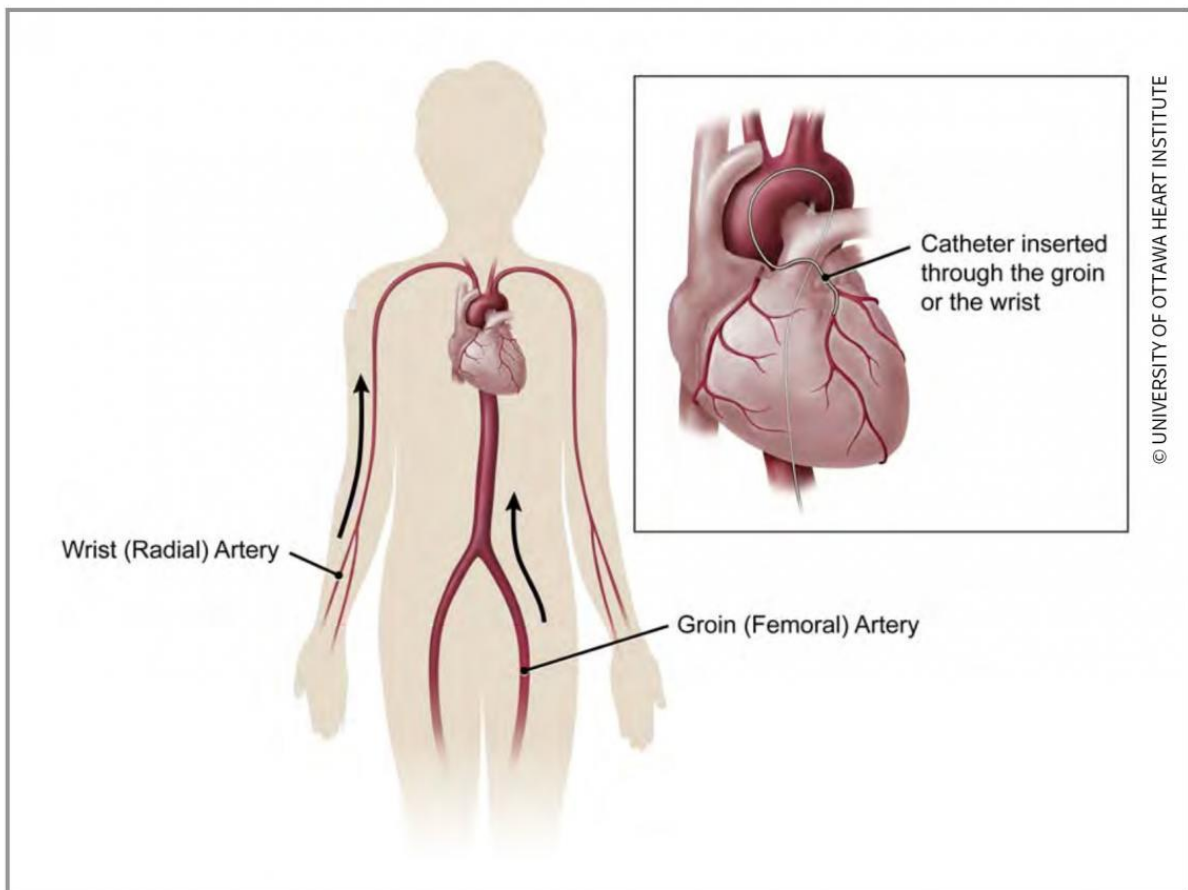


Figure 3: Procedural access

<https://www.ottawaheart.ca/sites/default/files/images/Patients-Visitors/catheter-illustration-eng.jpg>

A short plastic tube called a sheath, will be placed into your artery and/or vein. The doctor will use this sheath to guide catheters, long thin tubes, to your heart. You will not feel catheter moving through your body. You may be able to see them on the TV monitor.

During the procedure you may be asked to move your head to help with camera position. The doctor may also ask you to cough or take a deep breath. It is helpful that you listen for any instructions. The nurse will be present to assist you.

The doctor uses the catheter to inject a colourless **contrast** liquid. During injection you may feel hot and flushed for few seconds. You may also get a headache or notice a funny taste in your mouth. These are normal reactions and will pass.

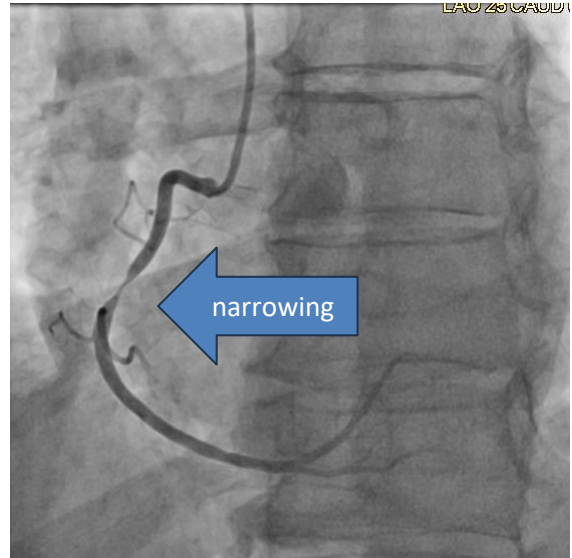
A typical angiogram procedure last **about 1 hour**.

Once all the pictures are taken, the doctor will review them to help decide on the next step. They may recommend moving to **angioplasty** within the same procedure. This is called same day angioplasty. The goal of angioplasty is to restore normal blood flow to the heart.

Angioplasty/PCI procedure

To help open a narrowed or blocked coronary artery, a catheter with a special balloon is placed inside the artery at the site of narrowing. The balloon is then inflated. This will push plaque out of the way and make room for the stent.

Stents are metal coils or tubes that are used to improve long term results of your angioplasty procedure.



The stent is guided to the narrowing. Once it is opened, it will stick to the sides of the vessel and help keep the artery open. You may have some brief angina (chest discomfort) when balloon and stent are inflated. This is common and can be treated with medications. Let your nurse know if you are having discomfort.

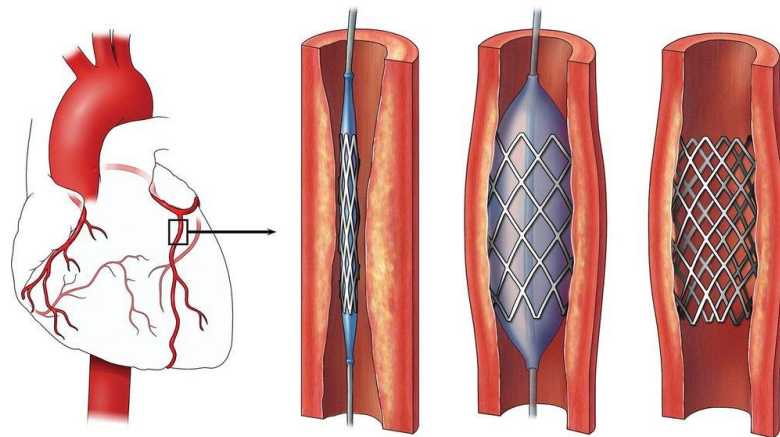


Figure 2: Placing stent inside narrowed coronary artery

<https://images.squarespace-cdn.com/content/v1/5c9c8c17e3abc50001d21a1c/1570742370635-35HJ66NOZ5BO3JXYJU10/angioplasty.jpg?format=1000w>

Standard angioplasty/PCI procedure takes 60 – 90 minutes. Some more complex cases take even longer.

After your procedure

Once the procedure is done all the catheters will be removed.

If your procedure was done through the wrist the sheath will also be removed. A tight wrist band will be applied to control bleeding. If you had groin access, the sheath may be left in and removed in the recovery area.

You will then be moved to the recovery area. Pre/Post Heart Investigation Unit (PHIU) is located down the hall from the cath lab.

Our PHIU nurses will provide all the nursing care you will require. They will monitor your vital signs, your groin and/or wrist access site and pulses. As time passes those checks will become less frequent.

Most patient are discharged home later the same day. Some will need overnight hospital stay.



If you had a groin site access:

You will need to remain in bed with your legs straight and your head on the pillow for 2-4 hours. If you need to cough or sneeze, you will be shown how to place light pressure with your fingers to the groin site.



Do not:

- Bend the legs as this may cause bleeding
- Cross your legs as this may block circulation to your feet

Your PHIU nurses will let you know when you can safely get up. They will assist you with slowly standing up.

If you had a wrist site access:

A tight band will be put on your wrist after procedure to prevent bleeding. It is important to keep your wrist and arm straight and supported on the pillow. You may move your fingers. Your nurse will assist you as needed.

Please notify your nurse if your leg or arm feels cold, numb, or painful. If at any time you feel warm or wet sensation at the insertion site or see blood on your bandage, apply pressure and call the nurse immediately.

Going home:



Discharge home education and care instructions will be provided by your PHIU nurses before you leave. You will receive detailed instruction sheet to take home with you.

How should I contact you?

You can contact us at:

St. Mary's General Hospital
911 Queens Blvd
Kitchener, ON. N2M 1B2



Regional Cardiac Care Coordinator

Phone: 519-749-6578 ext. 6541

PHIU

Phone: 519-749-6578 ext. 6750

Frequently asked questions:

1. Where do I get my bloodwork and ECG requisitions?

This is often given to you at your doctor's appointment. If this has not been done and if the requisition is not included in this package, then please contact either your referring doctor or your family doctor for a requisition. Required lab work includes CBC, electrolytes, and creatinine along with an ECG, within 60 days (about 2 months) of your procedure date. This can be completed at your nearest local lab.

2. How long will the test take?

The angiogram procedure, taking pictures, is only about an hour. The total length of stay, including prep and recovery, is about 6 hours. If angioplasty is done, your stay can be 8 hours. Angioplasty recovery is a little longer.

Please note that these are all approximate times as we deal with same day emergency cases.

The recovery is at least 2 hours. If you need, the team can call your ride to give them your estimated discharge time.

You are welcome to bring your cell phone or reading materials to pass the time.

3. My doctor said I was scheduled for an angioplasty, but I'm booked for an angiogram.

Doctors may foresee angioplasty for some of their patients based on the available test results. Pictures have to be taken first. Pictures will help them see where, if any narrowings or blockages may be. This will be explained to you in more detail on the day of your procedure.

4. Can my family/friend come with me?

Yes, your family/friend can come with you. Please note the length of stay is at least 6 hours. They will not be able to stay with you most of the time due to the lack of space. They will be called upon, if you wish, during the doctor consent and/or review of test results once procedure is completed.

We ask that you limit your support to 1 person.

There are specific waiting areas. The hospital also has Tim Horton's on main floor, and Subway restaurant in the basement cafeteria.

5. Will I get a general anesthetist?

We do not use general anesthetic for this procedure. You will be given medications to help you relax. As a result, you will not be able to drive for 24 hours. You will need someone to drive you home and stay with you overnight.