

Cardiac Catheterization Assessment What You Should Know

Developed by Lynn Reid, RN, BN, MN, CNCC(c), CCN(c)
Nurse Associate, Interventional Cardiology
New Brunswick Heart Centre, Atlantic Health Sciences Corporation

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New Brunswick Heart Centre

We at the New Brunswick Heart Centre hope this information booklet will be helpful to you, and your family. Your concerns about cardiac catheterization (heart dye test) are normal. During your visit with us, please feel free to ask your nurse or doctor about anything that is concerning you. Should you have any questions while waiting for your Outpatient Cardiac Catheterization Assessment, please call us at (506) 648-7577.

If you would like more information about heart-related matters, please feel free to visit the following web sites:

- New Brunswick Heart Centre at [www.ahsc.health.nb.ca/Programs/New BrunswickHeartCentre/](http://www.ahsc.health.nb.ca/Programs/NewBrunswickHeartCentre/)
- Heart & Stroke Foundation of Canada at www.heartandstroke.ca
- If your preference is for written information, please contact the Heart and Stroke Foundation of New Brunswick at 1-800-663-3600. If you live in Saint John or surrounding areas, you may call 1-506-634-1620.

The health information that is provided in this booklet was researched, developed, and reviewed by qualified health care providers at the New Brunswick Heart Centre. All information is accurate and reliable. This material is for information and education purposes only. It should not be used in place of medical advice, instruction and/or treatment. You should talk to your doctor for specific information on personal heart health matters.

Introduction

This information booklet has been prepared for patients like you who will come to the New Brunswick Heart Centre for a cardiac catheterization assessment and possible cardiac catheterization.

Purposes of this Information Booklet:

We believe that education plays an important role in the prevention and treatment of heart disease. One purpose of this booklet is to help you and your family:

- Learn more about your heart and heart disease
- Learn more about how best to prevent and manage heart disease



We understand that waiting for a test and/or procedure can be a very stressful time for you. Arming yourself with information can often help you cope. Another purpose of this information booklet is to help you and your family to:

- Know what to expect when you come to the New Brunswick Heart Centre for your outpatient cardiac catheterization (heart dye test) assessment appointment
- Prepare for your test and/or procedure

We are always trying to improve our patient care and services. Your questions and comments help us to better meet you and your family's heart health needs. The final purpose of this booklet is to:

- Provide you with a way to give us your feedback

Part 1: You and Your Heart

We believe that learning about your heart and how it works is the first step to help you better understand about diseases of the heart.

How does my heart work?

Your heart is a muscle. It pumps blood to all parts of your body. It is about the size of your fist. It is located in the center of your chest (slightly to the left), under your ribs. The heart has four chambers. Two chambers are on the right side of your heart. The other two are on the left side of your heart. The right side of your heart receives blood low in oxygen from your body (by way of your veins). This blood is pumped to your lungs. The blood passes through your lungs, where it picks up oxygen. From your lungs the blood is returned to the left side of your heart. It is then pumped out to the entire body (by way of your arteries). This is a continuous cycle.

As blood passes from chamber to chamber in your heart it passes through a valve. Your heart contains four valves. Each valve is made of thin (but strong) flaps of tissue. The valves open and close like a door as your heart pumps. They open and close over 100,000 times each day. They are there to make sure that blood flows through your heart the right way.

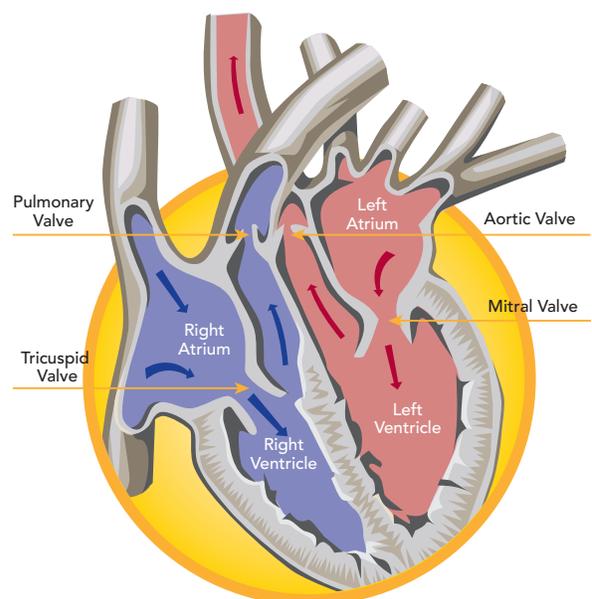
Sometimes age, heart problems and diseases such as rheumatic fever and infections can damage the heart valves. Sometimes people are born with an abnormal heart valve.

Your Heart's Blood Supply

To keep your heart pumping, it needs a constant supply of oxygen rich blood. The arteries that supply the heart muscle with blood are called the coronary arteries. The coronary arteries run along the surface of your heart. When the coronary arteries are healthy, blood flows through them easily.

Your Heart's Electrical System

The electrical system of your heart is the energy source to keep it pumping. Your heart's electrical system sets your heart beat. The heart beats an average of 70 times per minute. Sometimes people can have problems with their heart's electrical system. Their heart may beat too slow, or too fast, or irregularly. Heart arrhythmia(s) is the medical term for this condition.



Part 2: Heart Disease(s)

We believe that education is an important step in preventing and managing heart disease.

Your doctor has referred you to the New Brunswick Heart Centre for a cardiac catheterization (heart dye test) assessment. There may be a number of different medical reasons why your doctor has referred you for a cardiac catheterization (heart dye test).

The purpose of the information in this part is:

- To help you and your family learn more about heart disease
- To learn when you need to seek immediate medical attention

In Part 2, we provide health information on four different heart-related diseases.

- 1. Coronary Artery Disease**
- 2. Heart Valve Disease**
- 3. Heart Arrhythmia(s)**
- 4. Cardiomyopathy**

This information is discussed in general terms. It may not pertain to your own health situation. You should talk to your doctor for specific information about your own heart health matters.



1. Coronary Artery Disease

Coronary artery disease (CAD) is a medical term for having one or more blockages in your coronary arteries. Coronary artery disease causes angina and heart attacks. With coronary artery disease, fats, cholesterol, and other materials build up in the walls of your coronary arteries to form plaque. As you learned earlier coronary arteries supply the heart muscle with blood and oxygen. But over-time the coronary arteries become narrowed with plaque. When an artery becomes too narrowed, blood has trouble flowing through the artery. The heart muscle does not get enough oxygen.

We will first talk about angina and then heart attacks. Your doctor has told you that you have angina...

What is angina?

Angina is a medical term. It is used to describe the symptom such as chest pain or shortness of breath. Angina occurs when the heart muscle is not getting enough oxygen.

What are the signs and symptoms of angina?

The signs and symptoms of angina may include:

- A tightness, squeezing, fullness, pressure or pain in the chest. The pain goes away with rest or when you take your Nitroglycerin (Nitro)
- The discomfort may be felt in other areas, such as the neck, jaw, shoulders, arms or back
- There may be shortness of breath or difficulty breathing
- Nausea (sick feeling)

Remember your angina can feel very different from how another person feels angina.

When does it usually happen?

Angina usually happens at times when the heart needs more blood. Times such as...

- With physical activity such as running to catch the bus
- Walking in extreme weather (very hot, very cold, or wind)
- With emotional stress (feeling upset or angry).



What should I do?

Angina is usually relieved by stopping what you are doing and resting. Taking your nitroglycerin (Nitro) should also relieve angina. Talk to your doctor about what to do when you have angina.

Unless your doctor tells you otherwise, if you are having angina you should:

- Stop your activity and sit or lie down
- If the pain does not go away in a minute or two, use nitroglycerin. Note the time.
- If you still have angina after five minutes, take a second dose of nitroglycerin.
- If your angina is still there in another five minutes take a third dose of nitroglycerin.

If your angina is not completely relieved five minutes after the third dose of nitroglycerin, call 911 or emergency services.

The good news is that many people find that their angina can be prevented or controlled. How can I do this?

- Avoid sudden and extreme physical activity

- Avoid physical activity in extremely hot or cold temperatures.
- Avoid large heavy meals. Eat smaller amounts of food more often. Make sure to rest following a larger meal
- Avoid or learn to deal with stress
- Stop smoking. Nicotine makes blood vessels smaller. This will decrease the amount of oxygen carried by the blood
- Lose weight, if you are not your ideal body weight
- Take your medications as prescribed by your doctor



With a heart attack, the plaque that has formed on the inside of your coronary artery wall breaks open. A blood clot forms in the already narrowed coronary artery. This blocks the artery completely. The blockage may be permanent or temporary. This blockage prevents the blood from flowing to the heart muscle. Damage to the heart muscle occurs.

What are the signs and symptoms of a heart attack?

The signs and symptoms of heart attack vary from person to person and may come and go. Nitroglycerin may provide a little relief or no relief at all.

If you have any of the following signs you may be having a heart attack...

When to call your doctor...

You should call your doctor if you notice any of the following changes:

- Less activity brings on your angina or angina comes when you are resting
- Angina wakes you up at night
- Angina comes more often or becomes more severe
- Your nitroglycerin (Nitro) does not work as fast as before
- You need to take more nitroglycerin (Nitro) more often

- Sudden discomfort or pain (in the chest, neck, jaw, shoulder, arms or back) that does not go away with rest
- Pain may feel like burning, squeezing, heaviness, tightness, or pressure. *In women, the pain may be different than in men. Women may have more neck, shoulder and back pain than men.*
- Shortness of breath or difficulty breathing
- Nausea and/or vomiting
- Indigestion
- Sweating
- Cool, clammy skin
- Fear, and/or anxiety, and/or denial

Is Angina a Heart Attack?

No. Although people sometimes think that angina is a heart attack they are not the same thing.

With angina, blood has trouble flowing through a narrowed coronary artery. The blood flow to part of the heart muscle is reduced temporarily. This usually occurs with physical activity. When the blood flow is reduced, there is not enough oxygen for the heart to do its work.

Signs may be mild or severe. If you think that you or someone you know is having a heart attack, call 911 right away.

Receiving medical treatment as soon as possible is one of the most important things that can be done. Early medical treatment can reduce the amount of heart damage you suffer...it may even save your life.

Why do I have coronary artery disease?

Several factors have been shown to increase the build up of plaque in the coronary arteries. We call these "risk factors." Some of these risk factors, such as a family history of heart disease, cannot be changed. The good news is that there are other risk factors that YOU can change.

Risk factors that YOU can change to improve your heart health are the following:

- Not smoking.
- Try to keep your weight at the correct level for your height.

- Choose foods low in fat. Eat lots of fresh fruit and vegetables.
- Know your blood pressure.
- Know your cholesterol levels.
- If you are diabetic, keep your blood sugar under control.
- Get regular exercise. Talk to your doctor about what your activity should be.

You do not have to do this alone. Your doctor, nurse, or other health care providers will work with you to help you learn more about ways to reduce your risk factors.

Improving your risk factors is a very important step that YOU can take on the road to improving your heart's health and your future overall health.



2. Heart Valve Disease

As you learned earlier...

The four valves in your heart are made of thin (but strong) flaps of tissue. These heart valves open and close as your heart pumps. They open and close over 100,000 times each day. They are there to make sure that blood flows through your heart the right way.

What causes heart valve problems?

In most people, the heart valves work perfectly, day after day. But there are conditions that can damage the heart valves such as:

- Growing older
- Diseases such as rheumatic fever and infections
- Sometimes people are born with malformed heart valves

What are the types of heart valve problems?

Sometimes, age or disease can prevent heart valves from opening properly. The valves become narrower. This narrowing is called "stenosis". As the valve opening narrows, the heart can't push as much blood through as before. As a result the heart has to work harder to pump the same amount of blood. This can lead to an increase in the size of the heart muscle. In time, this can lead to heart failure.

Sometimes, a heart valve does not close properly. This is called a leaking heart valve or regurgitation. This can reduce the heart's pumping action. When the heart contracts, some blood leaks backward through the damaged valve. This limits the heart's ability to supply the body with blood.

What are the signs and symptoms of heart valve disease?

The signs and symptoms of heart valve disease will vary. The signs and symptoms will depend on the specific heart valve involved. Please talk to your doctor about your heart valve disease.

What can be done?

Heart valve problems can be treated in a number of ways. Your doctor will decide on the best treatment for you. Some people can be treated with medications and by living a healthy lifestyle. But in some cases, an operation may be needed. The operation will repair or replace the damaged heart valve.



3. Heart Arrhythmia(s)

(Abnormal Heartbeats)

What causes a heart arrhythmia (abnormal heartbeats)?

Heart arrhythmia (abnormal heartbeats) is the medical term for having abnormal heartbeats. Your heart has its' own natural rhythm. If your heart beats fast once in a while or you feel a fluttery feeling in your chest or a skipped beat, it is not always a serious problem. Please see you doctor if you have questions or concerns. There are many causes for a heart arrhythmia.

What are the signs and symptoms of a heart arrhythmia?

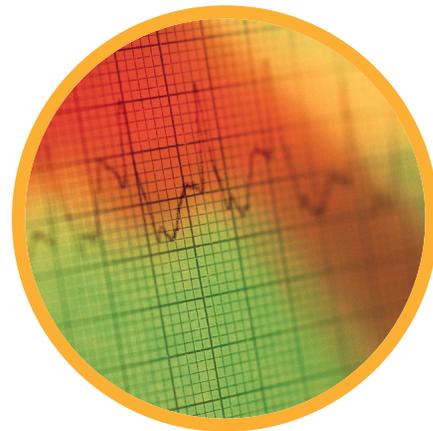
Signs and symptoms can vary from person to person. A heart arrhythmia can reduce blood flow to your brain and entire body. A serious heart arrhythmia can even be life threatening.

If you have any of these signs and symptoms, see your doctor immediately.

- Heart palpitations (skipped beats, heart racing)
- Lightheadedness or dizziness
- Shortness of breath
- Sweating
- Weakness
- Fainting

What Can Be Done?

The treatment for a serious arrhythmia depends on the cause. You will often need to have one or more heart tests done that will check for an arrhythmia such as an electrocardiogram (ECG) and/or holter monitor. A cardiac catheterization and/or electrophysiology studies (EPS) may also be done to check for the cause of the arrhythmia. Some people can be treated with medications and by living a healthy lifestyle. In other cases, medical devices such as a pacemaker or implantable heart defibrillator may be needed to correct the problem. Your doctor will discuss the best treatment options with you.



4. Cardiomyopathy

What is cardiomyopathy?

Cardiomyopathy is the medical term that means “disease of the heart muscle.” There are different types of cardiomyopathy. All types affect your heart’s ability to pump blood to the rest of the body.

What causes cardiomyopathy?

There are different causes of cardiomyopathy. A few of the more common causes of cardiomyopathy include:

- viral infections
- alcohol abuse
- coronary artery disease
- severe high blood pressure

What are the signs and symptoms?

Some people who develop cardiomyopathy may have no signs in the early stages. But as the condition gets worse, the following signs and symptoms may appear:

- Shortness of breath
- Chest pain
- Palpitations (skipped beats, heart racing)
- Tires easily
- Dizziness
- Lightheadedness
- Fainting
- Swelling of the abdomen (belly) and legs

It is important to see your doctor immediately if you have any of these symptoms.

What can be done?

You may need several heart tests to help your doctor find a possible cause for your cardiomyopathy. The tests often include an echocardiogram (echo) and/or cardiac catheterization (heart dye test). Treatment of cardiomyopathy is aimed at improving your heart’s pumping ability. Often your doctor will use a number of treatments. Specific treatments will depend on which type of cardiomyopathy you have. Many people can be treated with medications and by living a heart healthy lifestyle. Others may need an implantable heart defibrillator. Your doctor will discuss the specific treatment options that are best for you.

Now that you understand more about your heart and heart disease(s), we will move on to Part 3 of the booklet. The Outpatient Cardiac Catheterization (heart dye test) Assessment. The purpose of the information is to:

- Help you better understand what happens when you come to the New Brunswick Heart Centre for your outpatient cardiac catheterization (heart dye test) assessment.
- Help you better understand what to expect before, during and after your cardiac catheterization (heart dye test).



Part 3: The Outpatient Cardiac Catheterization Assessment

People before you have had many questions about coming to the New Brunswick Heart Centre. To better help you and your family prepare, we have answered the most frequently asked questions.

Before Your Appointment

Why am I going to the New Brunswick Heart Centre?

Your doctor has referred you to the New Brunswick Heart Centre for a cardiac catheterization (heart dye test) assessment. While tests such as electrocardiograms (ECG), stress tests, echocardiograms (Echo), and physical examinations provide important information about your heart, they do not give all of the answers. When more information is needed about your heart, a cardiac catheterization (heart dye test) is often requested. The information from the cardiac catheterization (heart dye test), together with the results of other tests, allows the doctor to decide the best treatment for you.

What is a cardiac catheterization?

A cardiac catheterization is a special x-ray study of the heart. A special heart doctor called an interventional cardiologist does the test. A small plastic tube is placed into an artery in the groin area or your wrist artery. Sometimes a tube is also placed into a vein in the groin area. A catheter (long narrow tube) is then passed through the blood vessels to the heart. Special

x-ray dye is put into your heart arteries through this catheter. This allows your doctor to take x-ray pictures. The pictures will show if you have blockages in any of your heart arteries. The doctor can also see how well your heart muscle is pumping. The doctor can also see if the heart valves are opening and closing correctly. Once the test is completed your doctor can decide the best treatment for you.

When is my appointment at the New Brunswick Heart Centre?

After your doctor's complete referral has been received at the New Brunswick Heart Centre, your name will be placed on a waiting list in order of urgency. You will be contacted by telephone or by mail with the date of your appointment. Any necessary instructions will be given to you at that time. If you have any questions, please contact your own doctor or the New Brunswick Heart Centre at (506) 648-7577.

What do I need to bring to the cardiac catheterization assessment appointment?

Please bring:

- Your Medicare card
- All medications that you are



currently taking in their original containers including those prescribed by your doctor and over the counter medication

- A list of any known allergies (i.e. drug, environmental, latex, food, etc.)

Where do I go for the cardiac catheterization (heart dye test) assessment appointment?

On the day of your appointment, please report to the Saint John Regional Hospital at least 30 minutes before your appointment. Go directly to the Admitting Department. Take an admission's ticket and wait for your number to be served. The clerk will confirm all necessary personal information (i.e. current address, telephone number, etc).

You then will proceed to the outpatient cardiac catheterization clinic located on 5B South. Included with your information packet are directions to 5B South. Please check in with the nurse in the clinic when you arrive.

What happens at the appointment?

During your appointment you will see a nurse and heart doctor. The nurse will ask you questions about your past and present health. The nurse will examine you. You will need to have blood tests drawn. The blood test will check that your kidneys are working properly and that your blood count is not low. A chest x-ray and an electrocardiogram (ECG) will also be done. The doctor will then see you and examine you. The doctor will determine if you need a cardiac catheterization.

If a cardiac catheterization (heart dye test) is needed, it is booked for the next day. The doctor

and nurse will review the test with you. The doctor will discuss the benefits and possible risks of the test. The doctor will then ask you to sign an "Informed Consent to Investigation, Treatment, or Operative Procedure" form.

The nurse will give you all your instructions that you will need for the following day for your cardiac catheterization test.

Please feel free to ask your nurse or doctor questions at any time during your appointment.

How long does the cardiac catheterization assessment take?

Your appointment will last about two hours.

Where do I stay?

We recommend that if you live more than 60 minutes from the Saint John Regional Hospital, you should make arrangements for your accommodations (i.e. hotel, relatives, friends, bed & breakfast, etc.) in Saint John for two nights, starting on the night of your assessment. A list of accommodations has been included with your information package and is available on the NBHC website.

Can my family come with me?

We suggest that a family member or friend does comes with you. Many people feel nervous when they come to their appointment. It is often helpful to have your family member or friend with you.

Why do I have to stay two nights?

If the heart catheterization (heart dye test) is needed, it is booked for the next day. We have to make sure that your electrocardiogram



(ECG), chest x-ray, and blood tests are all in order before having the cardiac catheterization. The day of your test, you will arrive at the hospital at 7:00 a.m. You will have to stay at the hospital until approximately 5:00 p.m. This is to make sure that you do not have any problems such as bleeding. Then you are usually able to leave the hospital and go back to your hotel, home, etc. In some cases, you will have to stay over-night in the hospital.

Please arrange for a responsible adult to drive and stay with you overnight after the procedure.

Can I eat before I come for the cardiac catheterization assessment appointment?

Yes. You do not need to fast for your appointment.

Do I take my medications before coming to my cardiac catheterization appointment?

Yes. You may take your medications that you normally take, unless told otherwise by your doctor or health care provider.

Please do not stop taking your Aspirin or Plavix before your cardiac catheterization.

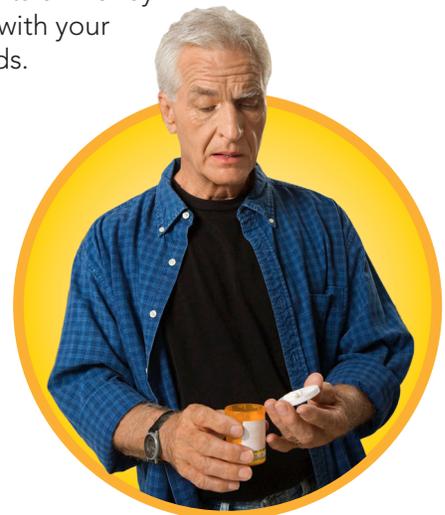
If you are

- **taking Warfarin (Coumadin), and have not yet been contacted by the nurse from the New Brunswick Heart Center,**
- **a dialysis patient and have not yet been contacted by the nurse from the New Brunswick Heart Center,**
- **If you have a question or concern that we have not addressed please call (506) 648-7577.**

How Do I Prepare for the Cardiac Catheterization (heart dye test)?

Before your test...

- You must not have anything to eat or drink after 11:30 p.m. the night before your cardiac catheterization
- Take a shower or bath the night before your cardiac catheterization test
- The day of your test, take all your medications with a sip of water, as you would normally do, unless told by the nurse or doctor not to take certain medications.
- If you are diabetic, you will be given special instructions for your diabetic medications
- Please bring all your medications (including over the counter) in the original containers with you to the hospital
- In the case you will have to stay overnight in the hospital, please bring only your necessary belongings such as toothbrush, toothpaste, etc.
- Please do not bring valuables to the hospital. Leave your jewelry and any large amounts of money at home or with your family/friends.



What Happens on the Day of Cardiac Catheterization (heart dye test)?

- The day of your test, report directly to the nursing station on 5B North at 7:00 a.m.
- A nurse will help you get settled into a bed. The nurse will check your blood pressure and pulse. The nurse will place an intravenous (IV) into a vein in your arm. This will be used to give you fluids and medication before, during and after your test.
- You will put a “johnny shirt” on. The nurse will shave your wrist and groin areas. The nurse will ask you to wash these areas with an anti-septic (disinfectant) liquid, to decrease the chance of infection.
- When it is time for your test, a porter will come to your room. The porter will take you by stretcher to the waiting area in the “cath lab”. This is outside the procedure room. You will meet the doctor, nurses and technicians that will be helping with your test.
- While you wait, the nurse will take your blood pressure and pulse. The nurse will check your hospital chart to make sure that everything is in order for your test.
- You are awake for the cardiac catheterization (heart dye test). Often you will be given a mild sedative before the test to help you relax. It is very normal to feel nervous before your test.

Where does my family stay when I am having my test?

While you are having your test, your family should wait for you in the family lounge on 5 B North. It is fine for your family to take a break. They can go for

a cup of coffee or snack while they wait. A family member should let the nurse know if they are leaving the 5B North and where they are going.

What Happens During the Cardiac Catheterization (heart dye test)?

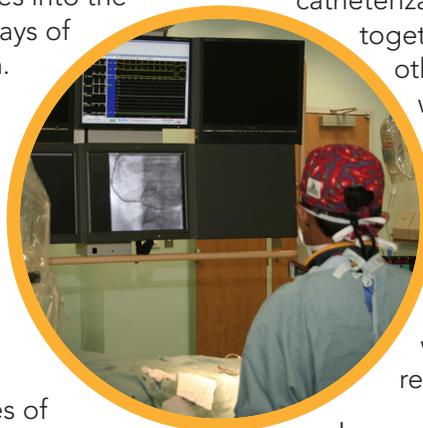
- When everything is ready in the procedure room, the nurses will take you into the room and help you onto the x-ray table. The first thing you may notice is that the table is narrow. The second thing you may notice is the cold temperature in the room. The temperature in the room is kept low for the x-ray and recording equipment. Try to make yourself as comfortable as possible. If you need an extra blanket or pillow, just ask.
- The nurses will attach electrocardiogram (ECG) leads to your chest and legs, just like when you had an ECG. These will allow your heart to be monitored during the test.
- The nurse will clean the skin on your groin and/or wrist areas where the tubes will be placed. This will decrease the chance of infection. Expect the fluid to feel cold. You will then be covered with sterile sheets from your shoulders to your toes. The doctor, nurses and technicians wear gowns, gloves, hats, and masks. This is done to decrease chance of infection.



- When you are lying on the table, you will notice TV screens on your left side. This is where your x-ray pictures will appear during your test. You will be able to see some of the pictures.

The Test...

- For the cardiac catheterization, a tube is inserted into an artery in your wrist or groin area. To make the test more comfortable for you, the doctor “freezes” or “numbs” your skin with an injection of local anesthetic before placing the tubes. This may cause a sting or burning feeling. Then a small cut is made into the skin. A needle and a short tube called a sheath are then placed into your artery (blood vessel). You may feel some pressure (discomfort), but this should not be painful.
- Once the sheath is safely in place, the doctor will pass a catheter (a long narrow tube) through the sheath. The catheter will go all the way to your heart. If the test is done from the groin, you will not feel the catheter moving. If the test is done from the wrist, you may feel the catheter moving up your arm.
- X-ray dye is put in through the catheter. The dye goes into the coronary arteries. X-rays of the arteries are taken. You may be asked to hold your breath or cough. Your doctor needs to take different views of your arteries. The doctor will move the x-ray camera around you and take pictures on both sides of your chest. Any blockages will appear on the TV monitors, and will be recorded.



- During your test, your doctor will often use another type of catheter to look at the pumping action of your heart and the health of the heart valves. When the x-ray dye is put in, you may feel a warm feeling that spreads around your body as the dye travels through your blood vessels. Actually, the feeling that you have passed urine is a common feeling. Do not worry, this feeling will last only five to ten seconds and is harmless.

How long will the cardiac catheterization (heart dye test) take?

The test will take about 30 to 40 minutes. Most patients find it quite easy to tolerate.

When will I find out the results?

Your doctor will often tell you what he or she has found while you are still in the procedure room (cath lab). Later that day, the doctor will also come to your room and talk to you and your family. The doctor will discuss your test results and the best treatment at this time.

What are the Treatment Options?

Your treatment options will depend on the results of your cardiac catheterization (heart dye test) together with the results of other tests. Treatment with medications is sometimes the best treatment. Other times an angioplasty and stent may be the best treatment. Sometimes treatment with open heart surgery is recommended.

In some cases, you may need some further heart tests before your doctor can decide which treatment is best for you.

Making life-style changes (i.e.: stopping smoking, eating a low-fat diet, losing weight, etc.) are always recommended and are the first steps to improve your heart health and well being.

What If I Need an Angioplasty and Stenting?

If your doctor recommends an angioplasty (Balloon Procedure) and stenting after looking at your pictures, you may have the angioplasty and stenting done immediately after your cardiac catheterization (heart dye test). The same doctor, staff, and equipment are used for the angioplasty. The doctor uses the same tube that is already in place in your groin area or wrist to pass the special balloon catheter.

What is Angioplasty and Stenting?

Coronary Angioplasty is a balloon procedure used to treat angina and heart attacks. It helps to open up narrowed or blocked arteries. A small balloon is inserted through a tube that has been placed in your groin area or wrist. The balloon is passed into the narrowed heart artery. The balloon is then inflated. This pushes the blockage (plaque) to the sides of the artery and stretches the artery open. This will allow the blood to flow more easily. In most patients, a small wire mesh tube called a stent is placed on the balloon. When the balloon inflates, the stent is placed in the artery. The stent will help to keep the artery open. The balloon and catheters will be taken out. The stent stays in the artery permanently. In the months to come, the artery wall will heal.

What if I Need Open Heart Surgery?

If your doctor recommends open heart surgery, a heart surgeon will usually see you later that same day. The heart surgeon reviews all your tests and comes to talk to you and your family.

If you need open heart surgery, often you are able to go home. You would then come back at a later date for your surgery.

If you need surgery more urgently, then you are kept in the hospital. Your surgery is usually performed within a week.

What happens when the test is done?

What can I expect if my Test is done through the wrist?

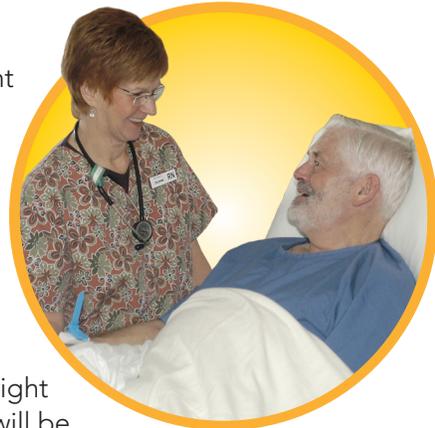
At the end of your test, the doctor will remove the tube from your wrist.

Then a tight bracelet is placed around your wrist to prevent bleeding.

You can usually sit up in bed right away. You will be taken to the waiting area outside the procedure room. There the nurse will check for any bleeding from your wrist. The nurse will check your blood pressure and pulse quite often. You will return to your bed on 5B North in approximately 30 minutes.

To prevent bleeding from your wrist, please remember the following:

- The bracelet will be kept on your wrist for about two hours. Sometimes it must stay on longer if needed.
- You must not put pressure on your wrist. For example, do not use your wrist to push yourself up in the bed, or push yourself up from a chair.



- Please do not flex the wrist for the rest of the day. You may move your fingers.

You can expect some mild tingling and tenderness of your hand and fingers.

What can I expect if my test is done through the groin?

When your groin area is used for the test, you will be taken out to the waiting area. The nurse will often remove the tube from your groin area. Sometimes the tube must stay in and be removed in one to two hours. When you are back in your room a nurse will then come to remove the tube from your groin area. When the tube is removed, firm pressure will be put on the area for up to 20 minutes to stop bleeding. Your nurse will check you often for any signs of bleeding.

To prevent bleeding from your groin area, please remember the following:

- You will be kept flat on your back and quiet for four hours after the tube comes out. In some cases you may have the head of your bed elevated
- Do not lift your arms over or under your head
- Do not bend your knee, raise your leg, or cross your ankles
- Do not strain or lift
- If you need to cough or sneeze, slight pressure will need to be placed over the groin area. The nurse will show you how to do this.

When can I eat and drink?

You can usually drink fluids immediately after your test. Your nurse will tell you when it is safe for you to eat.

Is it safe for me to go home the same day after the cardiac catheterization (heart dye test)?

Many people have this test each year. Experience shows that it is safe for you to go home later the same day. This however, will depend on your treatment. Your doctor will tell you if you are able to go home that same day.

When can I leave the hospital?

If you have a cardiac catheterization (heart dye test), you will be discharged the same day at approximately 5:00 p.m. Remember if you live more than 60 minutes from the hospital, you may need to stay in Saint John for the night. Your doctor will tell you if you are able to go home that same day. You can not drive. You must have a responsible adult stay with you that night.

If you had an angioplasty and stent, then you will likely need to stay in the hospital overnight. You are usually discharged the following morning after 9:00 a.m.

Before you are discharged, your nurse will discuss with you and your family what to expect when you go home.



Request for Your Feedback

We hope this heart health information has been helpful to you and your family. We would greatly appreciate if you would take a few minutes of your time to answer the following questions about the information contained in this booklet. Your comments and feedback are always welcomed and valued. Your answers will help us to continue to develop this booklet in a way that meets your needs. All responses will be held in strict confidence. Taking part is optional. You may leave any question blank that you do not wish to answer.

Age: <35 35-49 50-65 >65

Gender: Male Female

1. Did you find what you were looking for in this booklet?

Yes No If not, please tell us what is missing.

2. What information did you find most helpful?

3. What information did you find least helpful?

4. After reading the information in this booklet, do you feel less anxious about coming to the New Brunswick Heart Centre for your test?

Yes No If not, please tell us why?

5. After reading the information in this booklet, do you feel better prepared for coming to the New Brunswick Heart Centre for your test?

Yes No If not, please tell us why?

6. Do you feel you have learned more about preventing and managing heart disease?

Yes No If not, please tell us why?

7. How would you rate our booklet?

Excellent Good Fair Poor

8. Would you recommend our booklet to other people coming to the New Brunswick Heart Centre for a test?

Yes No If not, please tell us why?

9. Do you have any suggestions to improve our booklet?

*Thank you for taking the time
to answer our questions.*

Bring your completed form with you to your cardiac catheterization assessment appointment and drop off in the box provided in our clinic.

OR

Send to the following address:
Administrative Director, NB Heart Centre
Saint John Regional Hospital
P.O. Box/ C.P. 2100, Saint John, NB. E2L 4L2

Your name and return mailing address is optional.

The health information that is provided in this booklet was researched, developed, and reviewed by qualified health care providers at the New Brunswick Heart Centre. All information is accurate and reliable. This material is for information and education purposes only. It should not be used in place of medical advice, instruction and/or treatment. You should talk to your doctor for specific information on personal heart health matters.