



Centre for  
Heart Valve Innovation  
St. Paul's Hospital, Vancouver

# **You Are Having Transcatheter Aortic Valve Implantation (Transfemoral Approach)**





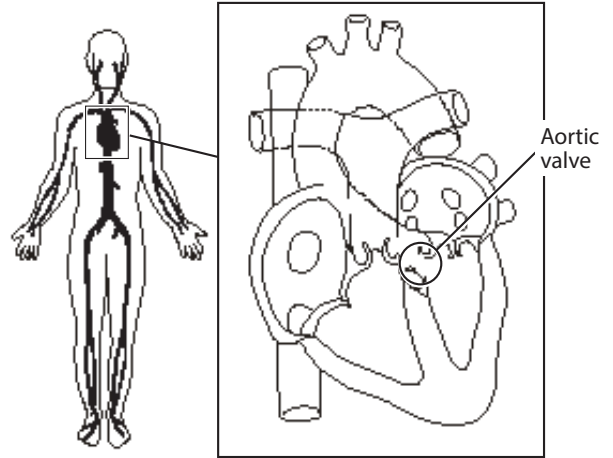
# Table of Contents

<b>Introduction</b>	<b>1</b>
<b>Waiting for TAVI</b>	<b>2</b>
How long will you be on the wait list?	2
Who looks after your medical health while you are on the wait list?	2
What if your health changes while waiting for TAVI?	2
<b>Preparing for TAVI</b>	<b>3</b>
Keep Active	3
Driving	3
Eat Healthy	3
Take your Medicines	4
See your Dentist	4
See Other Healthcare Providers	4
<b>Planning Ahead</b>	<b>4</b>
Your Going Home Plan	4
Understanding the Consent for TAVI	5
Advanced Care Planning	6
<b>Coming to the Hospital for TAVI</b>	<b>6</b>
Your Procedure Date	6
The Pre-Assessment Clinic Visit	7
The Day of the Procedure	8
<b>The TAVI Procedure</b>	<b>9</b>
Frequently asked questions	9
<b>In Hospital after TAVI</b>	<b>11</b>
After the Procedure	11
Equipment	11
Activity	11
Eating and Drinking	12
Pain and Discomfort	12
Tests	12
Sleeping in the Hospital	12
Visitors	12
<b>Going Home after TAVI</b>	<b>13</b>
Medicines	14
Follow-Up Appointments	14
<b>Contact Information and Maps</b>	<b>18</b>
<b>Questions I Have</b>	<b>19</b>

**Y**OU RECENTLY HAD HEART TESTS and meetings to discuss the treatment of your aortic valve disease. The heart valve team recommended transcatheter aortic valve implantation (TAVI) as your best option.

You are now on the wait list. You told us that you are ready, willing and able to come to St. Paul's Hospital or Vancouver General Hospital as soon as we give you a date for your procedure.

This booklet will help you prepare for TAVI, plan for your return home, and give you information to use after TAVI. Please read it and discuss it with your family or friends.



We have included information about the different steps you can expect along your TAVI journey:

1. Waiting for TAVI
2. Preparing for TAVI
3. Planning ahead
4. Coming to hospital for TAVI
5. The TAVI procedure
6. In hospital after TAVI
7. Going home

Use the page at the back of the book to keep track of important dates and write questions you have.

## Waiting for TAVI

### *How long will you be on the wait list?*

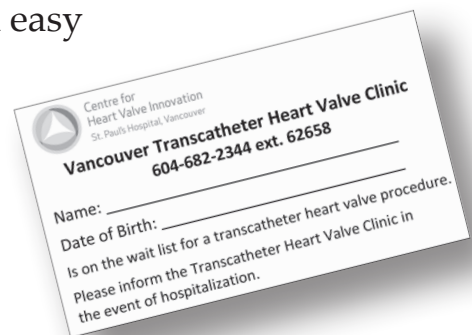
It depends on many things, including your overall health and your symptoms. Wait time is usually several weeks from the time of your TAVI appointments. The TAVI Clinic Nurse gives you an approximate wait time.

### *Who looks after your medical health while you are on the wait list?*

Your regular doctor(s) continues to be responsible for your medical care while you are waiting for TAVI. You need to see this doctor(s) as they request. Our TAVI doctors are responsible for your medical care when you come to hospital for the procedure. After you go home, you continue to see your regular doctor(s). If you are not clear who this doctor is, please ask us.

### *What if your health changes while waiting for TAVI?*

**Your TAVI cards:** We send you a card that says that you are waiting for TAVI and that someone must call the TAVI Clinic if your health changes. Put one card in your wallet or purse that you usually carry when you are out. Put the other one on your fridge (this is an easy way for people to find information about you). If you go to a hospital emergency department, if you are admitted to hospital, or if you see a doctor who is not your regular doctor, show them this card so that they know they must call the TAVI Clinic.



**Vancouver TAVI Clinic**

**604-682-2344 ext. 62658**

**What health changes could happen:** Over time, your aortic valve stiffens and the opening gets smaller. It gets harder for the heart to pump blood through the valve. Health changes can be difficult to interpret. These are some basic guidelines:

- **Small changes:** It is normal to have small changes in how you feel. For example, you might feel a bit more tired or more short of breath than you did recently. In this case, your regular doctor(s) monitors and treat you.

## Health changes, *continued*

- **Worrisome changes:** If you are worried about your health changes, call the TAVI Clinic. For example, if you are feeling quite a bit more tired or more short of breath, it is best to let us know.
- **Sudden changes:** If you are feeling much worse than you did recently, follow your doctor's instructions or call 911. Ask a family member to call our office.
- **If you go to the hospital:** Show your TAVI card to the doctor or nurse. Ask the doctor or nurse to call the TAVI Clinic. Once the TAVI Clinic is alerted that you have had a sudden health change, we contact you and your regular doctor(s) and follow your progress. Depending on your situation, we let you know if the changes in your health affect the wait time for your procedure. If our doctors feel that TAVI is no longer the best treatment for you, we recommend other options for your heart condition.

## Preparing for TAVI

Here are some guidelines for what you should do while waiting for TAVI:

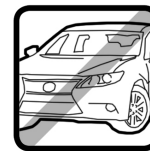
### *Keep active*

Stay as active as you can. Ask your regular doctor about what level of activity is best for you. Exercise every day, even if it is only for a short period of time. Exercise is important for your heart and general health. Slow down if you get short of breath, have chest pain, or feel faint. Talk with your regular doctor about which activities are best for you.



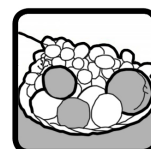
### *Driving*

If you have symptoms of severe aortic stenosis (like shortness of breath, chest pain, fainting or significant fatigue), we recommend that you do not drive until your valve is replaced. However, every person is different. Talk to your regular doctor about whether or not it is safe for you to drive during this time.



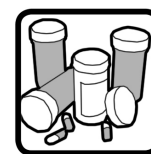
### *Eat healthy*

It is important that you eat as well as possible to prepare for TAVI. If your doctor has restricted the amount of liquids and/or salt you should have, continue to follow your doctors' recommendations.



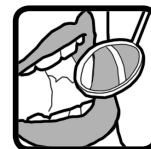
## *Take your medicines*

Continue to take the medicines that your doctor has prescribed. If you are taking blood thinners, the TAVI Clinic nurse may call you to make some changes a few days before TAVI.



## *See your dentist*

Book an appointment with your dentist if you have your own teeth and you have not had a dental check-up in the last 6 months. If you need dental work done, arrange to have it done before your procedure date. Dental work done right after receiving a new heart valve could cause the new valve to become infected.



## *See other healthcare providers*

The TAVI Clinic nurse or doctors may want you to see other medical specialists while you are waiting for TAVI. For example, you might benefit from seeing a geriatrician (a doctor who specializes in the care of older adults), a physiotherapist (a therapist who helps people move as well as possible), a dietitian, or a psychiatrist.



# Planning Ahead

## *Your Going Home Plan*



In most cases, TAVI is a same-day procedure with an overnight stay. This means that **Our Goal** is for you to walk and do basic activities (like eating, drinking, going to the washroom) on the day of your procedure, and to go home the next day. In some cases, people may need more time to recover in hospital. Most people recover faster if they do not stay in hospital longer than needed. It is best to plan to go home the day after TAVI so that you and your family are prepared. This planning is one of the most important things you and your family can do to help make your procedure a success.

Your Going Home Plan should include the following:

**Getting home:** You must make your own arrangements for your trip home. This includes road transport, flights, and accommodation payment. Even if you came to hospital by ambulance or air ambulance, you must arrange your return home. Ambulance services cannot be used to return people to their home.

## **Going Home Plan,** *continued*

Arrange to have someone travel with you for the trip home. If this is not possible, let the TAVI nurse know. If you are from outside the Vancouver area, we suggest you stay one night close to the hospital before your trip home.

**Help at home:** You will need some help when you first go home. It is hard to predict how much help you will need, and for how long. It is best to plan ahead so that you are sure to have the help you may need.

We suggest you arrange to have someone stay with you for the first 2 days or longer to help you recover. If you do not have family or friends to help you, speak to the TAVI Nurse.

**Recovering after TAVI:** Most people say that it takes them about one month to fully recover after TAVI. It is hard to predict who recovers quickly and who takes more time.

## ***Understanding the Consent for TAVI***

A medical consent is an agreement between you and your doctor. The doctor explains the benefits and risks of TAVI, and answers your questions. You are then asked to sign the consent form. This means that you agree that your doctor does the procedure, provides care for you while you are in hospital, and treats any complications you might develop.

Most medical procedures have risks. The risks that can be associated with TAVI include:

- having a stroke
- needing a permanent pacemaker
- bleeding from the groin puncture site
- leaking around the new valve

In very rare cases, there can be a life-threatening complication. Open heart surgery may be the best option. Your doctor may decide to proceed if this is what you/your family have decided should this be necessary. This means putting the patient to sleep, opening the chest, possibly using the heart-lung bypass machine, and doing surgery to fix the problem. The decision is made by your doctors based on the type of complication.



Emergency open heart surgery can be risky. Complications are hard to predict. When you sign the consent, your doctor asks you to agree to have TAVI as well as heart surgery to treat a life-threatening complication. The consent says:

I agree to have transfemoral TAVI (and heart surgery if needed to treat a complication)

If this is not what you want, you need to discuss this with your TAVI doctor before or when you sign the consent. Write down your questions and concerns at the end of this booklet. Contact the TAVI Clinic with your questions. It is better to answer all your questions now rather than just before your procedure.

### *Advanced Care Planning*

Before all medical procedures, it is important to plan now for the care you wish to receive should your health worsen. Think about your personal and financial affairs. Talk to your family about your future health care, in case you cannot speak for yourself later.

## **Coming to the Hospital for TAVI**

### **Your Procedure Date**

The TAVI Clinic nurse calls you to tell you the date and location of your procedure.

*Write this information on the planning form at the end of this booklet.*

It will be in one of three areas: *(see maps at back of book)*

- St. Paul's Hospital Operating Room
  - Go to the Surgical Day Care on the 3rd Floor of the Providence Building
- St. Paul's Hospital Cardiac Cath Lab
  - Go to the Reception on the 5th Floor of the Providence Building
- Vancouver General Hospital Cardiac Cath Lab
  - Go to the Ground Floor of the Jim Pattison South Pavilion, report to Station 7 – Heart Services



**Our Goal** is to let you know early enough to allow you to plan. However, we may call you on short notice if there is a change in our wait list. Sometimes, we need to cancel and postpone your procedure because of other surgeries or emergencies.

## **The Pre-Admission Clinic Visit**

Most people attend a pre-admission clinic visit before the procedure date. You go to the clinic in the hospital where you have the procedure.

- If you live in the greater Vancouver area, your appointment is either the week before the procedures or a few weeks earlier.
- If you live further away, your appointment is likely the day before your procedure. Plan to come to Vancouver a few days before your procedure date.

You see a cardiac nurse and an anaesthesiologist (the doctor who gives you medicines to relax or make you sleepy during the procedure). We take a health history, get an update on your medications, check your blood pressure and heart rate, and listen to your chest. You have an x-ray of your chest, an electrocardiogram, and some blood and urine tests. Please tell us if you have frequent bladder infections or have ever been told that you have an enlarged prostate.

We give you instructions on how to prepare and where to go on the day of your procedure.

## The Day of the Procedure

Most people come to hospital the morning of the procedure. We let you know what time you should arrive.



***Do not eat anything*** (any solid food) ***after midnight (12:00 am)*** the night before your procedure.

***You may drink sips of water, clear juice, or tea without milk*** until ***3 hours*** before you arrive at the hospital.

Take your usual medicines in the morning with a small sip of water. If you take insulin, pills for diabetes, aspirin, or blood thinners (such as warfarin or Coumadin), we give you specific instructions during your Pre-Admission Clinic visit.

While in hospital, you might need the following:

- ☐ Toothbrush and toothpaste
- ☐ Comb or brush
- ☐ Slippers with non-slip soles
- ☐ Glasses
- ☐ Hearing aid
- ☐ Reading material
- ☐ Your walking aid, such as a cane or walker

Bring only few personal items and clothing. It is best if your family can keep your clothes until you are ready to leave the hospital.

We suggest that you obtain insurance for the valuable belongings that you need to keep with you. This is to insure against both loss and damage. Your insurance should include coverage for glasses, hearing aids, dentures, watches, as well as your own wheelchair or walker. Our insurance only covers items that we have damaged or lost.

If you wear glasses, hearing aids, or dentures, it is a good idea to have them labelled or engraved with your name.

## The TAVI Procedure

**T is for Transcatheter:** This means we use a small flexible and hollow tube called a catheter. The doctor makes a small opening in the artery in the leg (called transfemoral). The doctor then threads the catheter and the new valve into the right position.

**A is for Aortic and V is for Valve:** The aortic valve is one of 4 valves in the heart that opens and closes to let blood through in the right direction at the right time. The aortic valve controls the way oxygen-rich blood flows from the heart to the rest of the body.

**I is for Implantation:** The new valve is placed (implanted) inside the existing valve. It pushes the old valve leaflets to the side to create a space for the new valve to open and close freely.

### *Frequently asked questions*

1. *Is TAVI like anything else I have ever had?*

Some people say it is like a “bigger angiogram”. It is similar to an angiogram done through the leg because the doctor makes a small opening in the groin, and uses an x-ray camera and other monitors to guide the catheter and place the new valve. It is different because the opening is bigger for the valve catheter, the doctor places two other small catheters in the other groin, and the procedure takes more time.

2. *What happens before the procedure?*

When you arrive in the admission area near the procedure room, we check you in. You change into a hospital gown and lay in a bed. When you are ready to be moved to the procedure room, we suggest you give all your belongings (like your dentures, glasses and wallet) to your family to keep your things safe.

3. *What equipment will I have?*

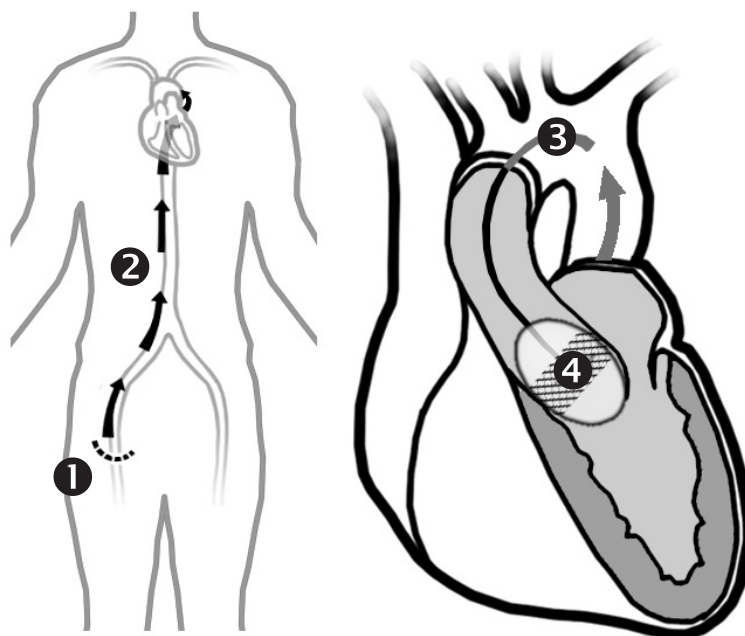
Usually, we start an intravenous (intra meaning “into” and venous meaning “vein”, commonly called an IV) in your arm or hand. We attach you to a cardiac monitor (similar to when you have had an electrocardiogram or ECG).

#### 4. *Will I be awake?*

Most people are awake or sleeping lightly during TAVI. Our goal is for you to be comfortable. The doctor injects “freezing” medicine (like at the dentist) with a small needle in the groin. The doctor may give you medicines to help you relax. In some cases, you may need “general anaesthesia”. This means you receive medicines that cause all your muscles to completely relax. Once you are asleep, the doctor puts a breathing tube in your throat and into your lungs to give you oxygen and help you breathe. The breathing tube is usually removed at the end of the procedure.

#### 5. *What will the TAVI doctor do?*

- A small opening is made in the femoral artery in the groin. ❶
- A catheter (small flexible and hollow tube) is threaded through the artery and up into the heart. ❷
- The doctor uses a special x-ray machine to guide the catheter ❸
- The new valve ❹ is placed into the right valve.
- We may insert a small wire attached to a temporary pacemaker in case we need to control your heart rhythm while the valve is secured in place. This small wire is usually removed at the end of the procedure.
- Once the new valve is securely in place, the catheter is removed.
- A dressing is placed over the skin opening in the groin.



## Frequently asked questions, *continued*

6. How long does the procedure take? The procedure usually takes 1.5 to 2 hours. The actual insertion of the new valve takes about 30 minutes.
7. I'm in hospital right now. What is different for me? Your nurse goes over the information with you and answers your questions. Your preparation is the same. You have the same tests and meetings with doctors. On the day of the procedure, you are brought to the procedure room. You may come back to the same bed after TAVI or transferred to another bed or unit to recover.

## In Hospital after TAVI

### *After the Procedure*

After TAVI, you are transferred to a clinical area to recover. Depending on where you had your procedure, you may recover in the area next to the Cath Lab, in the Cardiac Intensive Care Unit, the Cardiology Ward or the Cardiac Care Unit. Your nurses inform your family. Your TAVI doctor speaks to you and your family.

### *Equipment*

You have a heart monitor and an intravenous ("IV") in your arm or hand. If you still have a small catheter in your groin, the nurse removes it using a pressure device (like when you had a cardiac angiogram). Your nurse changes and removes your dressing as necessary.

### *Activity*

You lie in bed for the first 4 hours. You first lie flat for at least two hours. We then raise the head of the bed to make you comfortable and help you turn from side to side. We remind you to keep your legs straight. This is to make sure you don't start to bleed through the small opening we made in your groin. The nurse checks your groin area and feet frequently.

After 4 hours, and if there is no bleeding, we help you stand and walk.



**Our Goal** is for you to have two short walks on the evening of the procedure. It is very important for you to be as active as possible to recover and prepare to leave the hospital.

## *Eating and Drinking*

Once you feel well enough, you can start drinking clear fluids.



**Our Goal** is for you to have a light supper on the evening of the procedure. It is important to drink enough liquids and eat enough food to help you recover as soon as possible. Your appetite may be smaller than usual for a few days.

## *Pain and Discomfort*

Most people who have TAVI do not have a lot of pain.

We ask you to rate your pain using a number scale: “On a scale from 0 to 10, where 0 means no pain at all, and 10 means the worse pain ever, how much pain are you having right now?” We use the same scale all the time so we can compare your pain over time.

Sometimes, people get a bruise which can get quite large. The bruise slowly goes away.

## *Tests*

After your TAVI, you have an echocardiogram (ultrasound of the heart), an electrocardiogram, and some blood tests.

## *Sleeping in the Hospital*

Some people do not sleep well in hospital. Let us know if you have certain sleeping habits that work for you, or you take a sleeping pill at home.

## *Visitors*

Family plays an important role in a patient’s recovery. Families are welcome to be present at any time. The hospital does not restrict visiting hours to family members. Of course, you must follow a few guidelines.

- sick people need rest. You can visit often, but please respect your loved ones wishes for privacy or rest.
- children under 14 must be under adult supervision (from someone other than the patient) at all times.
- visiting may be restricted to protect the privacy and rights of other patients.



### **Visitors, *continued***

- your visit may be interrupted by staff to provide patient care.
- if you feel unwell, have an infection, flu-like or respiratory symptoms, or any sort of communicable disease, or have recently been in contact with anyone with these symptoms, we encourage you to stay at home until you're well again.
- we may not have the space to accommodate a large number of family members, but we'll try our best.

## **Going Home after TAVI**



**Our Goal** is for you to go home or leave the hospital the day after your TAVI.

Once at home, your priorities are to recover safely, rest, get back to your regular activities, and do a bit more every day until you feel well.

### ***Groin Site Care***

Check your groin puncture site every day. It can be normal to have a bruise or soft lump. It is not normal if the lump gets bigger or harder quickly. This can mean that you are bleeding. If this happen, you must:

- lie down
- ask someone to press down hard for 15 minutes just above the hole in your skin where the procedure was done. They will know if they are doing this right if the lump does not get bigger or harder. They must not stop pressing for the first 15 minutes.
- if the bleeding stops after 15 minutes, rest and stay lying down for at least 2 hours.
- if the bleeding does not stop after 15 minutes, call 911 for an ambulance to take you to the hospital. Do not drive yourself. Do not ask anyone else to drive you.



**See your doctor as soon possible if you have any of these problems:**

- redness and warmth that does not go away
- yellow or green drainage from the wound
- fever and chills
- numbness in your legs that is getting worse
- pain in the site that is getting worse

***Medicines***

There are some medicines that help prevent complications after your heart valve procedure. For example, you may need to take clopidogrel (“Plavix”), aspirin or warfarin (“Coumadin”) to stop clots from attaching to your new heart valve. These are important medicines.

If we give you a prescription before leaving the hospital, go to the pharmacy in the first 24 hours (or have someone go for you). We may give you information about your medicines. Keep this information for future reference.

You regular doctor(s) reviews your medicines during your first appointment. If you have questions about your medicines, speak to your doctor or your pharmacist.

***Follow-Up Appointments***

- **1 to 2 Weeks after TAVI:** See your family doctor after you get home. Your doctor checks your groin puncture site and your heart.
- **1 Month after TAVI:** You will either come to the TAVI Clinic at St. Paul’s Hospital (even if you had your procedure at Vancouver General Hospital) or have a check-in by phone for your TAVI follow-up. This will depend on where you live and if you are able to travel to Vancouver for an appointment. We give you an appointment letter for the clinic visit and an echocardiogram (heart ultrasound) before you leave the hospital.
- **2 to 3 Months after TAVI:** See you heart doctor (cardiologist or internist). Make an appointment as soon as you get home. Your heart doctor continues to be your heart specialist.
- **1 Year after TAVI:** The TAVI Clinic calls you to ask you questions about your health. You have an echocardiogram (heart ultrasound) in a hospital close to you.

## *Your Heart Valve Card*

We give you 3 copies of your Heart Valve Card when you leave the hospital.



**Our Goal** is for you to always tell your doctors, your dentist and your health care teams about your new heart valve in the future.

We recommend that you use your Heart Valve Cards in the following ways:

1. Keep one in your wallet or purse
2. Put one on your fridge door (this is an easy way for people to find information about you)
3. Give one to a family member or close friend



If you go to the emergency department or are admitted to hospital in the first month after TAVI:

1. Show your Heart Valve Card to the doctor or nurse
2. Ask the doctor or nurse to call the TAVI Clinic at St. Paul's Hospital (even if you had your procedure at Vancouver General Hospital)

If you must have major dental work or other medical procedures (like surgery):

1. Show your Heart Valve Card to your dentist, doctor or nurse
2. Tell your dentist that you have a prosthetic heart valve. Dental work done right after receiving a new heart valve could cause the new valve to become infected. You might have to take antibiotics before the procedure to prevent an infection.

## *Driving*

Most people can start driving one week after TAVI. You must have someone with you the first time you drive.

If your regular doctor(s) has told you in the past that you could not drive, you must check with them before you drive again.

## *Eating and Drinking*

Eating nutritious foods every day is important for your recovery. Some people find that they have a poor appetite for a few weeks after TAVI. Eating small frequent meals in the first week helps you regain strength.

If you had to restrict the amount of fluids you could drink before TAVI, you must continue to do so until you speak with your regular doctor(s). If you don't have any fluid restrictions, make sure you drink enough to stay well hydrated.

## *Activity and Exercise*

Daily activity and exercise are an important part of your recovery. People recover at different rates depending on their general health. Most people take approximately one month to feel recovered.

Do not lift, push or pull anything that weighs 10 pounds or more (like vacuuming, laundry, groceries, gardening, or a golf cart) for one week after TAVI.

Follow these activity and exercise guidelines:

- Move ahead from Step 1 to Step 4. Take 1 to 4 days to complete each step
- Always pay attention to how you feel whenever you increase your activity or add a new activity
- If you have any symptoms (unusual tiredness, shortness of breath, chest pain for dizziness), you must stop the activity and go back to the step that you had no symptoms.

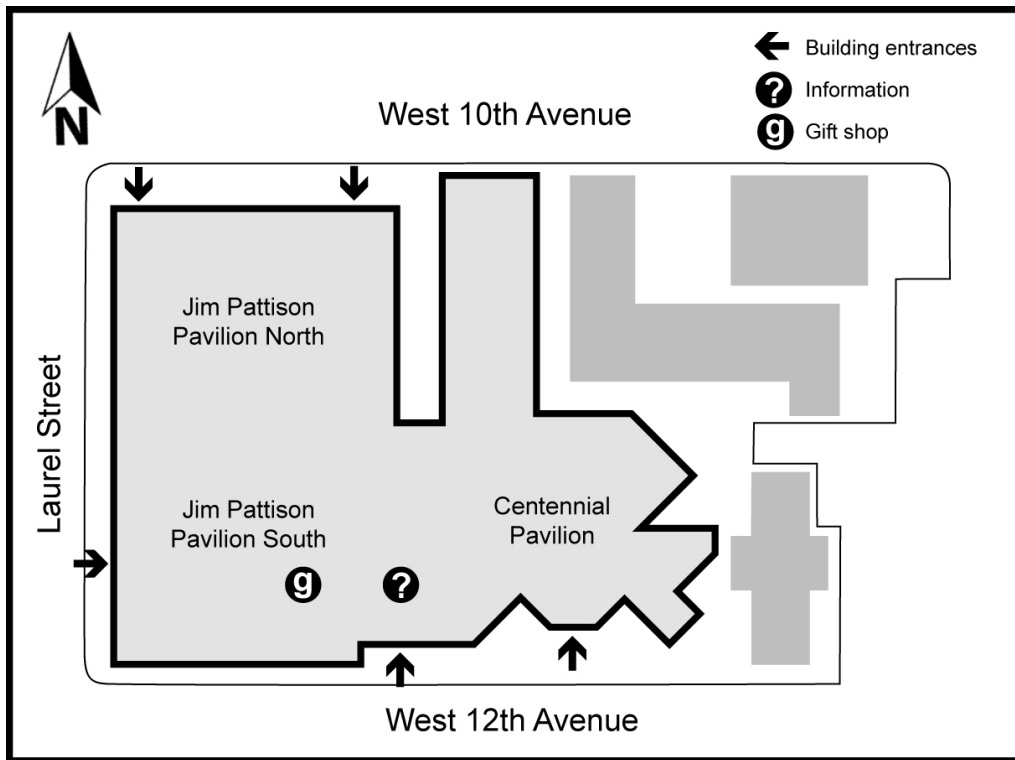
	At home	Walking
<b>Step 1</b>	<p>Get up and get dressed.</p> <p>Take care of your personal needs (like washing, making simple meals).</p> <p>Keep your activities easy for short amounts of time, and with many rest periods.</p>	<p>Walk around your home.</p> <p>Go slowly on stairs.</p>
<b>Step 2</b>	<p>Slowly return to activities around the house that don't involve a long time standing or using your arms (this causes more strain on your body)</p>	<p>Walk for 5 to 10 minutes at a time once or twice a day.</p> <p>Stay close to home.</p> <p>Avoid hills.</p> <p>These walks should feel 'light' or 'easy'.</p>
<b>Step 3</b>	<p>Do a few more activities around the house (like making your bed, making simple meals, watering plants)</p>	<p>Continue to walk once or twice a day.</p> <p>Make your walks longer. For example, add 5 minutes every day or two.</p> <p>These walks should feel 'easy'.</p>
<b>Step 4</b>	<p>Slowly start returning to your regular activities (like shopping, light gardening, going out with friends)</p>	<p>When a 15-minute walk feels easy, increase your walking speed that feels 'moderate'.</p> <p>Continue to lengthen your walks until you are walking 30 to 60 minutes every day, or for as long as you are comfortable.</p>

### *Cardiac Rehabilitation*

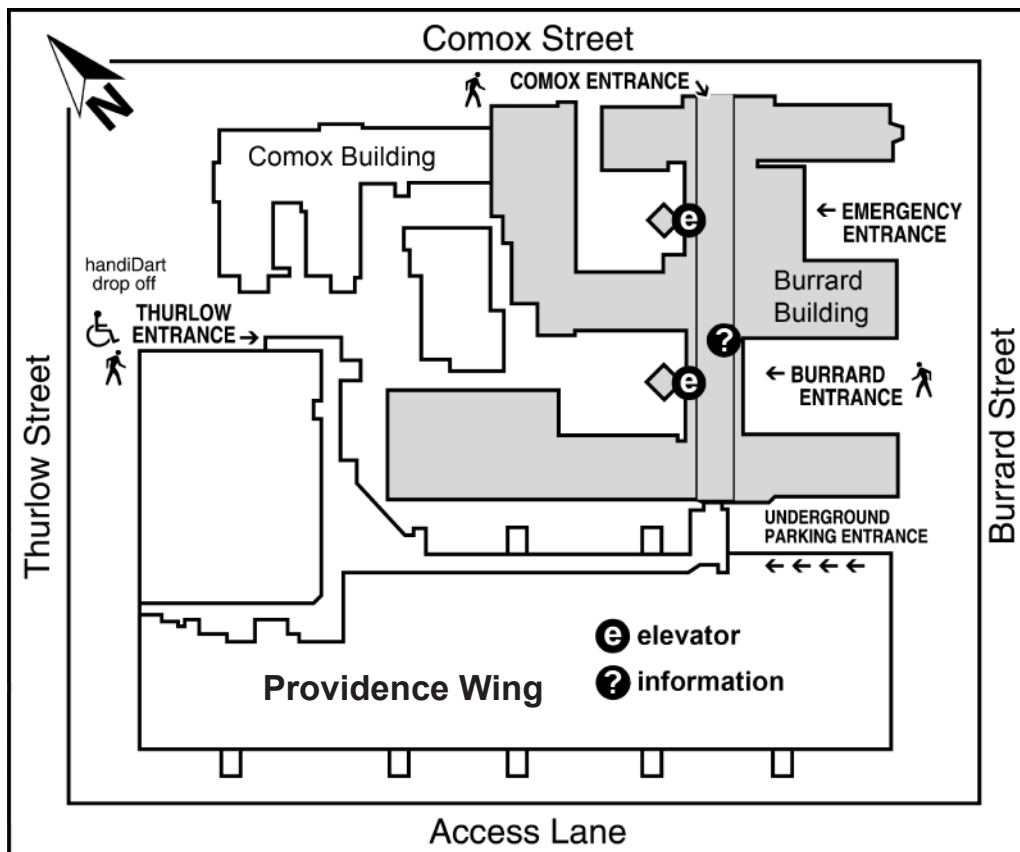
We strongly suggest that you attend a cardiac rehabilitation program such as "Healthy Heart" Program. This type of program helps you:

- Learn how to return to your daily activities and hobbies
- Participate in safe and heart-healthy activities
- Learn about your heart health
- Prevent more heart problems

Talk to your regular doctor(s) about which cardiac rehabilitation program is best for you.



Jim Pattison Pavilion, Vancouver General Hospital



St. Paul's Hospital

[illegible]

20

This material is for informational purposes only.  
It does not replace the advice or counsel of a doctor or health care professional.  
Providence Health Care makes every effort to provide information that is accurate and timely,  
but makes no guarantee in this regard.  
You should consult with, and rely only on the advice of, your physician or health care professional.

The information in this document is intended solely for the person to whom it was given by the health care team.

This material has been  
reviewed and approved by  
patients, families and staff.

