

Transcatheter Aortic Valve Implantation



An option for treating aortic stenosis



Cardiac Services BC

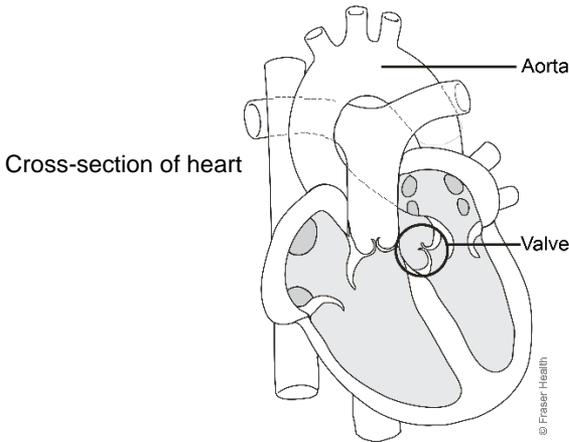
Your doctor has confirmed that the aortic valve in your heart is not working properly. Your doctor thinks a procedure called transcatheter aortic valve implantation or TAVI (say '*tah-vee*') might be an option for treating this problem.

This booklet describes what this procedure is and what to consider before deciding if a TAVI is a therapy you should consider. We hope it helps you understand how treatment recommendations are made and how you will be part of that process.

Please read this booklet, share it with your family, and bring it with you when you come to the TAVI Clinic. Think about questions you might want to ask and write them down on the last page of this booklet.

Why you might need a new aortic valve

The aortic valve is one of four valves in your heart. These valves keep blood flowing in the right direction through your heart. When your heart beats, blood is pumped out of the heart through the aortic valve to your lungs and the rest of your body.



When the aortic valve is not working properly, it can be because either:

- a. the aortic valve is too tight (does not opening easily) - we call this aortic stenosis (say 'ay-or-tic sten-oh-sis'), or
- b. the aortic valve is too leaky (does not close properly) - we call this aortic regurgitation

Aortic stenosis is more common than aortic regurgitation. In some people, as they age, the valve gradually becomes stiff. Blood has more and more trouble pumping through the valve opening. When this happens, it can cause a person to feel short of breath, have chest pain, and/or feel faint or very tired.

How aortic stenosis can be treated

Aortic stenosis is a problem with how your aortic valve moves and works. The only way to relieve the stenosis is to replace the valve. There are two options for replacing the valve:

- A. Surgical aortic valve replacement (SAVR)
- B. Transcatheter aortic valve implementation (TAVI).

Surgical aortic valve replacement, also called open heart surgery, is a well-established procedure done with success on many people. During the surgery, the surgeon opens your chest, connects you to a heart-lung machine to keep your blood pumping around your body, removes your diseased valve, and replaces it with a new valve. It is a very good procedure that leaves you with an excellent result, but it can take 3 to 6 months to fully recover. For some people, this surgery is a good choice for treating aortic valve disease

A TAVI is a newer procedure for replacing the aortic valve. It can be easier to recover from. TAVI might be a better option if:

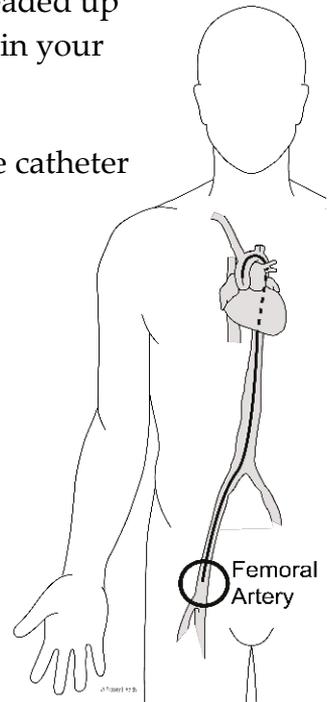
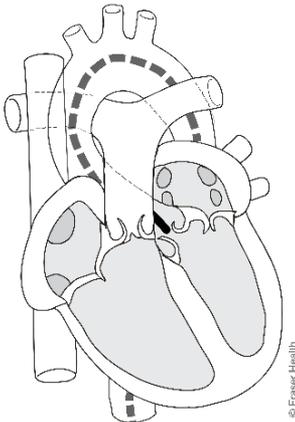
- You are older than 80 years and have health problems that can limit your ability to recover from open heart surgery (such as kidney disease, lung disease, or cancer).
- or**
- You have had one or more open heart surgeries in the past.
- or**
- You are not well enough to have open heart surgery because of a health condition such as kidney disease or stroke.
- and**
- The Heart Valve team agrees that TAVI is the right treatment for you.

Transcatheter Aortic Valve Implantation

- T:** Transcatheter means through a catheter. A catheter is a long, thin, flexible, hollow tube.
- A:** Aortic is the name of the heart valve where the aorta attaches to the heart.
- V:** Valve is the part of the heart that opens and closes when the heart beats.
- I:** Implantation means to implant or place a new heart valve.

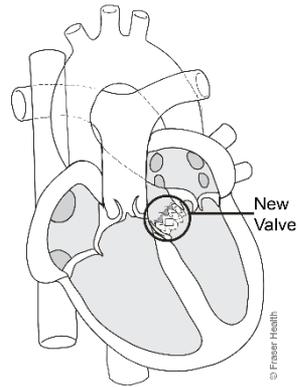
The procedure is done by attaching the new valve to the end of the catheter. The catheter is threaded up into your heart through a large artery in your groin called the femoral artery.

We use X-ray images to help guide the catheter to your heart and aortic valve.



Once in the right location, the new valve is implanted and the catheter is removed.

Unlike open heart surgery, you are usually awake. There is no need to use a heart lung machine. There are no large surgical incisions.



The TAVI Assessment Process

To determine if TAVI is right treatment for you, we need to gather a lot of information about your heart and your health.

These are the steps you can expect:

- Step 1** We make an appointment(s) for you to come to our clinic for a TAVI assessment. We let you know the days, times, and locations of your heart tests and clinic visits(s).
- Step 2** You come to the clinic for your TAVI assessment.
- Step 3** You have some heart tests (You might need a few of them).
- Step 4** The heart valve team meets to review the results of your assessment and heart tests. From this, they determine the best way to treat your aortic stenosis.
- Step 5** The heart valve team contacts you to let you and your family of the next steps.

Your TAVI Clinic Appointment

Expect to come to the TAVI Clinic for at least one appointment, and maybe more. Your heart tests might not be done in the same hospital as your TAVI Clinic appointment.

Before your TAVI Clinic appointment, talk to your doctor about making an advance care plan and perhaps an advance directive.

Attending these appointments can be quite tiring because the tests take time and you need to go to different areas of the hospital. It's best to plan to rest before and after your appointments, come with someone who can help you, and bring some snacks and water with you.

If you are from out of town, we try to schedule appointments for your heart tests and clinic visit over 2 or 3 days in a row. (Remember to book your hotel for at least 2 to 3 nights.)

If you do not speak or understand English, we can get a medical interpreter. Ask someone in your doctor's office (or someone you know who speaks English) to call the TAVI coordinator at least 3 to 5 days before your appointment to request an interpreter. You do not have to pay for this service.

If you are already a patient in the TAVI hospital, someone from the heart valve team will come and speak with you to explain the plan and answer your questions.

What to bring

- This booklet along with a list of questions you and your family have for us
- A list of all the medicines you are taking
- The completed questionnaire called 'Quality of Life Patient Questionnaire'
- Any other form(s) we have sent to you
- Your advance care plan and/or advance directive
- Snacks and water
- Someone to be with you such as your spouse, adult child, or good friend so they can support you, give the team information about you, and maybe take notes for you

- _____

- _____

What to expect during the appointment

- We review what a TAVI is, how it is done, as well as the benefits and risks of this procedure.
- We give you information about how the team decides which treatment option is the best one for you.
- We ask you questions about your everyday life, what you can and cannot do for yourself, and your heart symptoms.
- We ask you to do some walking as well as some activities that check your thinking and memory.
- A doctor might give you a medical check-up and ask you questions about your heart and your health.
- We ask to take your picture. If you agree, you might need to sign a consent form. We keep your picture in your chart and it helps the TAVI team get to know you.
- We give you time to ask questions.

Heart tests

These tests help us decide whether TAVI is the best option for you. You might have already had some of these tests done in the past. However, we might need to do them again to get specific information.

Everyone being assessed for a TAVI has an echocardiogram, a cardiac angiogram, and a CT Scan. Some people might have more. We let you know what other tests you might need.

An echocardiogram: (an 'echo' for short) is an ultrasound test of the heart. This test uses sound waves to see the heart valves and muscle. It is done while you are lying down on a bed. A microphone-shaped wand is lubricated with gel and moved back and forth across your chest. It takes about 30 to 60 minutes to complete this test.

A cardiac angiogram: (a heart or cardiac catheterization or 'heart cath') is a test to check the blood vessels that supply the heart muscle with blood, and the blood pressure inside the heart. A heart specialist (cardiologist) uses x-ray images to guide a long, tiny, flexible catheter from an artery in your wrist or leg to the heart. X-ray dye (also called contrast) is injected through the catheter so the doctor can see your blood vessels better.

The test takes about 1 hour, but you stay in the hospital for about 4 to 6 hours after the test. You are given an information booklet on how to prepare for this test.

Computed Tomography Scan: (a 'CT Scan') is a special x-ray that takes many pictures of your heart and blood vessels in small sections or 'slices'. The computer puts these pictures together to create a three-dimensional (3D) view of your heart and blood vessels.

During the test, we give you contrast (x-ray dye) to outline the heart and blood vessels. To give the contrast, we start an intravenous and use this to inject the contrast into your bloodstream. It takes about 30 minutes to complete this test.

Referral to other doctors

Sometimes, we ask other specialists to see you.

In some cases, we might ask a doctor who specializes in caring for seniors (called a geriatrician) to see you.

Heart Valve Team Meeting

After your TAVI clinic appointment and the heart tests are completed, the heart valve team meets to review all of your test results. Based on this information, the team recommends the best treatment option for you.

What the team could recommend:

- **Medical management:** This means we think your aortic stenosis is best managed without surgery or TAVI for now. Your family doctor or heart specialist will continue to monitor and treat your aortic stenosis with medication. Your doctor might ask you to return to the TAVI Clinic in the future.
- **Supportive care:** This means that even if you had a heart valve replacement, we don't think it would improve the quality and/or length of your life. We will suggest that you be sent to a healthcare team that focuses on using medications to help improve your symptoms and quality of life.
- **Surgical aortic valve replacement:** This means we think open heart surgery is the best option for you. We will arrange for you talk with a heart (cardiac) surgeon.
- **Transcatheter Aortic Valve Implantation (TAVI):** This means we think a TAVI is the best option for you.

It's always a good idea to speak with your family and your doctor about the options. Like any medical procedure, a TAVI is not without risks. Some possible problems after a TAVI include:

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

We give you more information about the TAVI risks during your clinic visit.

When will you know?

The TAVI coordinator calls you after the heart valve team meeting to tell you our recommendation. The TAVI Coordinator also sends your family doctor or heart specialist a letter describing the heart valve team's recommendations.

If the team thinks a TAVI is the best option for you, take time to think about whether this is what you want. You might prefer one of the other options.

If you want to proceed with a TAVI:

- Call the TAVI office to let us know what you decided.
- We place you on a waitlist. We let you know how long the wait list is when you call.
- We send you information on what to expect before, during, and after your TAVI procedure.
- Your family doctor or heart specialist continues to care for your heart health while you wait for the TAVI.

Before the TAVI procedure

Any time before your TAVI procedure, call the TAVI office if:

- You have questions about the TAVI procedure.
- Your symptoms get worse compared to what they were during your clinic visit.

If we are not able to speak to you when you call, please leave a message. We do our best to call you back as soon as we can, however, we might not be able to call you back for a couple of days.

My TAVI Clinic contact information:

Transcatheter Aortic Valve Implantation Program
Royal Columbian Hospital
330 East Columbia Street,
New Westminster, B.C, V3L 3W7
Phone: 604-520-4392 (say 'TAVI')
Fax: 604-520-4799

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