

# Saskatchewan TAVI Heart Programs

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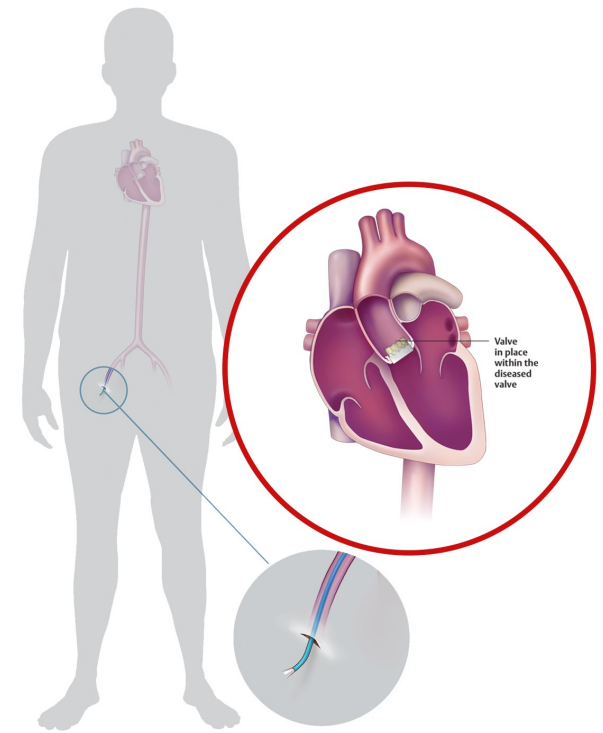
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**CS-PIER-0102**

## *Healthy People, Healthy Saskatchewan*

The Saskatchewan Health Authority works in the spirit of truth and reconciliation, acknowledging Saskatchewan as the traditional territory of First Nations and Métis People.



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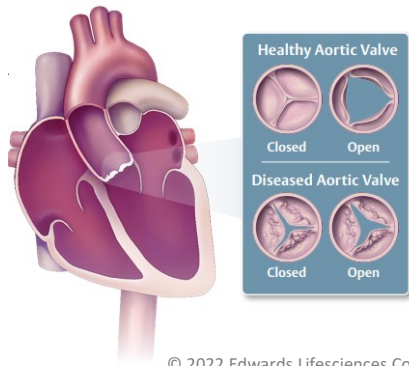
## PIER—Patient Information and Education Resource

OCTOBER 2024

## Transcatheter Aortic Valve Implantation ( TAVI) Patient Workup Guide

## The Heart and Heart Valves

The heart has 4 chambers and 4 valves. Heart chambers fill up with blood then squeeze that blood out through the heart valves. Heart valves act as one-way gates, allowing blood to move forward in one direction between the heart chambers preventing blood from leaking backwards. When the aortic valve opens blood flows from the heart to the body.



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## What is Aortic Stenosis?

Aortic stenosis means the aortic valve has become narrowed and does not fully open, making it harder for the heart to pump blood to the body. It's most frequently caused by calcium build-up from aging. Other reasons include being born with two leaflets instead of three, rheumatic fever, or chest radiation. Blood moves through the narrowed valve under higher pressure. Doctors often first detect a heart murmur which is a heart sound heard as blood rushes through the narrowed valve.

## Bioprosthetic Valve Dysfunction (Does not work properly)

Bioprosthetic (tissue) valves can also become severely narrowed (stenosis) or leaky (regurgitation). Treatment options are similar to those of aortic stenosis (page 6 and 7).

## Your symptoms - Your experience

Fill out the chart below prior to your clinic visit.

Symptoms	No	Mild	Mod	Severe	Did you have this symptoms 6 month ago?	
					yes	no
Chest pain or tightness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> yes	<input type="checkbox"/> no
Palpitations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> yes	<input type="checkbox"/> no
Shortness of breath	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> yes	<input type="checkbox"/> no
Dizziness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> yes	<input type="checkbox"/> no
Swollen ankles or feet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> yes	<input type="checkbox"/> no
Fainting		<input type="checkbox"/> yes	<input type="checkbox"/> no		<input type="checkbox"/> yes	<input type="checkbox"/> no

## Your Questions:

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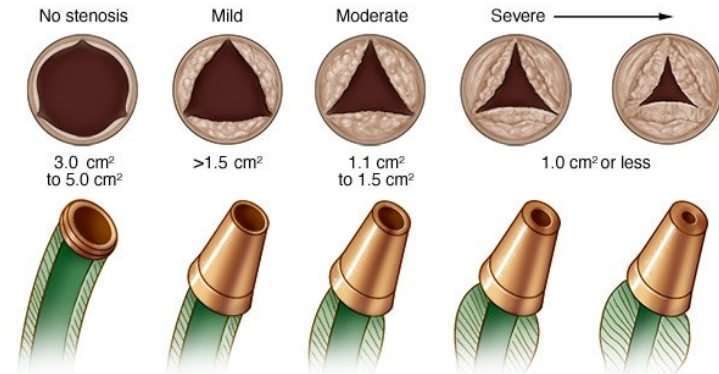
**Cardiac Rehab** is a program where you can stay active under the watch of healthcare professionals trained to help individuals with heart disease.

Would like to be referred to cardiac rehab?

Yes  No

## Stages of Aortic Stenosis

There are 3 stages of aortic stenosis: mild, moderate and severe. It often takes many years to progress from mild to moderate and finally severe. Aortic stenosis is monitored while it is mild to moderate but treatment is often recommended when it becomes severe and symptoms start.



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## Symptoms of Aortic Stenosis

As aortic stenosis progresses, pressure in the heart increases causing symptoms during exercise or activities. Symptoms may include: shortness of breath, chest pain, dizziness, fainting spells, leg swelling or congestive heart failure. These signs mean the heart is not working as well as it used to.

These symptoms may cause you to feel more tired and less able to do things you could 6 months to a year ago.

Some people mistake these changes for ageing rather than their heart.

## TAVI Workup - Are you a candidate?

A series of tests and appointments are needed to decide if you are a good candidate for a TAVI procedure.

**TAVI clinic:** In clinic, you learn about aortic stenosis and talk about the treatment options available to you.

### **Echocardiogram - an ultrasound of your heart**

This test looks at the heart strength, chambers and valves.

**Cardiac angiogram/catheterization (uses contrast)** - This test checks the heart arteries for any blockages. If there are blockages you may need a coronary stent.

**CT scan / CAT scan (uses contrast)** - A specialized scan for TAVI procedures. It helps us plan the procedure and informs us if the procedure is possible based on your anatomy.

*Currently, this CT scan is only done at the Royal University Hospital in Saskatoon and at the Regina General Hospital.*

**If you have an allergy to contrast or dye please notify your TAVI program on receipt of this booklet.**

## Did you know?

- The Saskatchewan Provincial TAVI program began in 2017.
- Typically, people go home 1 day after a TAVI procedure.
- Sometimes, select people go home the same day of their procedure.
- The TAVI valve is estimated to last about 10 to 15 years. Similar to a surgical tissue valve.
- You cannot drive for 1 month after your TAVI procedure. Talk to your local TAVI team regarding when you can resume driving.
- After a TAVI procedure, you can do all your basic activities. Do not lift anything over 5 kg (10 lbs) for 10 days to allow the procedure site to heal.
- Good dental hygiene and yearly checkups are recommended before a valve replacement. If you have not seen your dentist recently, please make an appointment. Dental clearance may be required prior to a valve procedure.

## Decision Making

After your TAVI workup is complete, the heart team carefully looks over your test results to decide if the TAVI procedure is the best treatment option for you.

Notification is sent in the mail from the TAVI program about whether or not the procedure is the best option for you.

***If you are approved for a TAVI procedure***, further instructions to guide you until it is time for your procedure are mailed to you. There is a waitlist for a TAVI procedure. Your estimated wait time will be communicated to you.

## Safe Activities

Strenuous exercise or activities that worsen your symptoms are not recommended. However, gentle walking and everyday activities such as light housework, yardwork and shopping for groceries keeps you mobile and still part of your community. Doing more than this is okay if you feel well or have only mild symptoms. Listen to your body and rest if you have symptoms.

**The healthcare team recommends you avoid strenuous exertion until the aortic heart valve is replaced.**

## TAVI Clinic - Meet your heart team

**Physician** - An interventional cardiologist and/or cardiac surgeon uses best practice guidelines to determine which of the three options is best for you (see next page).

**Registered Nurse coordinator** - assesses your day-to-day activities, physical function, and cognitive (brain) health to help determine if you are suitable for a TAVI procedure.

The healthcare team reviews your medical and surgical history, current medications, allergies and symptoms related to your heart conditions and your preference for treatment options.

The TAVI procedure and its associated risks are discussed along with any required tests and appointments.

## TAVI Clinic - What to bring

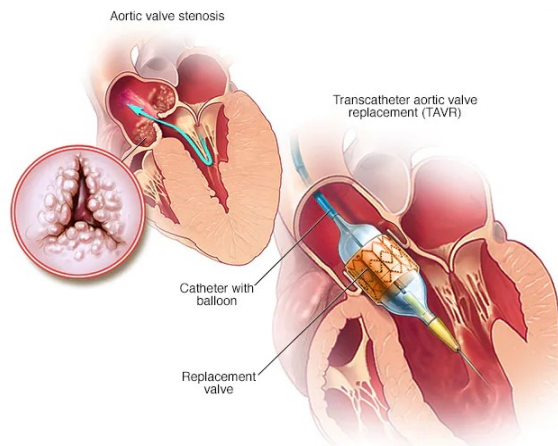
- Walking devices (cane or walker) and/or hearing aids
- This booklet and your questions
- A family member or friend
- Medication and allergy list
- A list of your past medical and surgical history, if known
- Email consent form - fill in your email address if you use one

## Treatment Options

### Transcatheter Aortic Valve Implantation (TAVI)

TAVI is a minimally invasive procedure done under sedation to treat patients with severe aortic stenosis. The TAVI valve is made from animal tissue such as bovine (cow) or porcine (pig) which is attached to a flexible, metallic frame. The valve is compressed (closed) onto a tube called a catheter which is inserted in the femoral artery near the groin. When the new valve is opened it pushes the old valve behind and out of the way.

It is common to spend a night in hospital before going home the next day. It generally takes about 1 week to recover from the procedure.



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If the femoral artery is too small or is diseased, the doctor may be able to use another artery under the collarbone called the subclavian artery or the carotid artery found in the neck.

## Treatment Options

### Surgical Aortic Valve Replacement (SAVR)

SAVR is an invasive surgical operation done under general anesthesia. A surgeon opens the breastbone and the heart is put on a heart lung machine during the operation. A cardiac surgeon cuts the old valve out and sews a new valve in. Most patients are in hospital for about 1 week and it takes about 6 weeks to fully heal at home.

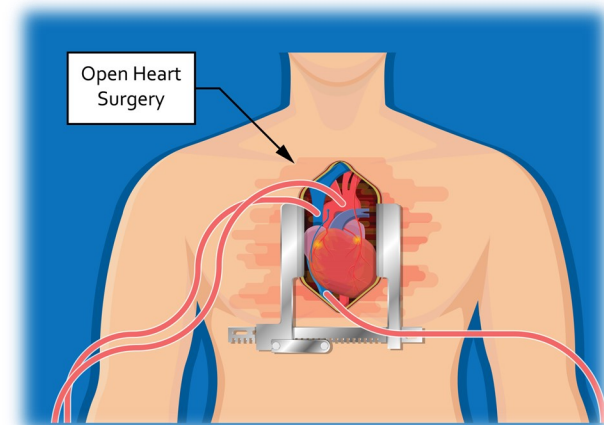


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### Medical management

Some people are not suitable for either the minimally invasive TAVI procedure or surgical valve replacement. Medications can be used to help relieve symptoms caused by aortic stenosis but are not a cure. This treatment plan is called medical management and is sometimes the safest and only option.