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# Transcatheter Aortic Valve Implantation

## Information and Procedure Guide

**Welcome**, you are approved for a Transcatheter Aortic Valve Implant (TAVI) procedure.

Your type of TAVI procedure is - see page 4 to 5 for details: ☐ Femoral ☐ Subclavian ☐ Carotid

Your wait time is: ☐ 1 to 2 months ☐ 3 to 4 months ☐ \_\_\_\_\_

*\* please note the above wait times are estimates. Dates will be confirmed by your TAVI program.*

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If your symptoms worsen or if you are hospitalized, please contact the TAVI clinic directly or have a family member do so. The clinic's contact information can be found at the back of this booklet.

## 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. The heart's right side takes in blood that the body has used and sends it to the lungs to pick up oxygen. The left side gets this oxygen-rich blood from the lungs and pumps it to the rest of the body and the brain. When the aortic valve opens, blood flows from the heart to the body.

## What is Aortic Stenosis

Aortic stenosis is when the aortic valve in the heart narrows and stiffens, making it hard to open properly. It is mainly caused by calcium build-up from aging, being born with two valve leaflets instead of three, rheumatic fever, or chest radiation. Doctors often first detect a heart murmur, and it slowly gets worse over time. Early on, it is just watched by doctors, but treatment is needed when it becomes severe and symptoms start.

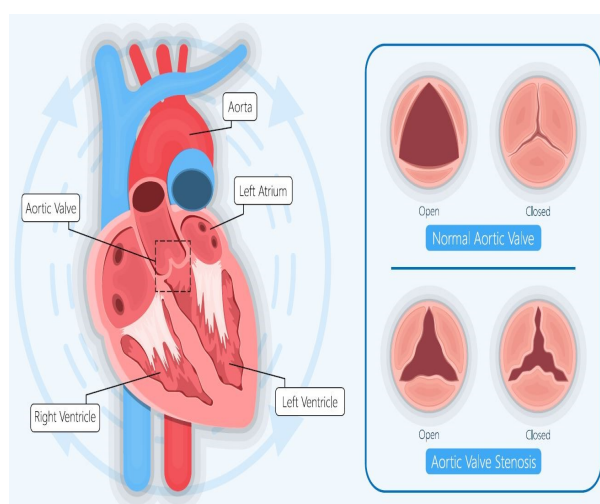


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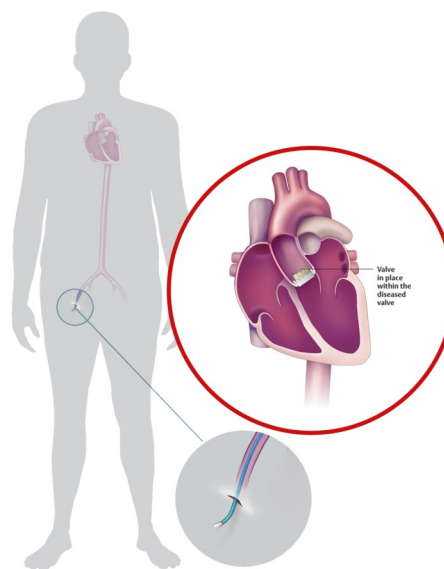
Symptoms like chest pain, breathlessness, dizziness, or fainting usually happen during physical activity. These signs mean the heart is not working as well as it used to. You may feel more tired and less able to do things you could 6 months or a year ago.

## Bioprosthetic Aortic Valve Dysfunction

If you already have a Bioprosthetic (tissue) aortic valve replacement, these typically start to wear out within 10 to 15 years. The tissue valve may develop stenosis (described above) or becoming leaky (called regurgitation). A worn out bioprosthetic aortic valve can be treated by inserting a new TAVI valve inside the surgical valve; this is called a **TAVI valve in valve procedure**.

## TAVI Procedure: Femoral Approach (most common)

- The procedure is done in the Cardiac Cath Lab.
- Light sedation keeps you relaxed, awake, and able to follow simple instructions.
- A small incision near the groin is made to enter the femoral artery.
- The TAVI valve is compressed (closed) onto a tube called a catheter which is inserted into the femoral artery.
- The valve will be advanced from the femoral artery up into your heart and placed inside the opening of your narrow aortic valve.
- A temporary pacemaker controls your heart rate during the procedure.
- A balloon is used to re-expand (open) the new TAVI valve which pushes the narrowed valve out of the way. The TAVI is anchored in place by the old valve.
- The TAVI valve works right away.
- The doctor will remove all the equipment and close the hole in the artery using internal sutures which do not need to be removed.
- Your nursing team will provide instructions on how to care for the procedure sites. It is very important to follow the instructions provided to avoid complications or infection.



## TAVI Procedure: Subclavian or Carotid Approach (uncommon)

- The procedure is done in the Cardiac Cath Lab.
- You are given general anesthesia and a breathing tube is inserted.
  - ⇒ You may experience a sore throat for 1 to 2 days after the procedure from the breathing tube.
- The doctor makes a 2 to 3 centimeter incision under the collar bone for a subclavian TAVI procedure, or along the side of the neck for a carotid TAVI procedure.
- The TAVI valve is compressed (closed) onto a tube called a catheter which is inserted into artery of choice.
- The valve is advanced from the artery up into your heart and placed inside the opening of your narrow aortic valve.
- A temporary pacemaker controls your heart rate during the procedure.
- A balloon is used to re-expand (open) the new TAVI valve which pushes the narrowed valve out of the way.
- The TAVI valve works right away.
- The doctor removes all the equipment and closes the incision with sutures and surgical tape. A dressing is put on top.
- Your nursing team will provide instructions on how to care for the procedure sites. It is very important to follow the instructions provided to avoid complications or infection.

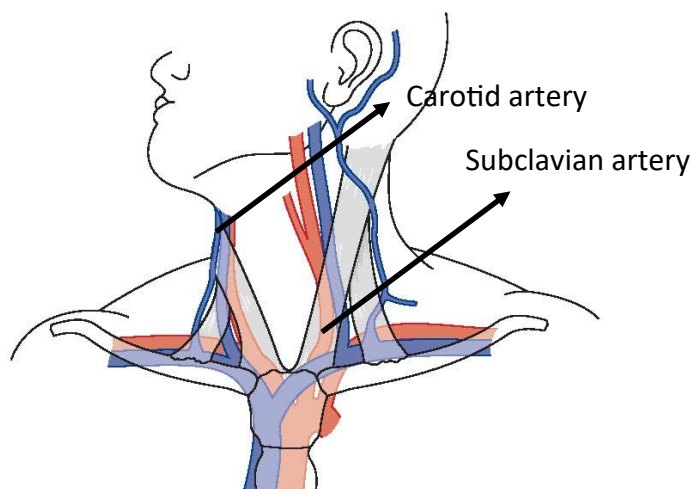


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## Procedure instructions

You are called 1 to 2 weeks prior to your procedure date and a procedure letter is sent to you by mail or email. Read the letter carefully and reach out to the TAVI program office with any questions.

It is important to stop taking blood thinners (anticoagulants) 2 to 5 days before your TAVI procedure to reduce bleeding risk. If you are taking an anticoagulant, your procedure letter will specify which anticoagulant to stop and when to do so. Continue taking all other prescribed medications, including ASA (Aspirin®), Clopidogrel (Plavix®), and Ticagrelor (Brilinta®), as directed by your healthcare provider.

The procedure letter will also inform you if you are eligible to go home on the same day as your procedure.

### The evening before your TAVI:

- Do not eat anything after midnight.
- Keep hydrated with water and clear juices only. Avoid dairy products.
- Take a shower or bath, but do not use any creams or lotions.
- Remove all nail polish.

### On the morning of your TAVI, please bring:

- Your medications in their original bottles or a bubble pack
- A bag for overnight stay
- Necessary medical equipment (such as CPAP machine, cane, walker)
- Your Questionnaires
- This booklet

## Recovery Instructions

After the procedure, you are on bedrest for 4 hours. You will be helped to the bathroom and by evening, short walks are encouraged. Your stay includes heart function tests, incision checks and frequent monitoring for any complications. These results will be reviewed by the doctor.

**Most people stay overnight in hospital after their TAVI procedure and are discharged home the next day.**

*\* Some patients can go home the evening of their TAVI procedure with these instructions:*

- Return for an ECG the next day—a form will be provided.
- A nurse will call the next day to check on your recovery. Be prepared to return to the hospital if needed.

## Pain and Discomfort

After a TAVI procedure, some tenderness at the groin or procedure site is common, but severe pain is unusual. Bruising may occur, but should fade in a few weeks. For mild discomfort, take over-the-counter acetaminophen like Tylenol®. Seek medical attention for sudden or worsening moderate to severe pain.

## Groin and Wrist site care

Remove your groin/wrist dressings 24 hours post-procedure. For the next week, shower using mild, unscented soap. Avoid baths. Gently wash and pat the sites dry. If there is any drainage, apply a new bandage, changing it daily as needed.

## Chest and Neck site care *(applies to carotid or subclavian TAVI procedures)*

Remove your chest dressing 48 hours after your procedure. **Shower regularly (no baths) but keep the incision area dry for the next 7 to 10 days until fully healed.** Do not apply creams or ointments directly to the incision site until fully healed. The sutures are dissolvable and do not require removal. Steri-Strips™ help keep the skin closed and should be left alone. They may loosen and fall off within 5 to 7 days. If they remain on after 2 weeks, gently remove them after showering when damp.

## Recovery instructions - part 2

### Visit your family doctor for:

- A lump that continues to grow (a small, marble-sized lump with some bruising or tenderness is normal for 2 to 4 weeks).
- Increasing or persistent redness, tenderness, or warmth at the procedure site.
- Yellow pus or foul-smelling discharge from the procedure site.
- Moderate to severe pain at the incision site.
- Chills or fever (temperature over 38.5°C).

### Visit an Emergency Room or call 9-1-1 for:

- Stroke symptoms: weakness/drooping on one side of the body/face, slurred speech or difficulty speaking, sudden vision changes.
- Frequent/new dizziness, blackouts, or palpitations.
- New or worsening shortness of breath or chest pain.
- Severe pain, loss of sensation/color, or numbness near the procedure site or affected leg or arm.
- Increased bleeding or swelling at the procedure site.

### If you notice bleeding at the procedure site:

- Press down firmly with two fingers about 2 centimeters above the bleeding spot. Keep consistent pressure for 15 to 20 minutes, without removing pressure.
- Call 911 or get someone to drive you to the nearest Emergency Department. Do not drive yourself.

## Medications

**Antiplatelet Medication:** Prevents blood clots on your new heart valve. Commonly prescribed: LIFE LONG acetylsalicylic acid (Aspirin®/ASA) and/or clopidogrel (Plavix®), unless already on another blood thinner.

**Anticoagulants (Blood Thinners):** Slows blood clotting. If you were on anticoagulants before your valve procedure, your cardiologist will resume them afterward. New anticoagulant prescriptions are given if needed.



## Recovery instructions - part 3

### Activity

- Avoid pushing, pulling, or lifting anything over 5 kilograms (10 pounds) for 1 to 2 weeks post-procedure to allow healing.
- After a subclavian or Transcatheter Aortic Valve Implantation (TAVI), avoid pushing, pulling, or lifting anything over 5 kilograms (10 pounds) or raising your elbow above shoulder height for 4 weeks.
- Expect mild fatigue for 24 to 48 hours; take breaks, eat well, and rest as needed.
- Use stairs slowly for next 3 to 5 days.
- Gradually increase daily walking distance. **See page 11.**

### Driving and Travel

- **Driving:** No driving for 1 month; no commercial driving for 3-months.
- **Air Travel:** Generally safe to fly 1 to 2 days post-procedure.
- **International Travel:** Consult your doctor. Travel insurance may not cover you immediately post-procedure; check with your insurer.
- **Concerns About Driving:** Discuss with your family doctor if you or your family have concerns.

### Return to Work

- Office work (mostly sitting): Return to work 48 to 72 hours after the procedure.
- Work involving heavy lifting (greater than 5 kg or 10 lbs.): Return to work after 14 days.
- Work involving operating a licensed vehicle: Return to work after driving restriction complete.
- **Concerns about returning to work:** Consult your cardiologist or family doctor.

### Follow-up Appointments

- **Family Doctor:** Schedule an appointment with your family doctor 1 to 2 weeks after your procedure.
- **Echocardiogram:** Scheduled for 4 to 6 weeks post-procedure. An appointment letter is sent to you by mail.
- **TAVI/Structural Heart Clinic:** Scheduled for 6 to 8 weeks post-procedure. An appointment letter is sent to you by mail.

## Question and Answers

### Q: What kind of support do I need after the procedure?

A: Arrange a ride home and have someone to stay with or check on you for the first 24 hours.

### Q: Will I need a permanent pacemaker?

A: Everyone who has a TAVI procedure has a risk of needing a permanent pacemaker. There is a 5 to 10% chance of requiring a permanent pacemaker.

A permanent pacemaker is a small device placed in your chest to regulate your heart rate so it beats normally. It sends electrical pulses to the heart when needed, helping maintain a steady heartbeat. If a permanent pacemaker is needed after a TAVI procedure, the pacemaker is inserted while you are in the hospital, and you will go home afterward with specific discharge instructions.

### Q: What are the Procedure Risks?

A: Risks of stroke, heart attack or major complication are very low. Your TAVI team will review your specific risk profile with you.

### Q: What is the risk of valve infection after a TAVI procedure?

A: To prevent endocarditis (a heart valve infection) antibiotics are needed before any dental work or cleaning or any invasive or surgical procedures for the rest of your life. Make sure to tell your dentist about your TAVI procedure. Avoid dental check-ups and cleanings for 6 months after your TAVI procedure. Antibiotics are needed for any dental work that could cause gum bleeding. Your family doctor or dentist will prescribe the antibiotics as necessary.

## TAVI Valve Card

A temporary valve card is given to you at discharge. Keep it on you at all times, especially when you travel. A permanent card is mailed to you within 6 months of your procedure. Show this card to your healthcare providers, including your dentist.

# Activity and Exercise information

## Physical Activity

Refrain from vigorous activities such as jogging, running, or lifting over 5 kilograms (10 pounds) for the next 1 to 2 weeks to ensure proper healing of procedure sites. Ease back into your usual light activities gradually over 3 to 5 days, increasing your activity level daily.

## Cardiac Rehabilitation Program

After your procedure, you may be referred to a Cardiac Rehabilitation program. Within 2 weeks, a healthcare professional will reach out to you with information about available programs designed to help strengthen your heart and body. **Participation in these offered exercises and programs is highly encouraged.**

## A Post Procedure Walking Guide

This is a gentle guide. Some may be able to do more walking than this. Listen to your body.

	Exercise	How often
Week 1	5 minute walk	5 times a day
Week 2	10 minute walk	3 times a day
Week 3	15 minutes	2 times a day
Week 4	30 minutes	Once a day

All the best,

TAVI Heart Team. ♥

## Saskatchewan TAVI and Structural Heart Programs

### Regina

TAVI Coordinator: 306-766-3766

Fax: 306-766-4183

### Saskatoon

Program office: 306-655-1901

Program Coordinator: 306-655-6883

Fax: 306-655-0468



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### *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.

## PIER—Patient Information and Education Resource

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