

Your Hospital Stay After Your TAVR

What to expect

This handout explains what to expect during your hospital stay after your transcatheter aortic valve replacement (TAVR). It also gives self-care instructions for after you go home.

What happens after TAVR?

- Right after your TAVR, you will be moved to an Intensive Care Unit (ICU). This will be either the Coronary ICU on 5-Southeast or the Cardiothoracic ICU on 5SA. There, nurses will watch you closely.
- Most patients stay in the ICU for 1 to 2 nights after the procedure. We will keep you in the ICU only as long as you need to be there.
- From the ICU, most patients go to a *cardiac telemetry* room on either 5-Northeast or 6-Northeast. These are the Cardiology units of the hospital.
 - Most patients who have **transfemoral** aortic valve replacement stay in the hospital for 3 to 4 days after the procedure.
 - Most patients who have **transapical** or **transaxillary** aortic valve replacement stay in the hospital for 4 to 5 days after surgery.
- Some patients, if they are well enough, may be able to go home directly from the ICU.

How long will I stay in the ICU?

Most patients stay in the ICU for 1 to 2 nights after TAVR. How long you stay in the ICU depends on how your recovery is going. Your time in the ICU is when the most important changes in your condition occur.



Highly-skilled nurses will monitor and care for you in the Intensive Care Unit after your surgery.

Can I have visitors in the ICU?

Your family and close friends may visit you in the ICU at any time. They can take the Cascade elevators to the 5th floor.

We encourage family and close friends to leave the hospital at night to get some rest. When they leave, they should make sure we have a phone number where we can reach them.

Family may call the ICU any time if they have questions or concerns or want to know how you are doing. We ask that only one family member makes these phone calls to the ICU. That person can then share this information with your other family members and friends.

What to Expect in the ICU

Highly skilled nurses will care for you during the hours after surgery. A doctor from the heart surgery team will also be on hand at all times.

Checking Your Vital Signs

During your stay in the ICU, nurses will watch your heart rate, rhythm, and blood pressure (*vital signs*) at all times. This is done using patches placed on your chest and *catheters* (thin, flexible plastic tubes) inserted into an artery or vein.

IV Catheters

You will also have several *intravenous* (IV) catheters in your veins. These will be used to:

- Give you medicines, fluids, and blood transfusions, as needed
- Draw blood samples for testing.

About 12 hours after surgery, most of these IVs are usually removed. One small IV catheter is left in place until you are discharged.

Pacemaker Wire

During TAVR, your doctor will place a pacemaker wire through a catheter in a large vein that ends in your heart. This pacemaker wire is used short-term to increase your heart rate as needed during the procedure. Usually this wire is removed right after TAVR, while you are still under *anesthesia* (medicine that makes you sleep). Removing the IV catheter and pacemaker wire will not cause any pain.

Sometimes, if a patient's heart rate is slow, the doctor leaves the pacemaker wire in place. Rarely, in about 6% of patients (about 6 out of 100 patients), the heart rate remains slow and a permanent pacemaker is needed.

If you need a permanent pacemaker, your doctor will talk with you and your family about the procedure. If needed, the pacemaker will be placed during your hospital stay.

For Transapical TAVR Patients

If you had transapical TAVR, fluid may build up in your chest after surgery. If this happens, it will need to be drained. During TAVR, your surgeon will put a chest tube in place to drain this fluid.

It is normal to have a small amount of blood in the chest tube drainage during the first 24 hours after surgery. These chest tubes are usually removed within 24 to 48 hours after surgery.

Urinary Catheter

During surgery, we will insert a small rubber catheter into your bladder to drain urine. It is usually removed about 24 hours after surgery.

Breathing and Coughing

When you are in the ICU after surgery, the breathing tube that you had during surgery will still be in your throat. The tube will be connected to a breathing machine (*ventilator*).

You will need to be on the ventilator until your anesthesia wears off and you are able to breathe on your own. You will not be able to talk or drink until the breathing tube is removed.

The breathing tube is usually removed a few hours after TAVR, or as soon as it is safe to do so. After it is removed:

- You will receive oxygen through a mask or nasal prongs. Leave the mask or prongs in place. Your body needs extra oxygen at this time.
- Your throat may be sore and your voice may be hoarse. These symptoms are from the breathing tube, which passed between your vocal cords and down your throat. The soreness and hoarseness should lessen with time. Sucking on ice chips may help if your mouth is dry.
- Incision pain may restrict your breathing and cause you to take shallow breaths. You **must** take deep breaths and cough up secretions because:
 - If secretions stay in your lungs, bacteria may build up and cause *pneumonia* (a lung infection).
 - If you take shallow breaths, your lungs may partly collapse. This may keep you from getting enough oxygen.

- **Use the incentive spirometer** as you were taught. It will show you how you are breathing and encourage you to breathe more deeply.

Pain Control

Pain from your incision will make coughing uncomfortable. Take your pain medicine as prescribed. It will reduce the soreness so that you can cough up secretions more easily.

As soon as you are able, your nurse will help you sit on the edge of your bed or in a chair. Sitting also helps with deep breathing and coughing.

Moving to the Cardiac Telemetry Floor

When you are stable (usually 12 to 48 hours after surgery), you will be moved from the ICU to a *cardiac telemetry* floor of the hospital, on either 5-Northeast or 6-Northeast.

Here, your heart rate and rhythm will be monitored with a *telemetry box*. Specially trained nurses will help you as you recover.

From now on, you will be responsible for much of your recovery. The staff caring for you will guide you, but you will be expected to actively take part in your own care. This will include:

- **Deep breathing.** At least 10 times an hour, take slow, deep breaths with your incentive spirometer. This exercise helps you fully expand your lungs. It will help release trapped secretions so you can cough them up. Clearing your lungs this way helps prevent pneumonia, helps you feel better, and speeds recovery.
- **Walking and increasing your activity.** Activity helps you breathe more deeply. It also strengthens your muscles and helps your body recover faster.
- **Eating nutritious foods to nourish your body.** Protein, vitamins, and minerals will help you heal faster. You will receive a regular diet after surgery. Even if you do not feel hungry, we will encourage you to eat. Walking and increasing activity will help you build an appetite.

If you have high blood sugar, you will be on a special diet until your sugar levels get back to normal. This diet controls the amount of carbohydrates you eat. It will help lower your infection risk and improve your healing.

Getting Ready to Leave the Hospital

Most patients stay in the hospital for 3 to 5 days after TAVR surgery. During your stay, you and your family will receive instructions to help you prepare for your *discharge*. Discharge is when you leave the hospital.

Before discharge, be sure to:

- Ask your care team members any questions you have.
- Plan for someone to drive you home on the day of your discharge from the hospital.
- Plan for someone stay with you for at least 1 week after you go home.

Your cardiac team will assess your progress and prepare you and your family for discharge. You will likely meet with a nurse, dietitian, pharmacist, and physical therapist. You and your family will learn about exercise, medicines, and other self-care you will need to do at home.

Going Home

Before you are discharged, a nurse will review pain control, activity guidelines, incision care, when to call the doctor, emotional reactions after surgery, and discharge planning with you. You will also receive a handout that explains these things.

If you have questions or concerns, please ask. We want to make sure you are fully prepared to go home. Some patients and family members learn well by watching educational videotapes. We have many videos that you and your family members may watch.

Self-care at Home

Protect Your Wrist

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| For 48 hours | <ul style="list-style-type: none">• AVOID lifting, pushing or pulling with the affected arm.• AVOID bending, turning, or twisting your wrist on the affected arm.• Do NOT have your blood pressure taken on the affected arm. |
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| For 5 days | <ul style="list-style-type: none">• Avoid vigorous exercise that uses the affected arm.• Do NOT lift anything that weighs more than 5 pounds (2.27 kilograms) with the affected arm. (A 2-liter bottle of soda weighs more than 4 pounds.)• It is normal to have a small bruise or lump at the insertion site. |
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Protect Your Groin

For 7 days

- Do **NOT** lift anything that weighs more than 10 pounds (4.54 kilograms). This includes groceries, children, pets, trash, and laundry. (A gallon of milk weighs almost 9 pounds.)
- Do **NOT** work in the garden, including lawn mowing and raking.
- Do **NOT** hold your breath, bear down, or strain when having a bowel movement.
- Do **NOT** allow the puncture site to be covered by water. This means do not take a bath, sit in a hot tub, or go swimming. It is OK to take a shower.
- You may have a bruise at the insertion site. This is normal. It might spread down your leg over the next day. It may take **2 to 3 weeks** to go away.

- For **30 days** after TAVR (until your 30-day follow-up visit), do **not**:
 - Run, jog, swim, or bike
 - Play sports like golf, tennis, bowling, or softball

For Transapical or Transaxillary TAVR Patients

For **2 weeks** after TAVR:

- Do **NOT** lift, push, pull, or carry anything that weighs more than 10 pounds (4.54 kilograms). This includes groceries, children, pets, trash, and laundry. (A gallon of milk weighs almost 9 pounds.)
- Do **NOT** reach your arms behind your back or above shoulder level. It is important not to stretch your skin and muscle. Protecting this area will help your incision heal faster.
- Do **NOT** garden, including lawn mowing and raking.
- Do **NOT** hold your breath, bear down, or strain when having a bowel movement.

Care of the Incision and Wrist Puncture Site

Signs of Infection

- Watch your incision closely for any signs of infection. These include:
 - Redness, warmth, heat, or new drainage around the incision

- Fever of 101°F (38.5°C) or higher
- Bleeding at the wrist or groin site that does not stop after applying pressure for 10 minutes
- If you have any of these infection or bleeding signs, call one of these numbers **right away**:
 - During clinic hours, call **206.598.VALV (8258)** and ask for the nurse or nurse practitioner.
 - After hours and on holidays and weekends, call **206.598.6190** and ask to page the CARD I Fellow on call.
- If your incisions are:
 - **Still draining** when you leave the hospital, your nurse will give you instructions and supplies for incision care at home.
 - **Not draining**, leave them open to the air. If your clothing rubs or irritates them, you can cover the area with dry gauze. Remove the gauze at night. You do not need to apply special dressing.
- Do **not** put any medicine, lotion, or powder on your incisions until they are fully healed and the scabs have fallen off, unless your care team tells you otherwise.
- You may remove the wrist dressing (bandage) the day after your procedure.
- It is normal to have a small bruise or lump at the wrist site.
- You may also have a bruise at the groin incision site. This is normal. It might spread down your leg over the next day. It may take **2 to 3 weeks** to go away.

Showering and Bathing

- You may shower when you get home unless your doctor tells you not to. When you shower:
 - Gently wash your incisions with mild, unscented soap and water.
 - Gently pat dry your incisions. Do **not** rub them.
- You may take a bath after your incisions heal fully, about 2 weeks after your surgery. Do **not** soak your incisions for longer than 5 minutes until all the scabs have fallen off and your incisions are fully closed. This precaution will help prevent infection.
- Do **not** take very hot showers or baths or soak in hot tubs. Hot water may lower your blood pressure, making you weak or dizzy. This could cause you to faint. (Your medicines may also cause fainting.)

Exercise

Make daily exercise part of your life. Exercise helps keep your joints flexible, builds strength and endurance, and helps your body heal and stay healthy. Your physical therapist will review exercises with you.

Slowly increase your activity as you prepare for discharge. Once you are home, keep doing the exercises you learned in the hospital.

Medicine

The medicines you will take after surgery help you recover. These medicines are prescribed for you and must be taken as directed.

Your medicines at discharge may be different from the ones you are used to. Also, your medicines may be adjusted or changed when you are discharged and in your follow-up visits. A pharmacist or a nurse will teach you about your medicines and answer any questions you have.

Nutrition

What you eat affects your health. A registered dietitian or diet technician can help you learn how to eat for a healthy heart. They can give you and your family tips on heart-healthy food choices, shopping, and cooking. Ask your nurse how to set up an appointment with a dietitian.

Eating nutritious foods will help you heal faster. Your body needs the proteins, vitamins, and minerals that these foods supply. Even if you are not hungry, please try to eat regular meals. Walking and other activity will help you build an appetite.

Antiplatelet or Anticoagulation Therapy (Blood-thinning)

You will need to take medicine to keep blood clots from forming on your new valve after TAVR. Most patients take:

- **Low-dose aspirin**, 81 mg, every day for the rest of their life to thin their blood,
- AND
- **Clopidogrel (Plavix)**, 75 mg, every day for 1 to 6 months after TAVR to keep blood clots from forming.

If you were taking:

- Aspirin and clopidogrel before TAVR, you will keep taking them to treat the condition you first started taking them for.
- Warfarin (Coumadin) before TAVR, you will probably take it after TAVR. You might be asked to take aspirin for a short time, too.

Bleeding

Tell your cardiologist, primary doctor, or other providers if you have any signs of bleeding. These include:

- Bloody nose
- Tenderness in your belly
- Dark, bloody stool (poop), or stool that smells odd
- Bloody urine

Risk of Valve Infection

Tell your dentist, doctor, alternative medical providers, and all other providers that you have an artificial heart valve.

Your new manmade valve can become infected. The American Heart Association advises taking antibiotics to lower your risk of infection before you have:

- Teeth cleaning and any type of dental procedure
- A surgery or procedure involving your lungs, bladder, or digestive system

Call your provider **right away** if you have:

- Fever higher than 100°F (37.8°C)
- Tenderness in your belly
- Bloody urine
- New shortness of breath
- New swelling around your legs or ankles
- Weight gain of 2 to 5 pounds over 3 days

High Blood Sugar and Diabetes

Many patients who were not diagnosed with diabetes before surgery will need insulin after surgery. Sometimes this is from a side effect from a medicine, such as prednisone. Other people may have had higher-than-normal blood sugar before surgery but did not know it.

If you have high blood sugar, you will be on a carbohydrate-managed diet until your blood sugar levels return to normal. This diet will help lower your risk of infection and help your body heal.

If you have diabetes, your blood sugar will be closely monitored and treated. If you did not need insulin before TAVR but are receiving it afterward, do not be alarmed. This is to prevent the problems that can happen with uncontrolled blood sugar. Your usual oral diabetes

medicine and insulin regimen will be restarted as needed. Your diabetes medicine may be changed or adjusted at discharge and in your follow-up visits.

Medical Alert Jewelry

We advise you to wear a medical alert bracelet or necklace after heart valve surgery and if you are taking blood thinners. Some people prefer to carry an ID card with this information.

Many drugstores and some jewelry stores carry this type of identification. Another source for medical alert jewelry is:

Medic Alert Foundation International

2323 Colorado Ave., Turlock, CA 95382

www.medicalert.org, 888.633.4298

Follow-up Visits

After discharge, our team will work with your heart doctor to monitor you closely. We want to make sure you are making good progress so that you do not need to be readmitted to the hospital.

A nurse will meet with you before discharge to set up your follow-up visits. Your schedule will likely include these **visits with your nurse practitioner**:

When	What
30 days after TAVR	<ul style="list-style-type: none">• <i>Echocardiogram</i> (ultrasound of the heart) to check your valve• Activity and walk test• Filling out a form that tells us about your current symptoms
Once a year	<ul style="list-style-type: none">• Echocardiogram to check your valve• Activity and walk test• Filling out a form that tells us about your current symptoms

If you are part of a research study, you may have follow-up visits more often.

Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

Heart Institute at UWMC: Call 206.598.VALV (206.598.8258) during clinic hours.

After clinic hours or on holidays or weekends: Call 206.598.6190 and ask to page the CARD I Fellow on call.