

Preparing for your Endovascular Abdominal Aneurysm Repair

**Michigan Medicine
Frankel Cardiovascular Center**



Michigan Medicine Phone Numbers

Billing	855-855-0863
	734-615-0863
Call Center	888-287-1082
Vascular Surgery (use Call Center)	888-287-1082
Cardiovascular Operating Room Desk	734-232-4553
Office of Clinical Safety (comments)	877-285-7788
Emergency Department	734-936-6666
Guest Assistance Program (GAP) (accommodations)	800-888-9825
Hospital Operator	734-936-4000
Lost & Found	734-936-7890
Mardigan Wellness Resource Center	734-232-4120
Parking & Transportation	734-764-7474
Registration & Insurance4 Verification	866-452-9896
Med-Inn (hotel)	800-544-8684
	734-936-0100
Tobacco Consultation Services	734-938-6222
Units (Patient Care):	
CVC-4 ICU	734-936-6514
CVC-5 Cardiac Surgery	734-232-4772
UH-4C Cardiac Surgery	734-936-6501

Other:

Michigan Quit Line (Smoking)800-784-8669

Address (mail):

Frankel CVC (room number/unit if known) or UH (room number/unit if known)

Person's Name

University of Michigan Health System

1500 E. Medical Center Drive

Ann Arbor, MI 48109

Building Location (visiting):

Samuel and Jean Frankel Cardiovascular Center

East Ann Street & Observatory Street

Ann Arbor, MI 48109

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What are my pre-operative medications instructions?

A member of your health care team will review your medications at your history and physical visit. They will tell you which medications to stop before surgery, and which to take on the morning of your surgery with sips of water.

Insulin: Your health care team will let you know if there are any changes to your dose(s) the night before and/or the day of surgery.

Do not smoke for 2 weeks before surgery.

What about my blood thinners?

Your care team will talk to you about your blood thinners.

- Tell them if you are on a blood thinner such as: warfarin (Coumadin®), rivaroxaban (Xarelto®), dabigatran (Pradaxa®), apixaban (Eliquis®), or edoxaban (Lixiana®).
 - You **will** have to **stop taking** your blood thinner. You may have to take a different blood thinner instead.
- Continue to take aspirin or clopidogrel (Plavix®) unless your surgeon tells you not to.

What about over the counter medications and supplements?

Below are common medications and supplements you need to discontinue before your procedure. Here are a few general rules that you should follow:

- **(14) days before surgery:** stop taking Coenzyme Q10 (CoQ10)
- **(10) days before surgery:** stop taking Non-Steroidal Anti-Inflammatory Drugs (NSAIDs):

Advil® (ibuprofen)	Motrin® (ibuprofen)	Midol® (ibuprofen)
Aleve® (ibuprofen)	Naprosyn® (naproxen)	Nuprin® (ibuprofen)

- **(10) days before surgery:** stop taking vitamin E, herbal supplements, or fish oil.

Note: the medications listed are selective and do not include all medications that affect bleeding. You should always follow your health care team's directions about taking medications.

How can I prepare for my hospital stay?

- Review the preoperative folder and bring it with you the hospital. Include the light blue Blood Bank form if indicated.
- Assign a family member or friend as your driver, you will not be able to drive yourself home. Taking a cab or bus alone is not acceptable unless someone you know is with you.
- Bring a copy of your advanced directive and insurance cards.

- Plan on bringing any special equipment that you use at home:
 - Glasses, dentures and hearing aids with storage cases. Be sure to label these items with your name.
 - CPAP machine if you have sleep apnea.
 - Walker or cane, labeled with your name.
 - Leave all jewelry at home. Including wedding bands, hair clips, body piercings, earrings and watches.

- Pack a suitcase with these items for your family/friends to bring to you after your surgery:
 - Loose fitting clothing. Button down shirts are preferred.
 - Robe.
 - Comfortable walking shoes.
 - Toiletries: toothbrush, toothpaste, deodorant, comb, etc.
 - A list of the medications you are currently taking including vitamins and herbal supplements. Do not bring the actual medications with you.

How will I prepare for my procedure?

Instructions for **the day before** your procedure:

- **Do not** drink alcohol 24 hours before surgery.
- On the last business day (Monday-Friday) before your surgery, you will need to confirm the day and time of your surgery. Make sure you follow these steps:
 - Call the surgery phone line at **(866) 983-9090** between 7:30am and 11:30am. If your surgery is on Monday, call the Friday before. If your surgery is the day after a holiday, call on the last business day (M-F) before the holiday.
 - On the answering machine, leave your name and phone number. Be sure to spell your name clearly and slowly.
- A preoperative nurse will call you back in the afternoon before 5:00pm to give you the following instructions:
 - The time your surgery starts and what time you should arrive the day of your surgery.
 - When to stop eating food and drinking liquids.
 - Medications you should take on the day of surgery.

Who do I contact if I'm not feeling well the day before my procedure?

Report any symptoms of flu, cold or infection to your doctor. It is important that you be in your best health possible for your procedure.

- To report any of these symptoms before 4:30pm call **(888) 287-1082** Monday - Friday and ask to speak to the Vascular Surgery Nurse.
- To report symptoms after 4:30pm, please call **(866) 983-9090** and leave a message.

What activities should I avoid after midnight on the night before surgery?

- **Do not** eat gum, hard candy, or food of any kind

- You may have sips of water with your morning medications up to (2) hours before your arrival time.

How do I shower and get ready for my surgery?

You need to shower on the night before and morning of your surgery using Chlorhexidine (CHG) 4% antiseptic soap which is a surgical soap that reduces the amount of germs on your skin.

1. Take a shower **the night before** your surgery.
2. Wash your face using regular soap.
3. Wash your hair using regular shampoo. Make sure to rinse your hair completely after shampooing.
4. Wash your body from the neck down using the chlorhexidine body wash for at least 5 minutes with a freshly-laundered wash cloth. Do the following:
 - a) First wash **your surgical site** area and all surrounding skin with the CHG soap.
 - b) Then wash your underarms, chest, under your breasts, stomach/belly button, hips, groin and buttocks.
 - c) Rinse thoroughly.
 - **Do not** use the body wash on your face, eyes, ears, mouth or hair.
 - **Do not** use in your genital area (“private parts”).
5. Rinse your body completely and pat your skin dry with a freshly laundered towel.
 - **Do not** apply make-up, deodorant, lotions, sprays, gels, creams, ointments or powders after showering with the CHG soap.
 - After showering, use freshly-laundered bed linens.
6. Put on clean underwear, socks and clothing.
7. **On the morning** of your surgery, use a new freshly-laundered washcloth and towel and repeat steps 1-6.
 - **Remove** nail polish from your hands and feet.
 - **Do** brush your teeth the morning of surgery.

- **Do not shave** the hair on your groin or legs. Shaving your skin with a razor can actually increase your risk of infection. We will prepare your skin by removing hair with special clippers the morning of your surgery.
- **Do not** wear contact lenses to the operating room.

What happens when I arrive at the hospital?

Please park in Cardiovascular Center Visitor Parking Structure P5.

1. Enter the Cardiovascular Center on Level 3 from the parking structure
2. Take the elevators to Level 4
3. "Surgery Check-In" is on the right side after you exit the elevators.

<p>Address to use for GPS directions to the Frankel Cardiovascular Center: 1425 E. Ann St. Ann Arbor, MI. 48109</p>

Valet service is available for patients, families, and other visitors for a \$5.00 fee at the circle drive main entrance to the Cardiovascular Center. Valet Service is available:

- Monday through Friday 5:30 a.m. to 7:00 p.m.
- Saturday and Sunday 8:00 a.m. to 6:00 p.m.

What will my hospital stay be like?

After your procedure you will be recovering on the CVC-5 moderate care unit. Our team will help you recover here from your procedure. When you arrive to the unit your nurse and patient care technician (tech) will meet you and orient you and your family to the unit.

Our visitation policy

- In alignment with Michigan Medicine, the Cardiovascular Center welcomes to presence of loved ones.
- Family members are welcome at your bedside 24 hours a day. We want you to feel supported, not only by the care we provide but by your loved one's presence as well.
- "Family" (for purpose of visitation) is defined by you. It is usually one or more individuals who play a significant role in your life. Family members may be related in any way- biologically, legally or emotionally. Your family member may include a person (s) who is not legally related to you.
- At times, we may ask your family members to step outside of the room if procedures or other necessary interventions need to be done. Your family will be welcomed back as soon as possible.

What type of monitoring will I need while I'm here?

When you arrive on the unit a portable heart monitor called a telemetry unit will be attached to your chest. The unit will transmit your heart rate and rhythm to monitors located at your bedside and at the nursing station. This portable monitor allows you to walk in the halls freely. Other care you may receive:

- The nurses and techs will regularly check your blood pressure, heart rate and temperature.
- You will have your blood drawn for lab tests.
- We will measure how much you drink and urinate. We will provide a container for you to urinate into for measurement. We will also ask that you keep track of the amount of fluid that you drink and report it to your nurse or tech.
- You will be weighed daily
- A member of your care team will enter your room to assess your needs hourly.

Pain and discomfort after your procedure

What kind of pain can I expect to feel after my procedure?

Experiencing pain after surgery is normal. You may be surprised where you feel pain after surgery. Often your incision site is not the only area of discomfort. Please tell a member of your healthcare team about the pain you have, which can include:

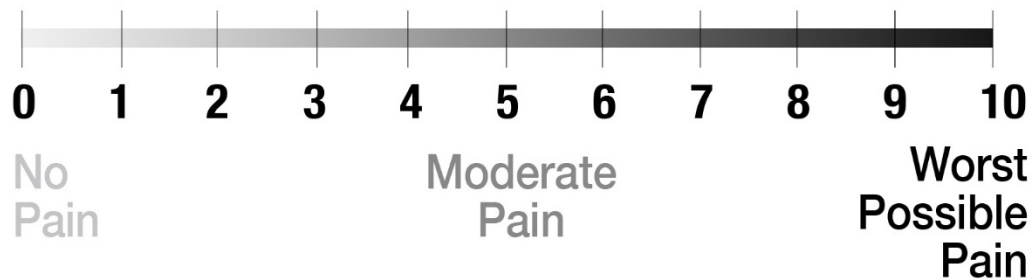
- **Muscle pain:** You may feel muscle pain in your chest, back neck, shoulders or legs. This is from lying on your back on the operation table.
- **Incision discomfort:** You may feel numbness along your incision line, jaw and your earlobe.
- **Throat discomfort:** Your throat may feel sore or you may notice changes in your voice (hoarseness).

What can I do to help keep my pain under control?

You doctor will order effective medications to keep your post-surgical pain under control. Your nurse will ask you about your pain regularly throughout your recovery. You shouldn't hesitate to ask for pain medication if needed.

Throughout your hospital stay, the nurses will monitor your need for pain medication. You can use the numeric pain rating scale below to measure your pain. This is a helpful tool you can use to describe how much pain you are feeling and to measure how well treatments are relieving your pain. You will be asked to rate your pain using a 0-10 pain scale. 0 means "no pain." 10 means the "worse pain possible."

Numeric Pain Rating Scale



Why is it so important to control pain after surgery?

Having good pain control not only helps you feel more comfortable, but also helps you recover faster and may reduce your risk of developing certain complications such as pneumonia and blood clots. If your pain is well managed, tasks such as sitting, walking coughing, deep breathing and eating will be easier.

What exercises will I do after surgery?

Exercise is an important part of the recovery process after surgery. Below are activities you will be expected to perform during your hospital stay:

- **Deep breathing and coughing**

Use your breathing machine (incentive spirometer) 10 times every hour while you are awake. For example, if you like to watch TV, you should be using your incentive spirometer 2-3 times during commercial breaks.

Tips when using the incentive spirometer:

- Do not get discouraged if you do not reach the number marked for you. You will improve with practice as your body heals.
- If you start to feel dizzy or light-headed, remove the mouthpiece from your mouth and take some normal breaths. Once you feel better, continue using the incentive spirometer.



How to Use an Incentive Spirometer

[By BruceBlaus - Own work, CC BY-SA 4.0](#)

- **Activities on the day of surgery:**

- Get out of bed and into a chair in the evening (if able). Wear your Sequential Compression Devices (SCDs) while in bed or sitting in a chair.

- **Activities for the rest of your hospital stay:**

- Sit in the chair 3 times a day
- Walk the hallway 4 times a day
- Do physical therapy exercises (as needed)
- Wear SCDs when in bed or sitting in a chair

- **Repositioning:**

To prevent pressure injuries during your hospital stay, you need to change your body position. The following recommendations will help you reposition yourself:

While in bed:

- Turn your body at least every 2 hours from side to side.
- Keep the head of your bed at a 30-degree angle or lower to prevent too much pressure on your bones.
- Place a pillow between your ankles and knees when lying on your side.
- Place a pillow under your lower legs to elevate the heels when lying on your back.

When sitting:

- Change your position every 15 minutes by tilting your body forward or to the side so that your bottom lifts off the seat.
- Stand up or do “pushups” by using arms to raise off the seat every hour.

What will my diet be after surgery?

Your food will be low in fat and cholesterol and will not have any added salt or sugar. Although this food may be different than what you are used to eating at home, this change in diet is very important in the healing process.

Guidelines:

Eat a balanced diet of:

- Carbohydrate-rich foods high in fiber
- A variety of fruits and vegetables
- Low-fat dairy products
- Lean meats
- Protein-rich foods very important for wound healing. Good source of protein includes: fish, eggs, dairy, beans and nuts.

Room service is available at any time of the day. Your nurse will bring you a menu so you can choose what you would like to eat. Your nurse will check to see if you ordered food and will assist you if needed.

If you are diabetic or insulin dependent, your nurse will ask you to call them before you eat so they can check your blood sugar. It is fine for your family to bring food from home but it should be low in salt and low to moderate in fat.

Many people experience constipation after surgery due to inactivity and pain medication. Eating a diet rich in fiber, drinking enough fluids, walking the halls and taking a stool softener will help your bowels move. Sometimes a suppository or laxative is needed to help aid this process along.

Our registered dietitians are food and nutrition experts who are available to discuss heart healthy choices and salt alternatives or reduction. They provide sound, easy-to-follow nutrition advice. If you are interested in speaking to a dietitian, ask your nurse to arrange a visit.

How will I care for myself while in the hospital?

- Wash your hands frequently or use hand sanitizer or sanitizer wipes that we provide to you. Hand hygiene is very important to decrease your risk of infection.
- Bathe daily with the assistance of a staff or family member.
- Continue to wear your compression stockings (sometimes referred to as TED hose). These will help with swollen and achy legs. They should only be removed to bathe.

What can I expect on the day of discharge?

- Ask a family member or friend to arrive at 9:30 a.m. to review final discharge instructions with you and your nurse.
- Your nurse case manager will be in contact with you to explain your final discharge plans.
- Your nurse will review all discharge instructions with you. During this time, ask any questions that you may have about your care after discharge.

- Be sure you understand:
 - Your medications and prescriptions
 - Incision care
 - Activity and restrictions
 - Diet
 - Reasons to call your doctor
 - Follow up appointment information
- At home you will need to monitor your weight and temperature until your next appointment. Please make sure that you have a thermometer before you are discharged.
- If you have a long drive home, make sure to get up and stretch your legs at least once per hour to help prevent blood clots.

Discharge Tips:

Please make sure to have all the items that you brought with you:

- Glasses, dentures and hearing aids
- CPAP machine
- Walker or cane
- All technology devices and chargers
- All medication

When do I need to seek emergency care?

Call 9-1-1 immediately if:

You have any of the following **symptoms of a stroke**:

- Sudden confusion, trouble speaking or understanding others
- Sudden trouble seeing in one or both eyes
- Sudden numbness or weakness of the face, arm, or leg, usually on one side of your body
- Sudden trouble walking, dizziness, loss of balance or loss of coordination
- Sudden or severe headache with no known cause

If you have any of the symptoms list below:

- Sudden onset of chest pain
- Shortness of breath not relieved by rest
- You believe you are experiencing a true emergency

When do I need to call my doctor?

- Under the tongue temperature above 101.5° F
- Bleeding, redness, swelling, increased pain or foul smelling drainage near your incision site
- Incisions that open up after you leave the hospital
- Sudden or increased swelling in your neck
- Problems talking or swallowing
- Increased shortness of breath/difficulty breathing
- Trouble urinating
- Nausea, vomiting, or diarrhea
- Stomach pain or bloating
- Chills or excessive sweating
- A vague feeling that something is wrong

What is the number to call?

- Call **(888) 287-1082** Monday through Friday from 8:00am to 4:30pm:
 - Ask to speak to the Vascular Surgery Nurse.
- Call **(734) 936-6267** after 4:30pm or on weekends or holidays:
 - Ask the hospital operator to page the Vascular Surgery Medical Resident on call. You will receive a call back from the Resident.

What type of follow up care will I receive?

You will have a post-operative visit in the Vascular Surgery Clinic 4 weeks after your procedure. If you did not receive an appointment for your return visit before you left the hospital, please call **(888) 287-1082** to schedule this visit.

What steps should I take to monitor my health at home?

You will need to perform and record the following self-checks daily:

- Check your incisions daily for **signs of infection** including:
 - Increased redness
 - Swelling
 - Increased pain
 - Foul smelling drainage at the incision sites
- Take your temperature each morning before eating, drinking and anytime you think you may have a fever. Keep a record of your daily temperature.
- Weigh yourself at the same time, on the same scale, in the same clothes, and in the same way each day. Keep a record of your daily weight.

How do I care for my procedure site(s)?

- Keep area clean and dry.
- If you have strips of tape or glue covering the procedure site, do not pick at them or pull them off, they will fall off on their own.
- You may shower after returning home, but don't allow the shower spray to hit your incisions directly.
- **Do not** put any creams, lotions, powders or ointments on your surgical incision(s) until they heal.
- **Do not** soak in a bathtub, hot tub or get into a swimming pool for the next 4 weeks.

Follow these guidelines to care for your incision while bathing:

- Wash your procedural site(s) with your mild soap and water and let the water run freely over them. Pat dry and leave open to air. Use a freshly laundered wash cloth and towel each time you shower.
- Do not scrub your procedure sites.

What are my activity instructions?

After your surgery, you should gradually and consistently increase your physical activity. You may tire more easily than before surgery. This is normal. Your strength and energy level will increase as your body heals.

Restrictions:

- Do not lift, push or pull any objects over 10 pounds for approximately 4-6 weeks after your procedure. As a reference, a gallon of milk weighs approximately 8 pounds. Your doctor will let you know when this precaution is lifted.
- Do not return to work until you have seen your doctor at the first follow up clinic visit.

Driving:

Your doctor will discuss with you when you can drive again. This usually happens within 1-2 weeks after your procedure and you have stopped taking pain medication. **Do not** drive if you are taking narcotic pain medication (opioids). You can ride as a passenger in a car at any time, but, as always, you should wear your seatbelt.

Activities

- Walk every day (find an indoor setting during bad weather).
- You may climb stairs but take them at a slow pace.
- Limit the number of times you take the stairs until you feel well.
- Divide your time and spread activities throughout your day. Do not try to do everything at once.

How will I manage my pain and comfort at home?

Your goal at home is to control your pain enough so you can do the things you need to do to heal. Pain is normal after surgery and everyone feels pain differently.

You may receive prescriptions for pain medication (opioids) to take at home. These may or may not be the same pain medications you took in the hospital. *We are careful about using pain medication (opioids) after surgery because they have been shown to be addictive, cause harm, and even cause overdose if used incorrectly or abused.* We will work closely with you to create a plan for managing your pain after surgery.

Below are a few tips to help with pain relief:

- Remember to take your pain medication before activity.
- Be sure to get enough rest. If you are having trouble sleeping, talk to your doctor.
- Use pillows to support yourself while you sleep and when you do your coughing and deep breathing exercises.
- Ask your doctor if it is okay to use over the counter acetaminophen (Tylenol®) or ibuprofen (Motrin®, Advil®).
- Try using alternative methods for pain: heating pads or cold therapy, guided imagery, listening to soft music, or changing your position in bed.

What are my medication instructions?

When you are discharged from the hospital, you will receive a complete list of the medications that you should take at home.

- Your medication list will include the following information:
 - Medication name(s)
 - Dose of the medication
 - Number of times to take the medication each day
 - The last time you took each medication
 - The next time that you should take each medication
- Your doctor will give you new prescriptions for your recovery before you leave the hospital. Contact your heart doctor or primary care provider if you need refills for your ongoing medications.

- Have your insurance cards with you to help speed up the filling of your prescriptions.
- Take your medicine exactly as your doctor prescribes.
- Do not take other medication without telling your doctor.
- Follow-up with your heart doctor and primary care provider within 2 weeks of discharge. They will need to make sure your medication list is complete and accurate. They may also need to adjust or change doses for the most effective treatment.
- Keep a current list of your medicines, dosages, and times to be taken in your wallet or purse.

How do I handle my emotions after I get home?

Feeling like yourself again after surgery may take a while. People who have had surgery commonly experience mood swings, feel depressed or down after returning home. You may find yourself crying for no clear reason or feeling more emotional or sentimental than normal. Even though you may feel drained emotionally, follow the guidelines for good self-care. As you resume your normal activities, you should notice gradual improvement in your mood and positive outlook.

- If you find yourself still feeling unmotivated, unusually fatigued, weepy, angry, hopeless, or sad after 3 weeks, be sure to call the CVC Social Worker at **(734) 232-1559** or your Primary Care Doctor to make an appointment to talk about how you are feeling.
- If you have thoughts of hurting yourself call the National Suicide Prevention Lifeline at **(800) 273-8255**. This service is available 24 hours a day every day. Chat options are also available through their website <https://suicidepreventionlifeline.org/>

Disclaimer: This document contains information and/or instructional materials developed by Michigan Medicine for the typical patient with your condition. It may include links to online content that was not created by Michigan Medicine and for which Michigan Medicine does not assume responsibility. It does not replace medical advice from your health care provider because your experience may differ from that of the typical patient. Talk to your healthcare provider if you have any questions about this document, your condition or your treatment plan.

Reviewers: Chandu Vemuri, MD
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