

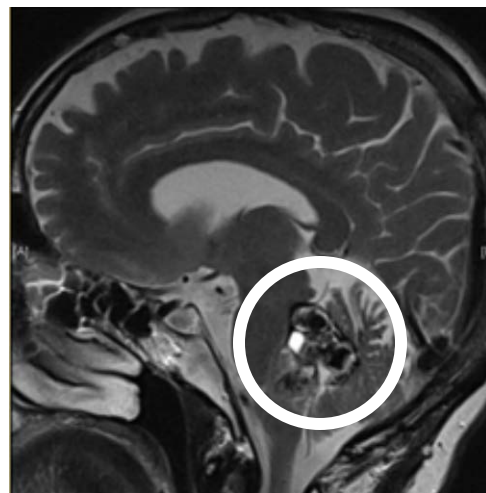
Treating Cavernous Malformation

How to prepare and what to expect

This handout explains cavernous malformation, how to prepare, what to expect during the procedure, and self-care at home.

What is a cavernous malformation?

A *cavernous malformation* is an abnormal group (*cluster*) of blood vessels in the tissue of the brain. This cluster can leak blood (*hemorrhage*) into brain tissue in the area. If this happens, it can cause major health problems such as stroke or seizure.



The circle shows a cavernous malformation in a brain.

How is it treated?

Surgery is done to remove a cavernous malformation. Your surgeon will access the cluster through an opening in your skull. This is called an *open craniotomy*.

How do I prepare?

You will come to the clinic for a pre-surgery visit. You will meet with:

- A **nurse**, who will give you information and instructions
- A **pre-anesthesia nurse**, who will talk with you about the medicines that will be used during your surgery
- The **Neurosurgery Team**, who will answer any questions you have about the procedure
- Your **patient care coordinator**, who will make sure you have all your follow-up visits scheduled before your day of surgery

Day Before Your Surgery

A nurse will call you to review your instructions. The nurse will:

- Review your medicines and tell you if you need to stop taking any of them before your procedure

- Ask if you have any allergies to any medicines, *contrast* (X-ray dye), or shellfish
- Remind you what you can and cannot eat and drink in the hours before your procedure

Day of Surgery

At Home

- **Up until 8 hours** before you arrive at the hospital, eat a healthy, balanced diet and drink liquids as usual.
- **Up until 6 hours** before you arrive at the hospital, you may eat a light meal and drink liquids as usual. Avoid heavy or fatty foods.
- **Starting 6 hours** before you arrive at the hospital, do not eat anything. We advise you to drink clear liquids such as water, black coffee or tea (no milk or creamer), clear broth, Gatorade, soda, apple juice, or Boost Breeze liquid supplement.
 - **If you have diabetes:** Drink clear liquids such as water, black coffee or tea (no milk or creamer), clear broth, and diet soda. Avoid juice, regular soda, and sports drinks, since these can raise your blood sugar levels.
- **Starting 2 hours before you arrive at the hospital, do not eat or drink anything.**
- If you must take medicines, take them with **only** a small sip of water.

At the Hospital

- Check in at Surgery on the ground floor of the Maleng Building at Harborview Medical Center.
- A nurse will greet you and help prepare you for your surgery.
- An escort will take you on a stretcher to meet the Anesthesia Team.
- The Neurosurgery Team will review the consent forms with you and you will sign them if you have not already done so.
- An *intravenous* (IV) line will be placed in a vein in your arm.
- You will receive a *sedative* (medicine to make you relax) through the IV.
- You will be taken into the operating room.

During Surgery

- You will be given *general anesthesia*. This medicine will make you sleep during surgery.

- An incision will be made in your scalp.
- Your neurosurgeon will drill a small hole in your skull and then use a special drill to remove a bone flap. This allows access to the brain and the blood vessels in the area. A high-powered microscope will be used to magnify and light the area.
- Small instruments will be used to remove the cluster of blood vessels.
- The bone flap will be replaced after surgery using small titanium metal brackets. The clip and brackets will stay in your body. They are safe for MRI scans and will not set off metal detectors.
- Your surgery will last about 4 to 6 hours.

After Your Surgery

- After your surgery, you will be taken to Recovery. You will spend about 1 to 2 hours in Recovery while waking up from anesthesia.
- You will then be taken to the Neuro Intensive Care Unit on the 2nd floor of the West Hospital Building. Your friends and family can visit you there.
- The day after surgery, you will have a follow-up *computed tomography* (CT) and *magnetic resonance imaging* (MRI) scan.
- You will most likely stay in the hospital 2 to 4 days.
- When you are discharged, you must have a responsible adult with you when you are ready to leave. This adult may drive you home, or may ride with you in a bus or taxi.

Follow-up Care

- Your incision will be closed with staples or sutures. These will need to be removed 14 days after surgery. This can be done by your primary care provider (PCP) or at the neurosurgery clinic.
- Your surgeon will see you at your follow-up visit 6 weeks after surgery. You will have a CT scan right before your appointment.
- You will have an MRI scan before another follow-up visit 1 year after surgery. These scans will show how your treatment is working.

Self-care at Home

- To help prevent infection, wait 5 days after your surgery before you take a shower.
- Do not take a bath until your incision is fully healed.
- For mild to moderate pain, you may take *non-steroidal anti-inflammatory drugs* (NSAIDs) such as ibuprofen (Advil, Motrin) or naproxen (Aleve, Naprosyn). Follow dose instructions on the bottle.

- Walk often to speed your recovery. It is OK to walk up and down stairs.

For Your Safety

For 2 weeks after your surgery:

- Do **not** bend over at the waist to prevent pressure on your head.
- Do **not** strain when having a bowel movement.
- Do **not** do heavy exercise (anything that increases your heart rate or makes you breathe hard).
- Do **not** lift anything that weighs more than 10 pounds. (A gallon of milk weighs almost 9 pounds.)

What to Expect

After this surgery, it is normal to have:

- Numbness at the incision site. This can last up to 1 year.
- Tenderness around your incision for several weeks.
- A dull headache for 1 to 2 weeks.
- A small bald spot where your hair was shaved for the surgery. Your hair will grow back.

When to Call

Call your **PCP or nurse** if you have:

- Severe or unusual headache
- Nausea or vomiting
- Loss of bowel or bladder control
- Problems with your vision
- Problems with balance or dizziness, problems walking, or poor coordination

Call 911 right away if you have any stroke-like symptoms such as:

- Weakness or loss of feeling
- Problems talking
- Problems walking
- Problems seeing
- Severe headache that starts suddenly

Questions?

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

Weekdays from 8 a.m. to 4 p.m., call 506.744.9340 and press 8 to talk with a clinic nurse.

After hours and on holidays and weekends, call the Community Care Line (24-hour nurse): 206.744.2500 or toll-free 800.607.5501.