You are having a procedure with University of Minnesota Heart Care.
It is scheduled at:

☐ University of Minnesota Medical Center
   500 Harvard St.
   Minneapolis, MN 55455
   on _____ / ____ / ____ (date) at ________ (time).
   Go to the Gold Waiting Room in the main lobby.
   Check in at the main desk.

☐ Fairview Southdale Hospital
   6401 France Ave. S.
   Edina, MN 55435
   on _____ / ____ / ____ (date) at ________ (time).
   Check in at the main desk in the Skyway Lobby.

University of Minnesota Heart Care: 612-365-5000
What is an ASD or Atrial Septal Defect?

This is a hole between the two upper chambers of the heart that is present at birth. Blood flows through the hole from the left chamber to the right, and this extra blood is pumped to the lungs. The extra blood flow forces the heart to work harder.

What is a PFO or Patent Foramen (foh-RAY-mun) Ovale (O-VAY-lee)?

This is a flap-like hole in the heart, present at birth, between the right and left upper chambers. Normally, the hole closes within the first one to two years of life.

If the hole does not close, in some adults there is a risk a blood clot could pass from the right to the left side of the heart and cause a stroke. Or, the blood flow from right to left might lead to a drop in oxygen. This would force the heart to work harder.

What is a PFO or ASD closure?

In this procedure the hole is closed with a special device (called a septal occluder). The doctor places a catheter (thin tube) in a blood vessel in the groin. Then it is threaded up into the heart where the device is placed in the hole. The device will stay in place for a lifetime.

How do I prepare for my treatment?

We want you to be safe and to feel at ease.

If you are a patient in the hospital, please follow the instructions that your nurse gives you.

If you are an outpatient (coming from home), please follow the instructions below.

Your nurse or doctor will check off the steps you must follow. He or she may give you other instructions not on this list.

When to stop eating and drinking

To make your test or treatment as safe as possible:

☐ 8 hours before surgery, stop all food, milk and chewing tobacco. Keep drinking clear liquids until 2 hours before your procedure. Clear liquids include water, clear juice, black coffee or clear tea without milk, gatorade, clear soda. Do not drink alcohol for 24 hours before your surgery.

Your medicines

☐ Take aspirin each day. Aspirin can prevent a blood clot. Start _______ (dose) aspirin on ___ / ____ / ___. Take one a day, even on the morning of your procedure.

☐ You need to stop these medicines:

Stop taking ____________________________ on ___ / ___ / ___.

Stop taking ____________________________ on ___ / ___ / ___.

Stop taking ____________________________ on ___ / ___ / ___.

☐ You need to start taking these medicines:

Start taking ___________________________ on ___ / ___ / ___.

Take _______ (dose) _____ times per day.

Start taking ___________________________ on ___ / ___ / ___.

Take _______ (dose) _____ times per day.

Start taking ___________________________ on ___ / ___ / ___.

Take _______ (dose) _____ times per day.

☐ If you have diabetes and take insulin: Call your diabetes care team. Ask if you should take ½ a dose the morning of your test.
What happens when you arrive?

After you arrive, a doctor will talk to you about the risks. Then you will sign a consent form that says you agree to the procedure. Do not sign the form if you don’t understand the risks and benefits.

A nurse will check your pulse, blood pressure and temperature. The nurse will start an IV (insert a small tube into a vein). This is for medicine. We will also review your lab tests.

You will change into a gown. We will bring you to the exam room. If you need to have general anesthesia, you will discuss that with your doctor before the procedure.

What happens during the procedure?

- First, we choose the site where we will insert the catheter (tube) into a vein (blood vessel). This will be in the groin (area between the leg and belly).
- We clip the hair at the site. We then wash the site and cover it with a clean sheet.
- We give you medicine to help you relax. Please tell the nurse if you need more medicine.
- We inject a numbing medicine at the site. You may feel some burning.
- You may feel a dull pressure as we insert the tube. Tell your doctor if you feel pain. We can give you more medicine if you need it.
- The catheter is guided through a vein into your heart.
- You will not feel it moving through your veins. This is because there are no nerves inside blood vessels.
- We inject a dye and take pictures of the heart. The dye makes the images easier to see.
- The catheter has a small balloon on the end. The balloon is used to measure the size of the hole.
- We close the hole with the device.
- Your doctor may remove the tube from your groin and put in a stitch.

What happens afterwards?

We will take you to a hospital room.

- You may need to lie flat in bed for up to four hours. Do not bend the leg where the catheter was inserted.
- The nurse will check on you often. He or she will:
  - remove the tube from your groin if this was not done earlier.
  - check the site.
  - check your blood pressure.
  - take the pulse in your foot.
- Be sure to tell your nurse if you feel any pressure in your chest or shortness of breath.
- You will receive pain medicine, if needed. Tell your doctor or nurse if you have back pain.
- You will have an echocardiogram (ultrasound of the heart). This will check that the device is in the right place.
**When will I go home?**

Most people go home the next morning. If there are problems, you may stay in the hospital for two or three days.

Before you go home:

- A nurse will answer your questions.
- We will tell you when to plan follow-up visits with your doctor.
- You will have the phone number of your doctor or nurse in case you have questions.

**What are the risks?**

The level of risk depends on the health of the patient. You should ask your doctor about your specific risks.

Inserting a catheter into a blood vessel may lead to:

- Bleeding or bruising
- Blood clots
- Injury to the vein
- A small risk of stroke
- A very small chance of emergency surgery.

**Long-term risks**

Risks are few and rare. They include:

- Blood clots forming on the device. This could cause a stroke.
- Irregular heart beats. You may need to take medicine for this.
- The device coming loose. This may require open-heart surgery.
- Wearing away of the heart wall, causing bleeding into the sac around the heart. This may need emergency surgery. Rarely, it is fatal.

**How should I care for myself at home?**

It is normal to have a small bruise or lump at the site.

**Bathing**

- You may shower. **Do not** scrub the site.
- Do not take a tub bath or swim for 2 days.
- **Do not** use lotion or powder near the puncture site for 3 days.

**Activity**

- For the first 2 days:
  - **Do not** stoop or squat.
  - When you cough, sneeze or move your bowels, hold your hand over the tube site and press gently.
  - Do not drive.
  - Do not have sex (intercourse).
- For the first 3 months: No contact sports, scuba diving, or sports that strain the groin (such as tennis).

If you start bleeding from the site in your groin, lie down flat and press firmly on the site. Call your doctor or 911 as soon as you can.
Medicines

- Take aspirin daily with food for six months.

- If you have started taking Plavix or Effient, do not stop taking it until you talk to your heart doctor (cardiologist).

- If you are on metformin (Glucophage), do not restart it until you have had blood tests (within 2 to 3 days after discharge). When your doctor tells you it is safe, you may restart your metformin.

- If you have stopped any other medicines, check with your nurse or provider about when to restart them.

- For one year, before you have any dental work or surgery: Tell your dentist or doctor that you will need antibiotics (anti-germ medicine) to prevent infection.

Follow-up

You will have a check-up with your health care provider 1 to 2 weeks after your test. He or she will check your site and review any new medicines.

You will see your heart doctor (cardiologist) in 1 to 2 months.

When to call for help

Call 911 right away if you have bleeding that is heavy or does not stop.

Call your doctor if you have:

- An irregular heart beat or fluttering in your chest.
- A large or growing hard lump at the tube site.
- Red, swollen, hot or tender site.
- Blood or fluid draining from the site.
- Chills or a fever greater than 101°F (38°C).
- A leg or arm that feels numb or cool.
- Hives, a rash or unusual itching.

University of Minnesota Heart Care:
612-365-5000 (7 days a week)