

## About Your ASD/PFO Closure

### *Preparing for your procedure*

*This handout explains how to prepare and what to expect when you are scheduled for an ASD/PFO closure at University of Washington Medical Center (UWMC) - Montlake campus.*

### Arrival Time

**Please check in at the Admitting Reception window** on the 3rd floor of the hospital at this date and time:

Date: \_\_\_\_\_

Time: \_\_\_\_\_

This arrival time allows us to fully prepare you for your procedure.

**We will do our best to start your procedure on time.** But please be patient if emergencies in the hospital cause a delay.



*Check in at the Admitting Reception window behind the Information Desk on the 3rd floor (main level) of UWMC - Montlake.*

### Phone Call Before Your Procedure

A Cardiac Procedures nurse will call you **3 to 7 days before** your appointment. The nurse will review your medicine list and allergies and answer any questions you may have. There may be some medicines you need to stop taking on the day of your procedure.

Please tell this nurse if you have any concerns about who will drive you home after your procedure. **You cannot drive yourself home or take a bus or taxi.**

- If you do not receive this call by 3 days before your appointment, call the nurse at **206.598.8435**.
- If you need to reschedule or cancel your appointment, call **206.598.8200** right away.

## Heart Anatomy

The heart has a right side and a left side. The 2 sides are divided by walls called *septa*. Septa keep *deoxygenated* blood (blood without oxygen) on the right side from mixing with *oxygenated* blood (blood with oxygen) on the left.

If one of the septa (called a *septum*) has a hole, blood from one side of the heart leaks into the other side. When this happens, the heart cannot pump blood as well as it normally would.

The top chambers of the heart are called the right and left *atria*. The wall between the two areas is called the *atrial septum*.

In a *fetus* (unborn child), there is a hole in the atrial septum called the *foramen ovale* (fore-AY-men oh-VAL-ee). An unborn child gets oxygen from their mother. They do not use their lungs. The foramen ovale allows blood to bypass the lungs as it circulates through the fetus' body.

## What is a PFO (patent foramen ovale)?

The foramen ovale usually closes by the time a child is a few years old. But, in about 10 to 20% of people (10 to 20 out of 100), it keeps leaking. This is called a *patent* (open) *foramen ovale* (PFO). A PFO is like a leaky tunnel.

More than 99% of people (more than 99 out of 100) with a PFO do not have symptoms or need treatment. But, a PFO can allow blood clots and other waste – which the lungs usually filter – to go from the deoxygenated (venous) side of the heart to the oxygenated (arterial) side. A clot or particle that enters the arteries can cause a stroke or cut off blood supply to a limb or organ.

## What is an ASD (atrial septal defect)?

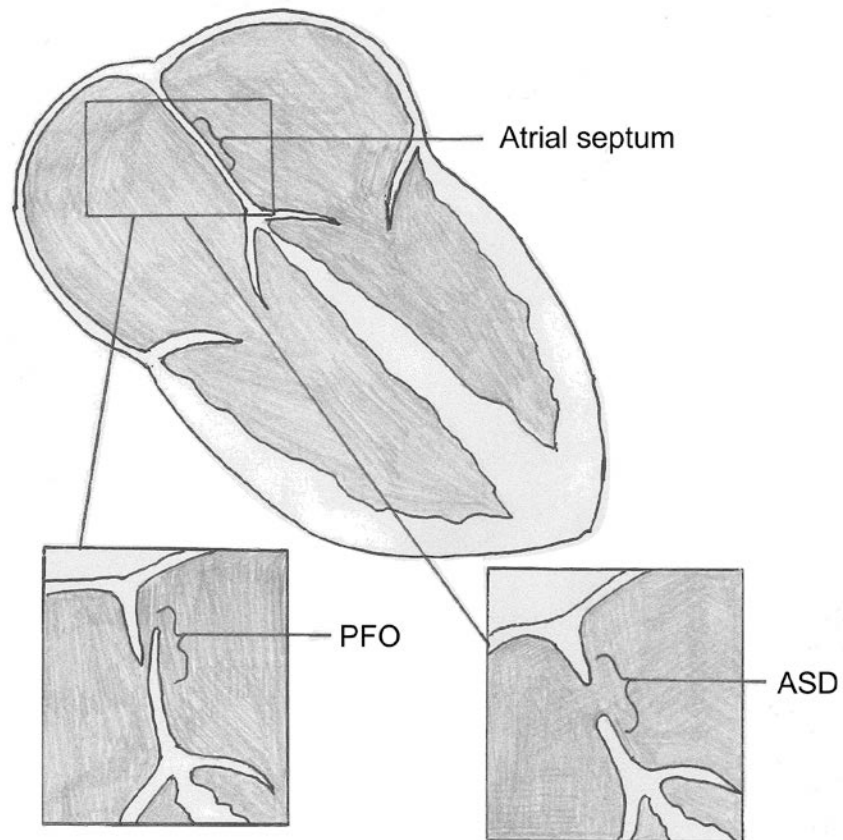
An *atrial septal defect* (ASD) is another type of hole in the atrial septum. An ASD is more than a “leaky tunnel.” It is an actual hole that allows a lot of deoxygenated and oxygenated blood to mix. If the hole is small, symptoms can be minor. If it is large, a person can feel very tired and be short of breath.

## What causes an ASD?

- Fewer than 1% of babies (less than 1 out of 100) are born with an ASD. An ASD in the fetus may occur if the mother has a

condition like diabetes, or a disease, such as lupus and rubella. It can also be caused by the mother's use of alcohol or street drugs.

- An ASD can also form later in life due to using alcohol or street drugs.



A patent foramen ovale (PFO) and an atrial septal defect (ASD) cause leaks in the atrial septum.

### How are ASDs and PFOs treated?

Most times, ASDs and PFOs are closed only if they cause fatigue or shortness of breath, or if they may have caused a stroke.

People with PFOs who also have had a stroke often have migraine headaches. After these people had their PFOs closed, their migraines went away or were greatly reduced. We do not know if ASD closure can help ease migraines.

ASDs and PFOs can be repaired with surgery or with *percutaneous* (through the skin) treatment using a *catheter* (a thin, flexible tube). Your doctor has advised you to have the catheter procedure.

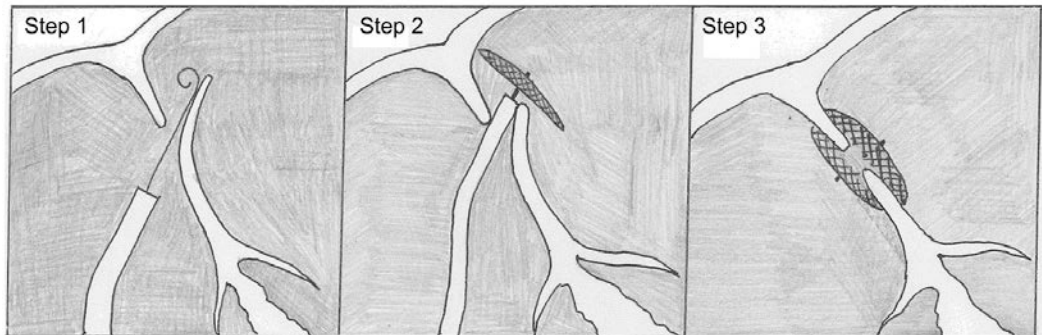
Catheter procedures involve only a needle puncture in the skin. The catheter is inserted through this needle into a vein or an artery. Since the surgeon does not have to open your chest or operate on your heart, your recovery may be easier and quicker than it would be after surgery.

## Your Procedure

At the beginning of your procedure, you will have a *cardiac catheterization*. This will show your doctor the size of your PFO or ASD and where it is located. We will also measure the pressures inside your heart chambers.

Closing your PFO or ASD involves 3 main steps (see drawing below):

1. Your doctor will insert a catheter through a vein and thread it into your heart. X-ray and ultrasound (“echo”) are used to help guide the catheter to the right place in your septum.
2. The catheter has a tiny device folded up inside it, like a folded umbrella. When the catheter reaches the hole in the septum, the device is slowly pushed out of the catheter. At the same time, the device opens up. This covers the hole in the septum, seals it closed, and secures the device in place.
3. The catheter is then removed from your body. Over time, tissue grows over the device and it becomes part of your heart.



*Closing your PFO or ASD involves 3 main steps.*

## Anticoagulant Medicine

For at least the first 6 months after your procedure, you will need to take an *anticoagulant* (blood-thinning) medicine. This will help prevent clots from forming on the device.

- The *cardiologist* (heart doctor) who does your procedure will advise you to take aspirin, clopidogrel (Plavix), warfarin (Coumadin), or another anticoagulant.

- Before you are discharged from the hospital, be sure that you review your medicine plan with this doctor.
- If you need a prescription, make sure you have it when you leave the hospital.

## Getting Ready for Your Procedure

- **Pack an overnight bag.** Most patients stay in the hospital overnight after their procedure and leave the hospital the next morning. Some people may be released the same day, but please pack an overnight bag in case you need to stay.
- Arrange for a responsible adult to take you home.
  - If you leave the hospital the same day as your procedure, you **must** have a responsible adult take you home. This person must be with you in recovery before you are allowed to leave the area. You may not go home by yourself.
  - If you have sedation, you cannot drive for 24 hours after your procedure. Make sure you have someone who can help you as needed during this time. We suggest you have a responsible adult stay with you for 24 hours.
- **Make plans.** If you are from out of town, you may want to make a hotel or motel reservation or other plans to stay overnight in the Seattle area.
- Talk with your healthcare providers about your current medicines. If you are taking:
  - **Coumadin (Warfarin):** You will need specific instructions about when or if you should stop taking this medicine before your procedure. Please talk with the provider who referred you for this procedure.
  - **Other blood-thinning (anticoagulation) medicines:** The Cardiac Procedures nurse will review these with you and let you know if it is OK to take them.
  - **Diabetes medicines:** Your medicines may need to be adjusted for your procedure. Talk with your provider who prescribed them.

## At Home on Procedure Day

### Fasting

**Do not eat or drink anything for at least 8 hours before your procedure.** You may have a light meal or snack if you finish eating at least 8 hours before your check-in time.

Some people eat a light snack or drink a large glass of water very early in the morning, if they wake up more than 8 hours before their procedure. Most people tell us that doing this helps the day go better, lowers their stress, and improves their mood.

Try having a light snack or drink water if you get up early to use the bathroom. You could also set an alarm to wake up early.

If you eat or drink anything, make sure it is more than 8 hours before your check-in time.

### Medicines

When you talk with the Cardiac Procedures nurse about your medicines, the nurse will tell you if there are any that you should not take before this test. Most medicines do not have to be stopped before this procedure.

- If you do not need to make any changes to your medicines, take your usual morning medicines with small sips of water.
- If your doctor prescribed aspirin for your heart health, it is very important to take it the morning of your procedure.

### What to Bring to the Hospital

On the day of your procedure, please bring with you:

- **A list of all medicines you currently take.** Include the dose and how often you take each one.
- A list of any other medicines you took on the day of your procedure, including vitamins and supplements. Write down the dose and when you took them.
- **The name(s) and phone number(s) of your contact person and the person who will take you home.** This may be the same person. The person who takes you home must be with you when you receive instructions before you leave the hospital.
- If you use a CPAP machine for sleep apnea or breathing problems, bring it with you to the hospital.

## At the Hospital

### Checking In

- Use the **main hospital entrance** on Pacific Street. When you enter, you will be in the lobby on the 3rd floor of the hospital. You will see the Information Desk in the lobby.
- Go to the Admitting Reception window. This office is down the hall to the right of the Information Desk. Tell them that you are checking in for your heart catheterization. If needed, their phone number is 206.598.4310.
- Do **NOT** go to Cardiac Procedures until after you check in at Admitting.

### Finding the Cardiac Procedures Unit

After you have checked in, go to Cardiac Procedures on the 2nd floor:

- From Admitting, go back to the lobby and turn left.
- Go along the main hallway to the Pacific Elevators. Take an elevator to the 2nd floor.
- As you step off the elevator, you will see a phone on the wall to your right. Pick up the handset and press **Key 1, Cardiac Procedures Visitors**. You will be connected to the Procedural Nurse who will tell you what to do next.

### Preparing for the Procedure

While you are in our pre-procedure area:

- You will change into a hospital gown.
- We will take your blood pressure and temperature.
- A nurse will review your health history. This includes a review of any allergies you may have and your current medicine list.
- If your doctor asks us to do so, we will do an *electrocardiogram* (ECG or EKG). This painless test measures your heart's electrical activity. It shows if parts of your heart are too large or working too hard.
- We will place an *intravenous* (IV) line in your arm vein.
- We will take a blood sample.
- You will meet with the doctor who will be doing your procedure. This doctor will explain the procedure to you and talk with you about risks and side effects. The procedure has some risks, and

some patients have side effects from the medicines that are used. Please be sure to ask any questions you have about the procedure.

- We will ask you to sign a consent form for your procedure. You may also decide not to sign the form. The procedure will not be done if you do not give your consent by signing the form.
- While you are in this pre-procedure area, 1 or 2 family members or friends may be with you.
- During your procedure, family and friends may wait in the waiting room.

## After Your Procedure

### Recovery Time

- **You must lie flat in bed for 2 to 6 hours.** Your nurse will help you stay comfortable. You may be given pain medicines if you have any problems lying flat.
- Nurses will check your pulse, blood pressure, and dressing often during the first 3 to 4 hours after your procedure.
- Your family and friends can visit during this time. But, since the recovery room is small, only 1 to 2 guests may visit at a time.
- You will be able to eat as usual.

### Length of Stay

After your procedure, your doctor will assess your condition and recovery. Most patients stay overnight on a short-stay unit of the hospital. Some patients may be able to go home the same day as their procedure.

### If You Have Sedation

- **A responsible adult must take you home.** You may not take a bus, shuttle, taxi, or any other transportation by yourself.
- For 24 hours after your procedure:
  - Do **not** drive.
  - Make sure you have a responsible adult who can help you if needed during this time.
  - Do **not** be responsible for the care of anyone else, such as children, pets, or an adult who needs care.

- Do **not** drink alcohol or take drugs other than the ones your doctors prescribed or suggested.
- Do **not** make important decisions or sign legal papers.

## When You Go Home

### Activity

- Starting 24 hours after you are discharged, you may:
  - Return to light activity
  - Drive
  - Shower
- **For 48 hours** after your procedure:
  - Do **not** do anything that puts stress on your puncture site. This includes housework, gardening, and many self-care tasks. Ask for help with any tasks that need to be done during this time.
  - You may go up and down stairs, but limit how much you do this.
- **For 7 days** after your procedure:
  - Do **not** lift anything that weighs more than 10 pounds. (A gallon of milk weighs almost 9 pounds.)
  - Ask someone to help you with chores like the laundry and other tasks that you may need help with during this time.
  - 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.

## Driving Directions and Parking

UWMC - Montlake is at 1959 N.E. Pacific Street, at the south end of the University of Washington campus. (See map on page 10.)

### From Interstate 5

- Take Exit 168B, State Route 520 to Bellevue.
- Take the Montlake Boulevard exit.
- Turn left onto Montlake.
- Turn left on N.E. Pacific Street.
- The hospital will be on your left.

## From Interstate 405

- Take Exit 14, State Route 520 to Seattle via Evergreen Point Bridge.
- Take the Montlake Boulevard exit.
- Veer right onto Montlake.
- Turn left on N.E. Pacific Street.
- The hospital will be on your left.

## Triangle Parking Garage

The Triangle Garage is on N.E. Pacific Place, across the street from the hospital. The garage is underground. A walking tunnel connects the garage to the hospital's main entrance.

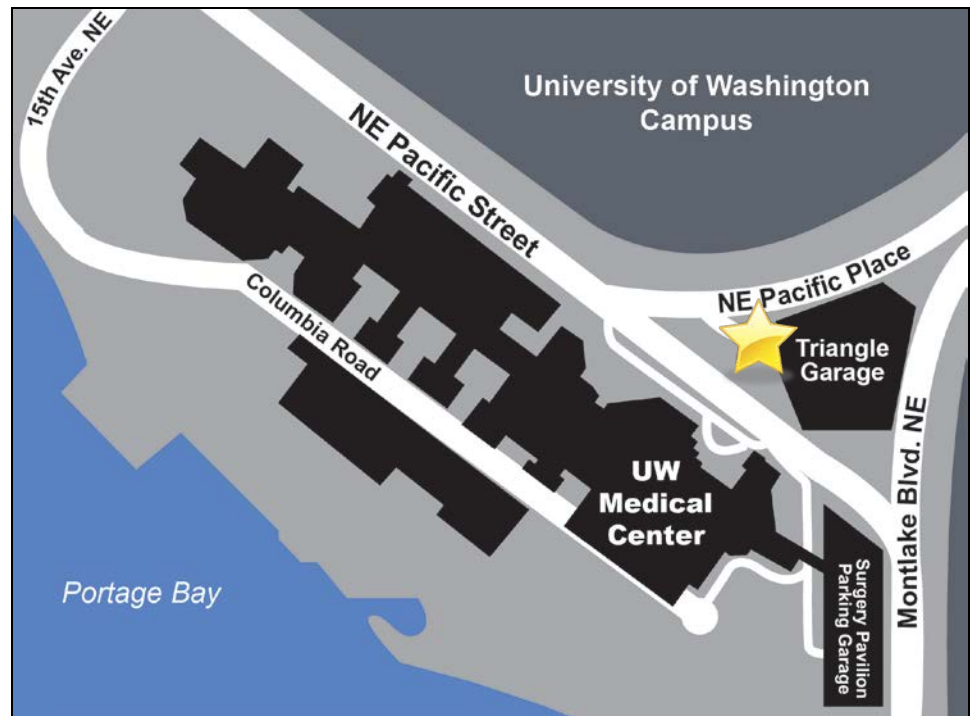
There is also a valet parking service at the main entrance to the hospital from 7:30 a.m. to 5:30 p.m. The cost for valet parking is the same as parking in the Triangle Garage.

To reduce your parking fee, bring your parking ticket with you to the hospital. Ask for a validation sticker when you check in at Cardiac Procedures.

## Questions?

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

- **For general questions**, weekdays from 8 a.m. to 5 p.m., call the Heart Institute at 206.598.4300.
- **For questions related to your procedure**, weekdays from 6:30 a.m. to 8 p.m., call Cardiac Procedures at 206.598.7146. Ask to talk with a nurse.
- **For urgent concerns related to your procedure**, or if it is after hours or on a weekend and holiday, call 206.598.6190 and ask to page the Cardiology I Fellow on call.



*The star on this map shows the entrance to the Triangle Garage.*