



A GUIDE FOR CARDIOVASCULAR CATH LAB PATIENTS

PATENT FORAMEN OVALE CLOSURE

Bring this booklet on the day of your procedure.

DALE MICHELS CENTER FOR HEART CARE

430 E. Division Street, Fond du Lac • Cardiology (920) 926-8230

For additional information, visit agnesian.com/cathlab.

agnesian.com

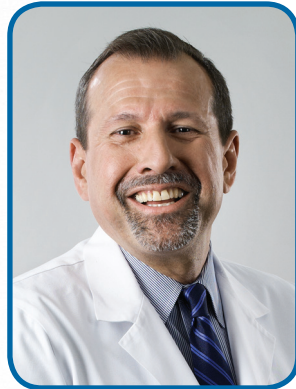
AGNESIAN HEALTHCARE IS SPONSORED BY THE CONGREGATION OF SISTERS OF ST. AGNES

AGNESIAN HEALTHCARE'S DALE MICHELS CENTER FOR HEART CARE

Agnesian HealthCare offers comprehensive heart care services close to home in Fond du Lac. These services, offered through the Dale Michels Center for Heart Care, bring to the region a diverse and complete package of quality cardiac and vascular procedures, including open-heart surgery (coronary artery bypass grafts), coronary angioplasty, stent placements, cardiac catheterizations, peripheral angiograms and other procedures.

For more information, call Cardiology Services at (920) 926-8230.

OUR CARDIOLOGISTS



Juan Diaz, MD, FACC

University of Illinois
College of Medicine



Richard Santa-Cruz, MD, FACC

University of Miami
School of Medicine

PROCEDURE DETAILS

Your Procedure: _____

Physician: _____

Date: _____ Arrival Time: _____

THE NIGHT BEFORE MY PROCEDURE:

- Do not eat or drink after _____.
- If you take insulin, decrease your nighttime dose by: _____

THE MORNING OF MY PROCEDURE:

- If you take insulin, decrease your morning dose by: _____
- Take all of your morning medications with sips of water **EXCEPT:** _____

- If you take Warfarin (Coumadin), have a contrast dye allergy or have impaired kidney function:

- Shower or bathe the night before or the morning of your procedure.

PLEASE BRING THE FOLLOWING WITH YOU ON THE DAY OF YOUR PROCEDURE:

- **If you use a CPAP at home, bring it with you.**
- You may want to bring a book or electronic device to entertain yourself while you wait for your procedure to start. Your start time may vary due to the length of procedures prior to yours, or if emergencies arise.
- A current list of your medications.
- Bring an overnight bag with home comforts if desired, as you may stay overnight.

Contact the Cardiology department at (920) 926-8230 with questions.

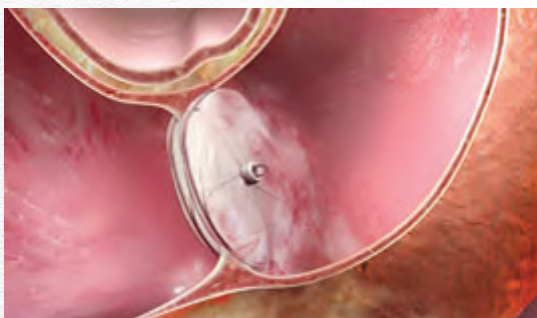
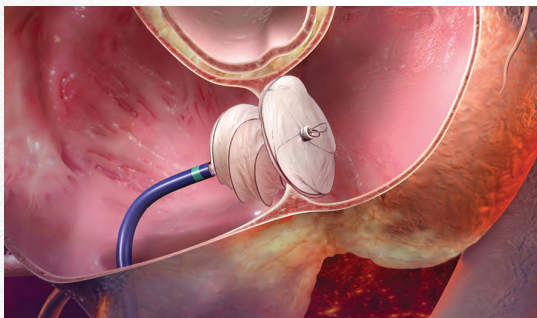
Please arrive on time to check in at hospital registration, located by Café Coffee, just off the hospital lobby. The main entrance is located off Division Street by the stop and go lights.

PATENT FORAMEN OVALE (PFO)

What is a patent foramen ovale?

A patent foramen ovale (PFO) is a hole in the heart that failed to close after birth. During development in the womb, the unborn baby has a small flap-like opening called the foramen ovale. This is between the two upper chambers of the heart called the atria. Normally the flap closes during infancy when the baby is no longer dependent on the blood supply through the umbilical cord - but when it doesn't close, it's referred to as a patent foramen ovale. As we are born and start breathing, the PFO (which is really a flap, not a true hole) should close. PFOs are noted in at least 25 percent of all adults.

Most people don't realize they have a PFO. The condition is often discovered during tests for other concerns. The flap-like opening of the PFO opens primarily when a person sneezes, coughs or strains, like during a bowel movement. The force can result in the PFO opening, allowing a venous blood clot to pass and migrate to the artery system and other parts of the body, causing a stroke or damaging organs in the process. Sometimes migraine headaches are a symptom of PFOs as well.



Atrial Septal Occlusion Device

How are PFOs diagnosed?

An echocardiogram, an ultrasound of the heart, visualizes the heart and shows the passage of micro bubbles through the atria if a PFO is present. PFOs are not detected through a physical exam, an EKG or a stress test.

PROCEDURE INFORMATION

What do I need to do before my procedure?

- You will need to arrange transportation to the hospital and later that day or the following day depending on your procedure results. We will not know when you will be discharged until the procedure is completed. Plan to spend the night, just in case.

When you arrive

- You can expect to spend about two hours in one of our pre-procedural rooms. During this time, we may:
 - Sign consent forms
 - Perform physical assessments
 - Update your medical history and medications
 - Obtain blood work
 - Perform diagnostic tests, such as an EKG
 - Start an IV to administer fluids and medications
 - Prep the skin area of your procedure site
 - Give oral medications in pill form prior to your procedure to prevent a contrast dye reaction and to help you relax
- The physician performing your procedure will speak with you. This is a good time for you to ask questions about your procedure and the recovery process.

PROCEDURE INFORMATION (CONTINUED)

During your procedure

- The procedure typically takes about an hour. Your loved ones will be taken to our waiting area until the procedure is done.
- You will be brought to the Cardiovascular Cath Lab procedure room where you are expected to lay flat on the X-ray table with the support of a pillow for your head. The procedure room tends to be very cool, which is by design, so we will comfort you with a warm blanket. Cardiovascular Cath Lab associates will then proceed to prep you for the procedure by attaching a heart monitor and other pertinent equipment. You will have oxygen placed in your nose and your procedure site will be washed with an antibacterial cleanser. A sterile covering will drape over you, and it will be very important for you to lie still.
- The nurse with you in the procedure room will administer conscious sedation through your IV to help you relax and stay comfortable. We will administer sedation while closely monitoring your vital signs for your safety.
- If you begin to experience any discomfort, please let the nurse or physician know so that we can make you comfortable.
- A tiny needle will be used to inject local anesthetic into the skin at the procedure sites. You will feel a pinch and a burn from this medication but the area will become numb very quickly.
- Catheters are inserted through a vein in both sides of your groin and maneuvered to your heart. The atrial septal occlusion device is inserted through the catheter and ultrasound imaging is used to identify the correct size, fit and placement. Once the atrial septal device is positioned in the correct location, straddling the atrial wall; the permanent device is deployed, closing the flap.

After your PFO closure procedure

You will have a puncture in both the right and left side of your groin. A sheath (tube that allows us to put equipment into your artery without blood coming out) will remain in both punctures for about two hours. There will be IV fluids and tubing attached to each sheath. A cardiovascular lab associate will remove each sheath and will apply firm pressure over the insertion sites for 10 to 20 minutes. This is to keep the area from bleeding. A dressing will be applied to both sites.

- You will be on bed rest for at least three hours after the sheaths are removed. While you are on bed rest, you will need to lie still, keep your head on your pillow and not bend your legs.
- You and your healthcare provider will discuss whether or not you can leave the same day or spend the night.
- You may also be prescribed an antiplatelet or anticoagulant medication to prevent blood clotting prior to leaving the hospital.
- You will need to take an antibiotic for one year prior to any dental procedures following your PFO closure. This prescription can be given to you by your cardiologist.

Risks of the procedure, although very rare:

- Bleeding, bruising, infection or pain at the catheter insertion site
- Vein damage
- Heart attack or heart arrhythmia, stroke or death are very rare

FREQUENTLY-ASKED CARDIOVASCULAR CATH LAB PROCEDURE QUESTIONS

Q. Why can't I eat before my procedure?

We do not want you to have anything to eat or drink before your procedure to make sure that your stomach is empty. This helps to decrease the risk of nausea, vomiting and breathing complications.

Q. Why do I need an IV started before the procedure?

An IV is started to administer IV fluids and medications, such as conscious sedation, pain medication and blood thinners.

Q. Why do I have to have my procedural site shaved?

Removing hair just prior to the procedure using a clipper reduces the risk of infection which is why we request patients shower the morning of to reduce risk of infection.

Q. Why do I have to arrive 1.5 hours prior to my procedure start time?

You have to arrive early to provide adequate time for your laboratory results to be reported and to allow your nurse enough time to complete the pre-procedural assessments, history review and procedural preparation tasks.

Q. Why are the cath lab procedural rooms so cold?

The temperature is kept below a certain level to maintain equipment sterility; this was done by design per regulations. Also so our specialized X-ray equipment doesn't overheat.

Q. Who will be present during my procedure?

In addition to your physician, there will be one nurse in the room with you, and either a radiology technician or nurse assisting the physician and another staff member who closely monitor you.

Q. Can I walk through metal detectors if I have an implant?

Yes. Your implant will not set off metal detectors.

Q. Why do I have to take an anti-platelet medication after having a PFO closure device implanted?

Anti-platelet medication reduces the risk of blood clotting around your implant.

Q. Can I stop taking my medication if I feel better?

No, you must continue to take your medications as prescribed even if you feel better.

Q: How long does the procedure take?

The length of your procedure varies and is based upon your procedure findings. If your procedure is taking longer than an hour, a Cardiovascular Cath Lab staff member will go to the family waiting area to update your family/friends.

Q: Will I be asleep for the procedure?

Cath lab procedures are performed while you are awake but sedated. A Cardiovascular Cath Lab staff member will start an IV and administer conscious sedation to you once you are in the procedure room. This way of sedation allows you to be comfortable and for your physician to still be able to communicate with you.

Q. Why do I need to be on bed rest?

You will be on bed rest from anywhere between three to eight hours after your procedure. Bed rest gives the puncture site adequate time to heal to prevent bleeding complications.

If you have any questions prior to your procedure, please call the Cardiology department at (920) 926-8230, or write down your questions for the physician on the last page of this booklet and bring along on day of your procedure.

RESOURCES

Agnesian Pharmacies

Agnesian Pharmacy Main Street
145 N. Main Street, Fond du Lac
(920) 926-4660

Agnesian Pharmacy Markesan
730 N. Margaret Street, Markesan
(920) 398-3261

Agnesian Pharmacy
North Fond du Lac
723 Park Ridge Lane
North Fond du Lac
(920) 926-8660

Agnesian Pharmacy Plus
420 E. Division Street, Fond du Lac
(920) 926-8585

Agnesian Pharmacy Waupun
904 W. Main Street, Waupun
(920) 324-3010

Agnesian Pharmacy West
912 S. Hickory Street, Fond du Lac
(920) 929-7480

Agnesian Prescription Center
Brownsville
900 Main Street, Brownsville
(920) 583-1310

Agnesian Prescription Center
Health Plaza A
421 Camelot Drive, Fond du Lac
(920) 926-5455

Agnesian Prescription Center
Mayville
360 S. Mountin Drive, Mayville
(920) 387-7570

Anticoagulation Management Services

Ripon Medical Center
845 Parkside Street, Ripon
(920) 745-3320

St. Agnes Hospital
430 E. Division Street, Fond du Lac
(920) 926-4580

Waupun Memorial Hospital
620 W. Brown Street, Waupun
(920) 324-8444

Cardiac Rehabilitation

Ripon Medical Center
845 Parkside Street, Ripon
(920) 745-3655

St. Agnes Hospital
430 E. Division Street, Fond du Lac
(920) 926-5041

Waupun Memorial Hospital
620 W. Brown Street, Waupun
(920) 324-6544

Cardiology Clinic

Fond du Lac Regional Clinic
420 E. Division Street, Fond du Lac
(920) 926-8230

Cardiothoracic Surgery

Fond du Lac Regional Clinic
420 E. Division Street, Fond du Lac
(920) 926-8231

Cardiovascular Cath Lab

St. Agnes Hospital
430 E. Division Street, Fond du Lac
(920) 926-5006

Pacemaker Clinic

Fond du Lac Regional Clinic
420 E. Division Street, Fond du Lac
(920) 926-4781

Vascular Services

Fond du Lac Regional Clinic
420 E. Division Street, Fond du Lac
(920) 926-8540

Nurses' Station

St. Agnes Hospital
4 South: (920) 926-5140
5 West: (920) 926-4230
5 South: (920) 926-5150
6 South: (920) 926-5160
Day Surgery: (920) 926-4900
Intensive Care Unit: (920) 926-4730

Creekside Café (St. Agnes Hospital Cafeteria)

Hours of Operation:
Monday through Sunday
6:30 a.m. to 6:30 p.m.

Weekday Grill Hours:
6:30 a.m. to 10 a.m.
11 a.m. to 1:30 p.m.
4:30 p.m. to 6:30 p.m.

Café Coffee (Proudly serving Starbucks)

St. Agnes Hospital
Hours of Operation:
Monday through Thursday
6:30 a.m. to 5:30 p.m. &
Friday 6:30 a.m. to 3:30 p.m.

Closed on Weekends

