A GUIDE FOR CARDIOVASCULAR CATH LAB PATIENTS

Carotid Angiogram

Bring this booklet on the day of your procedure.

For additional information, visit agnesian.com/cathlab.

AGN-15372-CA (Rev. 12/13/16)
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 or Vascular Services at (920) 926-8540.

Our Cardiologists

Juan Diaz, MD, FACC
University of Illinois College of Medicine

Richard Santa-Cruz, MD, FACC
University of Miami School of Medicine

Our Vascular Surgeon

Shahrriar Alizadegan, MD
Tabriz University of Medical Services
Tabriz, Iran

Patient Notes

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Procedure Details

Your Procedure: ____________________________________________

Physician: ____________________________________________

Date: ____________________________  
Arrival Time: ______________________

What do I need to do the night before my procedure?

• Do not eat or drink after ________________________.

• If you take insulin, decrease your night time dose by: ____________________________ and your morning dose by: ____________________________.

What do I need to do the morning of my procedure?

• Please take all of your medications the morning of your procedure with sips of water except: ____________________________.

• You may want to bring a book to read, a tablet or something to entertain yourself. The cardiovascular lab does not run on a precise schedule since each procedure varies in length of time. While we strive to start your procedure as soon as possible, there are times where emergencies occur and your procedure may be slightly delayed.

• Special medication instructions for patients on Warfarin, who have a contrast dye allergy or those with impaired kidney function: ____________________________.

Contact the Cardiology department at (920) 926-8230 or Vascular Services at (920) 926-8540 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.
**Procedure Information**

**What do I need to do before my procedure?**
- You will need to have transportation to the hospital and possibly later that day or the following day depending on procedure results. We will not know when you will be discharged until the procedure is completed. Plan to spend the night just in case and bring an overnight bag.
- Please shower prior to your procedure.
- Make a list of your current medications and bring with you the day of your procedure.
- If you use a c-pap at home, bring it with you the day of your procedure.

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 important assessments including a detailed neurological assessment
  - Update your medical history and medications
  - Obtain blood work
  - Perform diagnostic tests, such as an ENG
  - Start an IV to administer fluids and medications
  - Prep the skin area of your procedure site
  - You will be given three medications in pill form prior to your procedure. The first is aspirin, which is given to you to help thin your blood so catheters can be more easily manipulated. The second medication is Benadryl. This is given to prevent a contrast dye reaction and also helps you relax. The last medication is Valium and is given to you to relax.
  - When you arrive the cardiovascular lab staff do their best to make you comfortable and keep you informed prior to entering the lab suite.
  - 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.
  - Pain management is often a concern for patients undergoing a procedure. Our nursing staff are specially trained to administer conscious sedation, also known as moderate anesthesia to manage pain/discomfort during the procedure.

**Resources**

**Agnesian Pharmacy**
- Agnesian Pharmacy Plus
  - 420 E. Division Street, Fond du Lac (920) 926-8585
- Agnesian Pharmacy Main Street
  - 145 N. Main Street, Fond du Lac (920) 926-4660
- Agnesian Pharmacy North Fond du Lac
  - 723 Park Ridge Lane, North Fond du Lac (920) 926-8660
- Agnesian Pharmacy Waupun
  - 904 W. Main 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

**Anticoagulation Management Services**
- Ripon Medical Center
  - 845 Parkside Street, Ripon (920) 745-3555
- St. Agnes Hospital
  - 430 E. Division Street, Fond du Lac (920) 926-4580

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

**Cardiac Rehabilitation**
- Ripon Medical Center
  - 420 E. Division Street, Fond du Lac (920) 926-8585
- Agnesian Pharmacy Main Street
  - 145 N. Main Street, Fond du Lac (920) 926-4660

**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 to 10:00 a.m.; 11:00 a.m. to 1:30 p.m.; 4:30 to 6:30 p.m.

**Café Coffee (Proudly serving Starbucks)**
- 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
Carotid Artery Disease

What is a carotid artery?
Your brain needs constant supply of oxygen and nutrient rich blood. A substantial amount of blood flow to your brain comes from the carotid arteries. The common carotid artery is on both sides of your neck, which divides into two vessels which are called the external carotid and the internal carotid artery. The external carotid artery brings blood to your face and the internal carotid artery brings blood to the front part of your brain.

What is carotid artery disease?
This is also known as atherosclerosis allowing a buildup of fatty substances like cholesterol, plaque or blood clots, which thicken and harden within the artery. This can result in slow blood flow. Build up atherosclerosis can lead to a stroke in two different ways.

1. Buildup of plaque over time narrows the blood vessel and the flow to the brain is diminished or blocked.
2. The plaque breaks off within the blood vessel and travels to smaller vessels of the brain causing blockages.

How is carotid artery disease diagnosed?
A series of tests may be completed to diagnose carotid artery disease. Your physician may order an ultrasound, CT scan or MRI. If there is atherosclerosis noted on one of those tests your physician may recommend having an angiogram performed in the Cardiovascular lab.

During your procedure
• The procedure typically takes one hour. Your loved ones will be taken to our waiting area until the procedure is done. A Cardiovascular lab associate will update your family if the procedure is longer than expected.

• You will be brought to the Cardiovascular 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 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 soap. A sterile covering will drape over you, and it will be very important for you to lie still.

• Throughout the procedure your vital signs are monitored by a trained Cardiovascular lab associate.

• The nurse with you in your procedure 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.

• A tiny needle will be used to inject local anesthetic into the skin. This numbs the area when the puncture or incision is made. This injection may cause a mild stinging sensation, but only lasts a brief amount of time. The benefit of using a local anesthetic is reduction of discomfort at the insertion site.

Frequently-Asked Questions

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 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 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 artery puncture adequate time to heal to prevent bleeding complications.

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 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 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 artery puncture adequate time to heal to prevent bleeding complications.
Carotid Artery Disease (continued)

- A long narrow tube called a catheter is inserted into a puncture made in the groin. It is guided to your carotid artery using special X-ray technology called fluoroscopy and contrast dye to obtain real-time moving pictures of the blood flow in your arteries. These images can identify the exact location of your narrowed or blocked arteries. Blocked or narrowed arteries can be opened quickly with a balloon. To ensure that the blocked artery stays open, a stent is used to increase blood flow through the artery.

- If you begin to experience discomfort, please let the nurse or physician know so that we can make you comfortable.

- In order to get the proper images, we will move the table and the lights will occasionally turn off. This is normal. It is essential to keep your head still. The nurse may ask you questions during the procedure or you squeeze a stress ball to assess your neurological function.

- The physician or nurse may ask you questions during the procedure or you squeeze a stress ball to assess your neurological function.

- The physician will speak to you and your family about your results when the procedure is completed or you are discharged.

After your carotid angiogram
- After the procedure is completed the small hollow tube will be removed and the puncture site will be sealed with a special closure device. You will be on bed rest for three to four hours. While you are on bed rest, it will be important for you to lie still, keep your head on your pillow, and not bend your leg. A nurse will perform regular neurological assessments; monitor your vital signs, procedure site and pulses frequently.

- Depending on the results of the procedure and what interventions were done will determine how long you will need to stay after your procedure. If we used a balloon or inserted a stent, you will stay overnight in the intensive care unit. This allows us to monitor you closely. If we did not fix your arteries, you will be able to go home later that day. You will be given discharge information prior to leaving.

- You may be prescribed an antiplatelet or anticoagulant medication to prevent blood clotting.

Risks of the procedure, although very rare:
- Bleeding, bruising, infection, or pain at the catheter insertion site
- An allergic reaction to the contrast dye
- Artery damage
- Kidney problems
- Heart attack or heart arrhythmia
- Stroke
- Death (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 aspirating when we administer conscious sedation.

Q. Why can’t I take my Metformin?
Contrast will be given to you in your arteries during the procedure. Your kidneys get rid of the contrast through your urine, which is how Metformin is excreted as well. By not taking your metformin, it allows your kidneys to completely excrete the contrast minimizing the risk of damaging your kidneys. This is also why it is important to stay hydrated after your procedure, to flush out the contrast dye from your system.

Q. Where does my family go during my procedure?
Your family will be taken to the cath lab waiting room and the physician will speak to them after the procedure while we are getting you ready for recovery.

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 take an anti-platelet medication after receiving a stent?
Anti-platelet medication reduces the risk of your stent becoming clogged because the medication works with the stent’s special drug coating.

Q. Can I stop my medications if I feel better?
No, you must continue to take your medications as prescribed even if you feel better. If you stop taking your medications, you are at an increased risk of a blood clot forming in or near your stent which may lead to complications.

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.

Q. Why do I have to have my procedural site shaved?
This helps to decrease the risk of aspirating when we administer conscious sedation.

Q. How long do stents last and are they removable?
Stents are permanent and cannot be removed. There are no nerve endings inside your arteries so you will not feel your stent. Stents cannot move after being deployed by the physician. Also, the stent will not rust.

Q. Can I walk through metal detectors if I have a stent?
Yes. Stents will not set off metal detectors.

Q. Why can’t I take my Metformin?
By not taking your metformin, it allows your kidneys to completely excrete the contrast minimizing the risk of damaging your kidneys. This is also why it is important to stay hydrated after your procedure, to flush out the contrast dye from your system.

Q. Why do I have to take an anti-platelet medication after receiving a stent?
Anti-platelet medication reduces the risk of your stent becoming clogged because the medication works with the stent’s special drug coating.

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.

Q. Why do I have to have my procedural site shaved?
This helps to decrease the risk of aspirating when we administer conscious sedation.

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 aspirating when we administer conscious sedation.

Q. Why can’t I take my Metformin?
Contrast will be given to you in your arteries during the procedure. Your kidneys get rid of the contrast through your urine, which is how Metformin is excreted as well. By not taking your metformin, it allows your kidneys to completely excrete the contrast minimizing the risk of damaging your kidneys. This is also why it is important to stay hydrated after your procedure, to flush out the contrast dye from your system.

Q. Where does my family go during my procedure?
Your family will be taken to the cath lab waiting room and the physician will speak to them after the procedure while we are getting you ready for recovery.

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 take an anti-platelet medication after receiving a stent?
Anti-platelet medication reduces the risk of your stent becoming clogged because the medication works with the stent’s special drug coating.

Q. Can I stop my medications if I feel better?
No, you must continue to take your medications as prescribed even if you feel better. If you stop taking your medications, you are at an increased risk of a blood clot forming in or near your stent which may lead to complications.

Q. Why can’t I take my Metformin?
By not taking your metformin, it allows your kidneys to completely excrete the contrast minimizing the risk of damaging your kidneys. This is also why it is important to stay hydrated after your procedure, to flush out the contrast dye from your system.

Q. Why do I have to take an anti-platelet medication after receiving a stent?
Anti-platelet medication reduces the risk of your stent becoming clogged because the medication works with the stent’s special drug coating.

Q. Can I walk through metal detectors if I have a stent?
Yes. Stents will not set off metal detectors.

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.

Q. Why do I have to have my procedural site shaved?
This helps to decrease the risk of aspirating when we administer conscious sedation.