Cardiac Catheterization Guide
Cardiac Catheterization, Coronary Angiogram, and Percutaneous Coronary Intervention (PCI)
Cardiac Catheterization, Coronary Angiogram, and Percutaneous Coronary Intervention (PCI)

Your doctor has recommended that you have a cardiac catheterization, coronary angiogram, and/or possible percutaneous coronary intervention (angioplasty or stent placement) as part of your continuing medical care. Your procedure is performed in a specialized room, the, on the Cardiac Cath Lab second floor. Here, a team of cardiologists, registered nurses, and technologists work closely together to provide your care. It is their goal to make your experience as comfortable as possible.

What is a Cardiac Catheterization and Coronary Angiogram?
A Cardiac Catheterization is an invasive, non-surgical procedure done to study the arteries that bring blood to the heart muscle and to check the function of the main pumping chamber of your heart. During a cardiac catheterization, the cardiologist inserts a small, hollow tube (catheter), into an artery or vein, and then guides it into the heart using x-ray. The cardiologist injects contrast (x-ray dye) through the catheter to outline the arteries and to show any blockages or narrowings that may exist. The results of these tests will assist your doctor in making the diagnosis of Coronary Artery Disease (CAD). Most patients have little or no discomfort during a cardiac catheterization. However, you may feel a hot, flushing sensation for several seconds when the contrast is injected into the main pumping chamber of the heart. The nursing and medical staff will give you medication and reassurance throughout the procedure to ensure your comfort.

PCI may include one or more of the following treatments:

Balloon catheter angioplasty: During this procedure, the cardiologist inserts a cardiac catheter with a small balloon around it into the coronary artery. The cardiologist then places the balloon in the narrowed area of the artery and expands it with liquid. This pushes the plaque (blockage) to the sides of the artery where it remains. This technique reduces the narrowing in the artery and restores the normal size of the artery. The cardiologist removes the balloon catheter at the end of the procedure.

Stent: The cardiologist places a small, hollow metal (mesh) tube called a "stent" in the artery to keep it open following a balloon angioplasty. The stent prevents constriction or closing of the artery during and after the procedure. Drug-eluting stents are now used. These stents are coated with medication that helps prevent narrowing of the artery.
Registration and pre admission.

- During your appointment at the outpatient clinic, your doctor will explain the procedure, do a general physical examination and answer any questions that you or your family may have.
- You will be given an accommodation form on which your date of admission and date of procedure will be mentioned.
- You will be asked to sign a form consenting to the procedure.
- You may need to be admitted a day before or the morning of the procedure and stay for one day afterwards. (With the introduction of day procedure services, patients are able to undergo the procedure and return home on the same day.)

What Can I Expect Before the Procedure?

Consult with your doctor about your medications:
- Bring a list of all your current medications with you to your appointment, including strength (dose) and frequency (time taken). This includes any over-the-counter medications, herbal preparations, or vitamins.
- Ask your doctor about whether or not to take your routine medications with a sip of water before coming to the hospital.
- Usually, aspirin should be taken prior to cardiac catheterization and PCI.
- If you are taking blood-thinning medications such as warfarin, check with your doctor about when to stop taking these medications prior to the procedure.
- If you are taking medications for diabetes, e.g., medicine name, or, you may be advised to stop these medications before the procedure and re-start these medications after the procedure, as directed by your doctor.
- Be sure to tell your doctor if you have had an allergic reaction to x-ray dye (contrast), iodine or seafood, or have a history of bleeding problems.

Prepare the night before:
- Drink plenty of fluids the evening before the test, unless otherwise directed by your doctor.
- Do not eat or drink anything after midnight, the night before your procedure, unless otherwise directed by your doctor.
- You must arrange for a relative or friend to drive you home. You may not drive for 24 hours following the procedure.
What Can I Expect on the Day of the Procedure?

- Take medications which your doctor has specifically instructed you to take on the day of your procedure with a sip of water.
- Arrive at least 2 hours before your scheduled procedure.

Note: If you are scheduled for a 9 a.m. procedure, please arrive at 7 a.m.

- Most scheduled procedures are performed on time. However, your scheduled procedure time may be delayed if there are emergency cases.
- Family members and friends are invited to wait in a designated waiting area. The cardiologist will contact them there after the procedure.

While you are in the Day Care Unit (DCU) and Cath Lab holding area:

- Your nurse places a small intravenous (IV) catheter (tube) in your arm. The IV is needed to give you medications to help you relax and make sure that you are comfortable throughout the procedure.
- You will be asked to sign several consent forms stating that you understand the procedure. These forms may include consent for cardiac catheterization, coronary angiogram, PCI, emergency coronary bypass surgery, and blood transfusion, if needed.
- The nurse shaves either your groin and/or arm area (the insertion site for the cardiac catheter) to remove hair and prevent infection.
- Then, the nurse may insert a small tube (urinary catheter) into your bladder to drain your urine. The catheter will be removed after your procedure.

What Can I Expect During the Procedure?

- The nurse or technologist brings you into the Cardiac Cath Lab procedure room.
- The nurse gives you medication through your IV to help you relax and to ensure your comfort throughout the procedure.
- The nurse cleans your groin/arm area with a special anti-bacterial soap, and covers you with sterile drapes to prevent infection.
- The cardiologist injects a numbing medication (local anesthesia) into the groin/arm area. This may feel like a mild sting which lasts only a few seconds and will keep the area pain free.
- Next, the cardiologist places a small plastic tube called a sheath through the skin and into the artery. You may feel a slight pressure at that moment.
- Immediately report any chest pain or discomfort during the procedure.
- Once the sheath is in place, the cardiologist inserts a catheter into the sheath and advances it toward the heart. Then, x-ray pictures are taken as the contrast is injected. You may feel a "hot flash" or a flushing sensation during contrast injection.
What Can I Expect After the Procedure?

After the procedure, you will return to the holding area for a recovery period before you go home.
- The sheath will be removed. The timing of the sheath removal depends upon the results of your blood tests (bleeding time) and other considerations.

- Manual pressure, a compression device, or a "closure device" may be used to seal the artery puncture site. Closure devices may include a collagen plug, a compression device (Femostop®), or a surgical stitch (Perclose®).

- If the insertion site was in your arm, you will have a compression band placed around the puncture site. The nurse will slowly release the compression band and place a dressing over the puncture site.

- If you have had a PCL, you will be transferred to a special cardiac care unit for an overnight stay. There, nurses will continue to monitor your condition closely. Most patients go home the following day after a PCI.

- After the procedure from groin, you will remain flat in bed for 6 or more hours to prevent bleeding from the catheter/sheath insertion site. You may not sit up until several hours after the sheath is removed and the blood vessel is sealed by manual pressure or a closure device has been placed. Your nurse may raise the head of your bed slightly to allow you to eat and drink beginning one hour or more after your procedure.

You may experience a backache after the procedure. Report any backache to your nurse. Your nurse will give you medication if needed.

- Call your nurse immediately if you are experiencing any chest pain, lightheadedness, bleeding, or severe back pain.

- The nursing staff will give you detailed instructions about what to expect when you go home. This will include symptoms to watch for and when to call your doctor.

- If you experience pain, moisture or any unusual sensation at the cath site, call your nurse.

- If you have to cough or sneeze, apply gentle pressure at the site with your hand.

When Do I Get My Results?

Your cardiologist will notify you, your family member(s) or friend(s) of the test results and management plan after the procedure.

Going Home

Before leaving hospital, your doctor will ensure that you are alright and will advise you on activities and medication.

1. You must make follow up appointments with your cardiologist.

2. a) Do Not Stop Aspirin without asking your cardiologist.

   b) Do Not Stop clopidogrel (Plavix®) without asking your cardiologist.
Dressing Care

- You may remove the plaster tape 1 day after your Percutaneous Coronary Intervention (PCI).
- You may shower 1 day after your PCI.
- Do Not sit upright for more than 1 hour at a time during the first day at home if procedure was done from groin and lifting weight from hand if performed through wrist.
- If traveling for long periods, stretch your legs out and get up and walk every hour during the first day after going home.
- You may see a hematoma (soft lump or bruise) around the hole or even down the leg where the PCI was done. This is normal.
- It is Not Normal when the hematoma suddenly gets bigger or harder. This means you are bleeding. If this should happen you must:
  - Lie down
    - Ask someone to press down hard for 15 Minutes just above the hole where the PCI was done.
    * You will know if you are doing this right if the hematoma does not get bigger or harder.
    - Do Not Stop pressing to check under your fingers during the first 15 minutes.
    - If the bleeding has stopped after 10 minutes, rest and lie down for 2 more hours before getting up.

Important:

If the bleeding does not stop after 10 minutes, Call THI cath lab/Day care/ER or call for an ambulance to take you to the hospital.

The purpose of a PCI is for you to return to your previous level of activity and enjoy life.

- However, during the initial period after the procedure, common sense and moderation are recommended.
- No heavy activities for 5 days. For example: Do not lift, push or pull anything that weighs more than 10 pounds (e.g., heavy laundry, groceries or a golf cart).
- Do Not exercise aggressively, golf, vacuum, mow or rake lawns, or move furniture.
- After the first 7 days, after you have seen your doctor, it is important for you to do moderate exercise for 30 minutes or more, 5 times a week. This will strengthen your heart.
- If you were not exercising before, walk daily with a gradual increase in distance and speed. An example of a walking schedule is:
  - Ask Your Cardiologist when you can resume sexual activities.
  - As a Rule, you may resume sexual activities if you can:
☐ Climb 2 flights of stairs at a fairly brisk pace without becoming short of breath or having angina.

**Special Considerations:**

☐ Many medications can affect sexual function. Do not stop any medications on your own. Discuss this with your doctor first.

☐ Do Not have sexual activities to "prove" that you have recovered.

☐ Do not begin sexual activities immediately after meals; wait 2 hours.

☐ Avoid sexual activity after drinking alcohol, smoking or if you feel tired.

☐ Ask Your Cardiologist when you can resume driving/riding privately or commercially and/or operating heavy equipment.

☐ Someone MUST drive you home on the day of discharge.

☐ If you have had a heart attack, the Motor Vehicle Act (MVA) states by law you cannot drive privately for 30 days or drive commercially for the first 3 months after a heart attack.

☐ If you have NOT had a heart attack, you may drive 2 days after a PCI, or drive commercially in 7 days after a PCI with a 6 month doctor follow up appointment with your doctor.

☐ Someone MUST be with you the first time you drive.

☐ Avoid stressful situations that may increase your blood pressure. For example, night driving and rush hour traffic.

☐ Your return to work will depend on whether you have had a heart attack, any complications, the type of work you do, your age and your overall physical stamina. Ask your family doctor about the specific date.

**Note:** Each person is unique and therefore each person’s condition will vary. This is general information about these procedures. If you have additional questions or concerns, please ask the staff.

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Cardiac Catheterization, Coronary Angiogram, and Percutaneous Coronary Intervention (PCI)

 Coronary Artery with Stent

 Plaque  Vessel wall  Vessel lumen

 Plaque  Vessel wall

 Coronary Artery with Stent

 Catheter  Vessel wall  Plaque  Stent  Balloon

 Anterior (front) View of the Heart  Posterior (back) View of the Heart
کیہک کیا ہے اور جن میں تبادلہ کی سیرت

تیسہا میں سیدہا میں کھڑی ہے کہ بچوں کی خرابی کی دلیل جن میں اپنی خاصہ توجہ دیتا ہے۔

- بچوں کی خرابی کی دلیل
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گل کے گداران میں ارے اگھزے کی کمی ہوئی ہیں؟

- نئی کوئی گیارہ گل کے گداروں کا گلا نہیں ہے۔
- نئی کوئی گیارہ گل کے گداروں نے گل کے گداروں سے کمک نہیں کی۔
- نئی کوئی گیارہ گل کے گداروں کی صحت کھٹ کھٹ ہے۔
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Intravenous

- نئی کوئی گیارہ گل کے گداروں میں ارے اگھزے کی کمی ہوئی ہیں؟
- نئی کوئی گیارہ گل کے گداروں کی صحت کھٹ کھٹ ہے۔
- نئی کوئی گیارہ گل کے گداروں کی صحت کھٹ کھٹ ہے۔
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- نئی کوئی گیارہ گل کے گداروں کی صحت کھٹ کھٹ ہے۔
"Noor" کے امیر ایک گھر میں جراحت کی ہوئیا ہے؟

آپ کو سمجھئے کہ اس کی جراحت کا کاہل کہا گيا ہے؟

کوئی بھی نتیجہ:

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کوئی بھی نتیجہ:
لا يوجد ملخص.