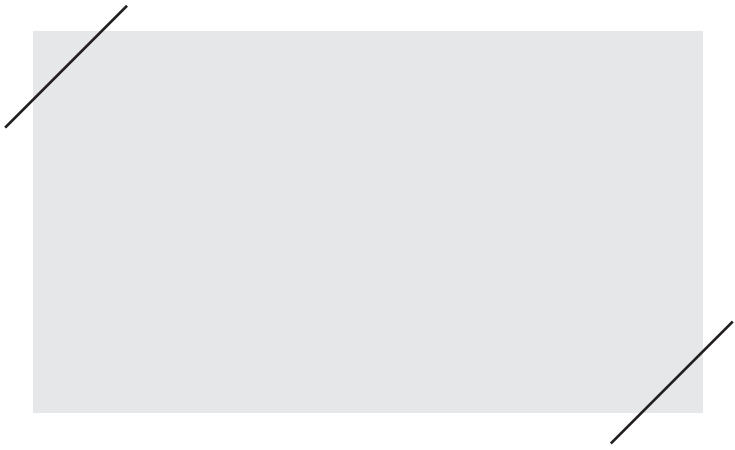


# CARDIAC CATHETERIZATION LABORATORY PATIENT GUIDE

INFORMATION FOR NEW PATIENTS AND THEIR FAMILIES





# PATIENT GUIDE

**INFORMATION FOR NEW PATIENTS AND THEIR FAMILIES**

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# WELCOME



## Welcome to Mount Sinai Heart at The Mount Sinai Hospital

For several years, Mount Sinai Heart's Dr. Samin K. Sharma Family Foundation Cardiac Catheterization Laboratory has been the safest catheterization laboratory in the state, based on the annual New York State Percutaneous Coronary Intervention (PCI) Report. Mount Sinai Heart's health care team is dedicated to your well-being and to providing the best care for you. We practice interventional cardiology and deliver care supported by appropriate use criteria for coronary revascularization from the American College of Cardiology (ACC) and the American Heart Association (AHA).

This booklet will help prepare you for your procedures at The Mount Sinai Hospital, which may consist of cardiac catheterization and/or stent implantation. It will help you understand the procedures, guide you through your recovery and your subsequent follow-up, and provide you with some guidelines for a heart-healthy lifestyle.

Please take a moment to review this information carefully.

If you have any additional questions, please do not hesitate to call 212-241-5881 or speak to someone from our experienced Mount Sinai Heart health care team. We are more than happy to answer any questions you may have.

We wish you a very positive experience at The Mount Sinai Hospital, a smooth recovery, and a healthy future. Please feel free to contact us with any questions.



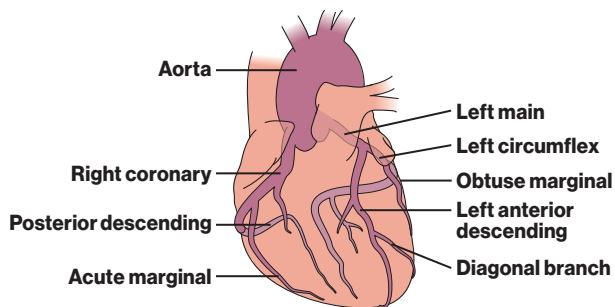
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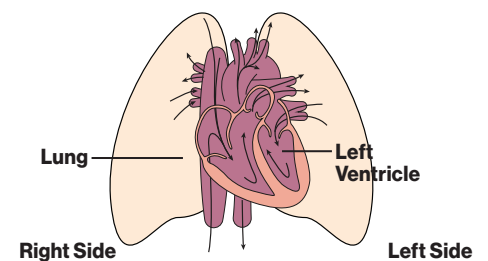
# YOUR HEART

## The Heart and the Coronary Arteries



Your heart, which is about the size of your tightly closed fist, is a muscle that pumps blood throughout your body. Veins bring blood from the body to the heart, where it enters the right upper collecting chamber (the right atrium). It passes through the tricuspid valve into the right lower pumping chamber (the right ventricle) from which it is sent to the lungs via the pulmonary artery.

Your blood picks up oxygen there and returns through the pulmonary veins to the left upper collecting chamber (the left atrium). It then passes through the mitral valve into the left ventricle, where it is pumped across the aortic valve to the main “pipe,” the aorta, from which stem the blood vessels that carry the blood to all the organs in the body. The blood returns from the body to the heart via the veins and the cycle repeats.



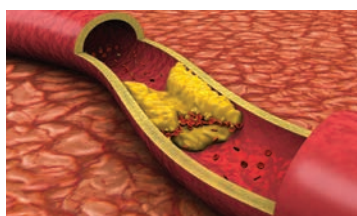
Like all organs, your heart is made of tissue that requires a supply of oxygen and nutrients. Although its chambers are full of blood, the heart receives no nourishment from this blood. It needs its own blood supply to function. Coronary arteries carry oxygen-rich blood from the aorta to the heart muscle itself.

## Coronary Artery Disease

Your coronary arteries supply oxygen-rich blood to your heart. Coronary artery disease, also known as atherosclerotic heart disease, occurs when the walls of the arteries thicken and deposits of a waxy substance, called plaque, block or reduce the flow of this oxygen-rich blood to the heart muscle. When plaque builds up in the arteries over many years, the condition is called atherosclerosis, a hardening or clogging of the arteries. When one or more of the arteries suddenly become blocked with clots, a heart attack may occur.



## Angina



Atherosclerosis can cause pain, pressure, or a strange feeling in the chest, called angina. Angina isn't a disease; it's a symptom of an underlying heart problem. Some people experience pain, pressure, or a strange feeling in the back, neck, jaw, or upper belly, or in one or both shoulders or arms. Other manifestations of angina include shortness of breath, nausea or vomiting, lightheadedness, sudden weakness, or a fast or irregular heartbeat.

## Heart Attack

A heart attack occurs if the flow of oxygen-rich blood to a section of heart muscle suddenly becomes blocked. If blood flow isn't restored quickly, the section of heart muscle begins to die.

### Heart Attack Warning Signs

- **Chest pain or discomfort:** which involves pressure, squeezing, fullness, or pain in the center or left side of the chest that can be mild or strong. This discomfort or pain often lasts more than a few minutes or goes away and comes back.
- **Upper body discomfort:** which may occur in one or both arms, the back, neck, jaw, or upper part of the stomach.
- **Shortness of breath:** which may occur before or along with chest discomfort.
- **Nausea,** vomiting, light-headedness, sudden dizziness, or episodes of cold sweats.
- **Sleep problems,** fatigue (tiredness) and lack of energy.



*If you think you or someone else may be having a heart attack, call 911 right away. Immediate treatment can save a life.*

## Special Concerns for Women

While you may think heart disease affects more men than women, the fact is that more women than men die of heart disease every year. The risk is greater for postmenopausal women, whose bodies no longer produce estrogen, a hormone that helps to prevent the risk of heart disease. Postmenopausal women are particularly at risk for developing cardiovascular disease in the smaller blood vessels. Women with a family history of heart disease, however, may be at risk at any age.



Women may fail to seek medical attention promptly because the symptoms they experience are often unrelated to chest pain, such as discomfort in the neck, shoulder, upper back, or abdomen; shortness of breath; nausea or vomiting; sweating; dizziness; lethargy; and fatigue.

Metabolic syndrome, which is a combination of fat around the abdomen and elevated blood pressure, blood sugar, and triglycerides, has a greater impact on women than on men. Women are more

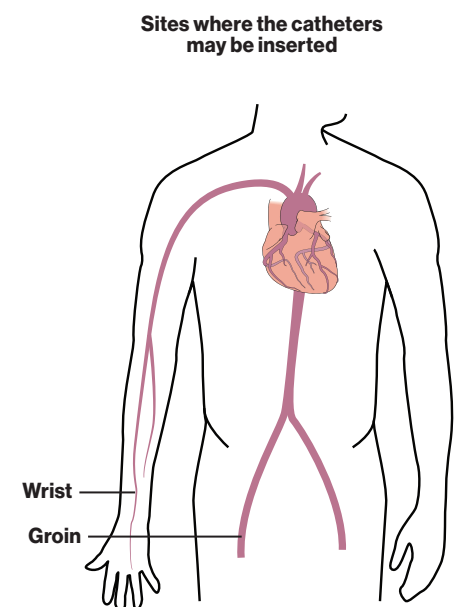
subject to mental stress and depression than men; both can lead to less healthy diet and lifestyle choices. Women who smoke are also at a greater risk of developing heart disease than male smokers, particularly if they are also taking birth control pills.

# CARDIAC CATHETERIZATION

Cardiac catheterization is an imaging procedure that allows your doctor to evaluate or confirm the presence of coronary artery disease or cardiac valve disease and evaluate heart muscle function to determine the need for further treatment (such as stent implantation).

During cardiac catheterization, a tiny incision is made at the groin (at the top of the thigh) and a plastic tube is inserted in the femoral artery. The incision may also be made at the wrist and the sheath inserted in the radial artery. A long, narrow tube, known as a catheter, is inserted through a plastic introducer sheath (a short, hollow tube that is inserted in your leg or arm). The catheter is guided through the blood vessel to the coronary arteries with the assistance of a specialized x-ray machine.

Dye is injected through the catheter, and a rotating x-ray machine takes digital photographs that identify the location of any narrowing or blockage in the coronary arteries. When the dye is injected, you may feel a warm sensation or “hot flash.” Diagnostic cardiac catheterization takes **about half an hour from the time you enter the room.** After the initial photos are obtained, the best treatment options for you will be decided by your doctor and discussed with you and your family. If you are a candidate for a stent procedure, we will then proceed with stent implantation after consulting your primary cardiologist and discussing it with you.





# INTERVENTIONAL PROCEDURES

# IV

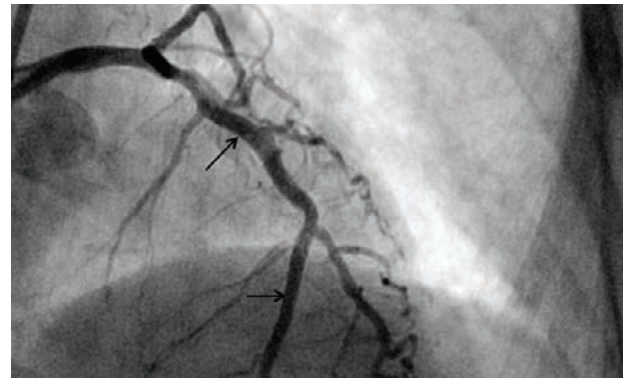
An interventional procedure starts out just as cardiac catheterization does. Once the catheter is in place, one of the following procedures may be performed to open a coronary artery:

## Balloon Angioplasty

Balloon angioplasty is the technique of mechanically widening the blood vessel that has narrowed, typically a result of atherosclerosis. An empty and collapsed balloon on a guide wire, known as a balloon catheter, is passed into the narrowed location and then inflated. The balloon crushes the fatty deposits, opening up the blood vessel for improved flow, and the balloon is then deflated and withdrawn. Balloon angioplasty is very often performed in combination with a stenting procedure, which ensures that the vessel remains open.



*Blocked artery*

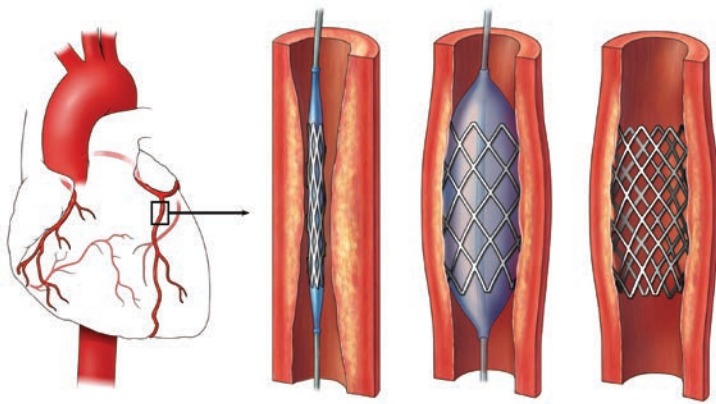


*After stent*

## Stent Implantation

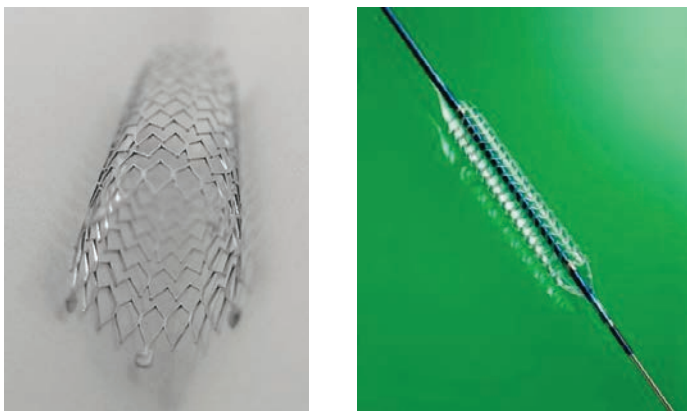
A stent is a small device made of metal mesh. When a stent is placed inside of a coronary artery, it acts as a support or scaffold, keeping the vessel open, improving blood flow to the heart muscle, and reducing angina pain. About 98 percent of patients who have balloon angioplasty will also have a stent placed.





Restenosis, or reblockage, of the vessel is a common problem with stent implantation. A stent may be bare metal (BMS) or drug eluting (DES). More frequently implanted today, after clinical trials have demonstrated their effectiveness, are drug-eluting stents: metal stents that have been coated with a medication

that is known to suppress restenosis. Your interventional cardiologist will choose the type of stent to implant depending on your individual case.

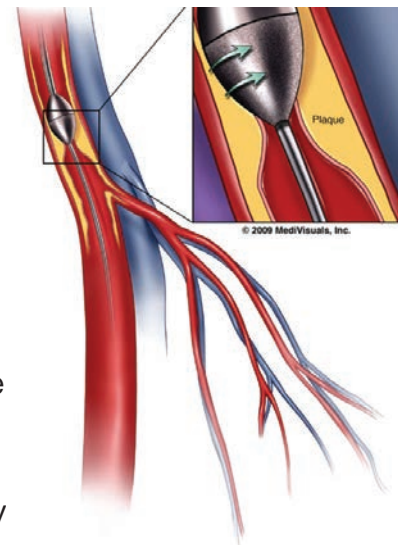


### Atherectomy (for Calcified Plaque)

Sometimes patients have blockages in their arteries that are calcified and hard. If the arterial plaque (a mixture of cholesterol, calcium, and other substances) that is causing the blockage is too hard for the angioplasty balloon to crush, we may recommend rotational atherectomy.

Most such procedures utilize the rotablator, a small drill with a burr on the end coated in diamond dust. The rotablator drills through the calcified plaque, breaking it up into tiny pieces without damaging the artery walls. These pieces of plaque can then be safely picked up by your bloodstream and carried away, and eventually your body processes and eliminates the pieces of plaque.

For patients with severe calcification, we may recommend a relatively new procedure, orbital atherectomy. Orbital atherectomy works much like rotational atherectomy, but the diamond burr is mounted off-center along the length of the wire instead, creating centrifugal force as it rotates, pressing the crown against the blockage and breaking it away. As with the rotablator, the pieces of plaque are carried away and processed by the body.



# PREPARING FOR YOUR PROCEDURE



## Follow These Important Steps

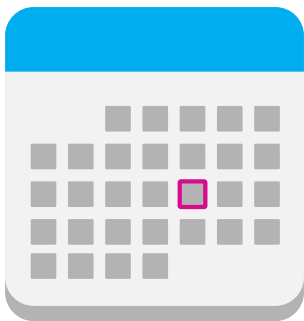
- Stop taking Coumadin (warfarin) at least three days before your procedure date, unless your doctor instructs you otherwise. In some cases, your doctor may instruct you to receive blood thinner injections into your skin.
- Continue to take your prescribed medications unless your doctor has told you not to. Do not take your diuretic, insulin, or oral diabetes medications on the morning of the procedure.
- Let your doctor know if you have an allergy to x-ray dye. In that case, you may need to take allergy medications before the procedure.
- Do not eat any food after midnight if your procedure is scheduled for the next morning. If your procedure is scheduled for the afternoon, you may eat a light breakfast.
- Drink clear liquids only up until two hours before you arrive at the hospital the morning of your procedure.
- Have sips of water only with your medications the morning of your procedure.
- Prepare a list of your current medications including names, dosages, and the time of day you usually take them (or you can bring the medications with you).
- Remove your jewelry and leave it at home along with any valuables; you may want to bring a book to help pass the time.
- Write down any questions to ask the Cardiac Catheterization Laboratory nurse when she calls the day before the procedure.

# VI

# YOUR PROCEDURE STEP-BY-STEP

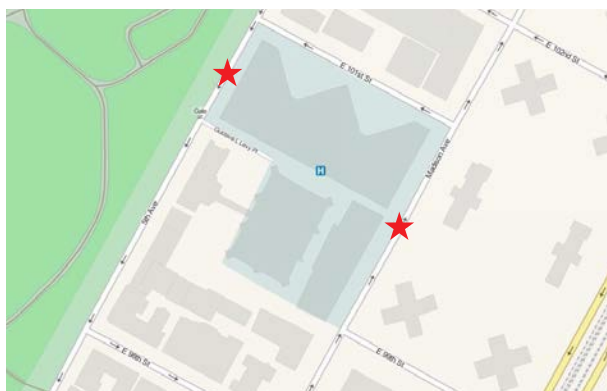
## 1 Day Before Your Procedure

A nurse will call you after 1 pm to give you a time to arrive at The Mount Sinai Hospital. She will tell you what medications to continue or discontinue and what you can eat the morning of your procedure. She will answer any questions you may have.



## 2 Day of Your Procedure

The street address and directions to The Mount Sinai Hospital are listed on pages 27-28 of this guide. You may enter at 1468 Madison Avenue, or 1190 Fifth Avenue. When you enter the building, ask the receptionist to direct you to the Guggenheim Pavilion 5 West, Fifth Floor, Room 182.



## 3 Registration (About 45 minutes)

(Guggenheim Pavilion 5 West, Fifth Floor, Room 182) You will be asked for your name, address, phone number, etc., and your insurance information. You will need to provide some form of identification. Any insurance copayment will be required at this time. You will also need to provide a list of medications you take.



## 4 Ambulatory Area (2-4 hours)

If someone accompanied you to the hospital, he or she will now have to go to the family waiting area. You will be escorted to the Ambulatory Area, where you will put on a hospital gown and slippers. Blood chemistry screening and an electrocardiogram (EKG) will be performed. You will be asked to give your informed consent for the procedure(s).

An intravenous (IV) line will be inserted in your arm.



## 5 Cardiac Catheterization Laboratory Holding Area (1-3 hours)

You will be wheeled into the Holding Area. Here you will wait until a procedure room is available.



## 6 Procedure Room (1-4 hours)

You will be wheeled into the Procedure Room, where you will be attached to monitoring equipment. The catheter access area will be shaved (groin, or arm if necessary) and you will be covered with sterile drapes. IV infusion will be given, delivering medication for light sedation. You will be asleep when the procedure is performed.



## 7 Post-Procedure Area (3-6 hours)

You will be wheeled into the Post-Procedure Area, where you will be reattached to monitoring equipment. Your IV medication rate will be checked, and the sheath for catheter insertion will be removed if it was not removed in the Procedure Room.



## 8 Discharge Area (6-8 hours)

You may be discharged to go home, but depending on your condition you may be admitted to the hospital and moved to a room on a different floor.

**Be prepared to spend the night.**



# VII

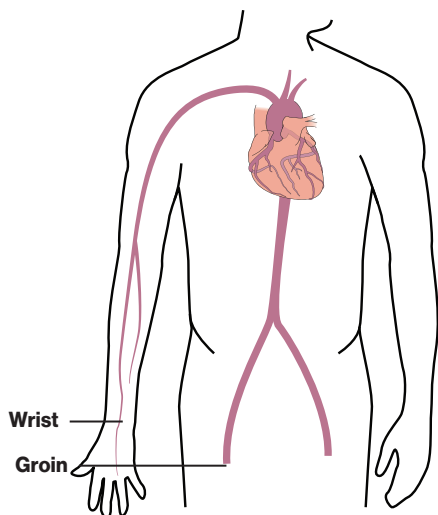
# WHEN YOU ARE DISCHARGED

## General Post-Procedure Instructions

- Be sure to drink plenty of fluids.
- If you received a stent, wait two weeks before engaging in strenuous activity/exercise.
- **For 48 hours following the procedure:**
  - As much as possible, avoid standing, climbing stairs, or walking for long periods. If necessary, slowly climbing one or two flights of stairs is permitted.
  - Do not engage in sexual activity.
  - Do not drive a car.
- Wait five to seven days to travel by plane after the procedure.
- Do not engage in strenuous activity and/or exercise (e.g., swimming, biking, tennis, jogging, lifting weights, working out at the gym) for at least four weeks.
- Call your doctor if the insertion site becomes painful or warm to the touch or if you develop a temperature over 100°.

## Care of the Catheterization Access Site

Your procedure may have been performed through a radial (wrist) or femoral (groin) access point.



### If Your Access Site was the Femoral Artery (Groin)

- If there is a hospital dressing, **you may remove it when you arrive home**. Cover the site with a new Band-Aid® daily.
- You may take a shower or wash the site with soap and water when you come home, but do not bathe or soak in water until the puncture site is completely healed, typically three days after the procedure.
- You should wait two weeks to lift objects weighing more than 10 pounds, to avoid reopening the access site.

- You should not be concerned if you notice a small lump at the catheter insertion site. This is normal, especially if a closure device was placed in the artery. It usually resolves over four to six weeks.
- You can expect the catheter insertion site to be bruised, sore, and/or discolored, and the discoloration may extend over your inner thigh. This, too, is normal and will resolve over four to six weeks.
- If bleeding should occur following discharge from the hospital:
  - Lie down and apply firm pressure to the site with your fingers for 10 minutes.
  - If the bleeding stops, continue to lie quietly, keeping your legs straight, for two hours. Notify your physician as soon as possible.
  - If the bleeding does not stop after 10 minutes of pressure, or if there is a large amount of bleeding, call 911 immediately. Do not drive yourself to the hospital.

### **If Your Access Site was the Radial Artery (Wrist)**

- If there is a hospital dressing, you may remove it when you arrive home. Cover the site with a new Band-Aid® daily.
- You may take a shower or wash the site with soap and water when you come home, but do not bathe or soak in water until the puncture site is completely healed, typically three days after the procedure.
- You can expect mild tingling of the hand and tenderness at the puncture site for up to three days. If this persists or other symptoms develop, notify your physician.
- For 48 hours following the procedure:
  - Avoid excessive (extension/flexion) wrist movement.
  - Do not engage in vigorous exercise (e.g., tennis, golf) using the affected arm.
  - Do not operate a lawn mower, motorcycle, chainsaw, or all-terrain vehicle.
- Do not lift anything heavier than three to five pounds with the affected arm for seven days.
- If bleeding should occur following discharge:
  - Sit down and apply firm pressure to the site with your fingers for 10 minutes.
  - If the bleeding stops, continue to sit quietly, keeping your wrist straight, for two hours. Notify your physician as soon as possible.
  - If the bleeding does not stop after 10 minutes, or if there is a large amount of bleeding or spurting, call 911 immediately. Do not drive yourself to the hospital.

**Remember:** If you have had a heart attack, resting is extremely important. If you feel tired during the day, take a nap or a short rest. Heart patients should rest before they get too tired. Plan some type of relaxation activity for short periods several times a day.

## Medications

Medications are very important in the management of most patients with coronary artery disease. Daily aspirin therapy for the rest of the patient's life is often advised, but other medications may be prescribed, to be taken alone or with aspirin. While aspirin (acetylsalicylic acid) has been manufactured since 1899, there are many newer medications, and in fact new lines of defense are being explored and new drugs developed every day.

All medications have some side effects; they range from mild to severe and from common to extremely rare. Your doctor will discuss possible side effects of the prescribed medications with you and will also advise you of any other precautions. He or she will also instruct you on whether to take the medications with meals, and your prescription should be clearly labeled with those instructions as well.

### General guidelines for taking your medications:

- Never discontinue any medication unless your doctor instructs you to do so. Stopping some medications may result in serious medical problems including heart attack and death.
- If you forget a dose, take it as soon as you remember. If it is almost time for your next dose, skip the one you missed and go back to the regular schedule. Do not take a double dose.
- If your medication is in tablet form, do not split, crush, or chew it. Swallow the tablet whole. If it is in capsule form, do not open it and sprinkle the contents on food. Swallow the capsule whole.

If you have any questions or concerns, call the Cardiac Catheterization Laboratory any time at 212-241-5881 and ask to speak to a nurse practitioner. We will be glad to assist you. If any medication side effects develop or change in intensity, contact your doctor as soon as possible. And if you have symptoms such as chest pain, palpitations, shortness of breath, or difficulty breathing, immediately call your doctor, call 911, or go to the closest emergency room.

The following is a guide to some of the most commonly prescribed medications for the management of patients with coronary artery disease. The guide is loosely organized based on the way the medications work and what condition(s) they treat, but each medication has its own specific indication and its own set of side effects. Your doctor will provide more information about your medication.



## Antiplatelet medications

Antiplatelet medications prevent platelets in your blood from clumping together to form clots. The four most commonly prescribed are:



**Aspirin**



**Effient** (prasugrel)



**Plavix** (clopidogrel)



**Brilinta** (ticagrelor)

Plavix, Effient, and Brilinta are often prescribed in combination with aspirin.

## Anticoagulants

Anticoagulants work by decreasing the clotting ability of the blood. Commonly prescribed anticoagulants include:



**Coumadin** (warfarin)



**Pradaxa** (dabigatran)



**Eliquis** (apixaban)



**Xarelto** (rivaroxaban)



**Pletal** (cilostazol)

## Statins

Low-density lipoprotein (LDL) cholesterol is known as “bad” cholesterol, while high-density lipoprotein (HDL) cholesterol is known as “good” cholesterol. Statins (HMG-CoA reductase inhibitors) are medications that boost HDL while reducing LDL. There are many statins available, including:



**Advicor** (niacin extended release/lovastatin)



**Lipitor** (atorvastatin)



**Altoprev** (lovastatin extended release)



**Livalo** (pitavastatin)



**Caduet** (amlodipine and atorvastatin)



**Mevacor** (lovastatin)



**Crestor** (rosuvastatin)



**Pravachol** (pravastatin)



**Juvisync** (sitagliptin/simvastatin)



**Simcor** (niacin extended release/simvastatin)



**Lescol** (fluvastatin)



**Vytorin** (ezetimibe/simvastatin)



**Lescol XL** (fluvastatin extended release)



**Zocor** (simvastatin)

Niacin, a B-complex vitamin, is used with restriction of cholesterol and fat intake to reduce the amount of cholesterol and certain fatty substances in the blood.

## Fibrates

Very-low-density lipoprotein (VLDL) is another type of cholesterol that is especially harmful because it is made up of even more triglycerides, a type of fat, than LDL. Fibrates reduce the liver's production of VLDL and speed up the removal of triglycerides from the blood. They are modestly effective in increasing HDL but are not effective in lowering LDL. Fibrate drugs are:



**Lopid** (gemfibrozil)



**Tricor** (fenofibrate)

## Antihypertensives

Antihypertensives are a class of drugs used to treat hypertension (high blood pressure). There are many classes of antihypertensives, which lower blood pressure by different means; among the most widely prescribed are angiotensin-converting enzyme (ACE) inhibitors, calcium channel blockers, beta blockers, and angiotensin II receptor blockers (ARBs).

The angiotensin-converting enzyme converts angiotensin I, which is produced by the body, to angiotensin II, a very potent chemical that causes the muscles surrounding the blood vessels to contract, narrowing the vessels. **Angiotensin-converting enzyme (ACE) inhibitors**, as the name suggests, reduce the activity of the angiotensin-converting enzyme. This causes dilation of the vessels, which means your heart does not have to work as hard to pump your blood. Common ACE inhibitors are:



**Lotensin** (benazepril)



**Capoten** (captopril)



**Vasotec** (enalapril)



**Monopril** (fosinopril sodium)



**Prinivil, Zestril** (lisinopril)



**Univasc** (moexipril hydrochloride)



**Aceon** (perindopril erbumine)



**Accupril** (quinapril)



**Altace** (ramipril)



**Mavik** (trandolapril)

**Angiotensin II receptor blockers (ARBs)** block the action of angiotensin II by preventing it from binding to angiotensin II receptors on blood vessels. As with ACE inhibitors, this causes the blood vessels to dilate, lowering blood pressure. Common ARB medications are:



**Atacand** (candesartan cilexetil)



**Teveten** (eprosartan mesylate)



**Avapro** (irbesartan)



**Micardis** (telmisartan)



**Diovan** (valsartan)



**Cozaar** (losartan)



**Benicar** (olmesartan)

All cells in your body need calcium. When calcium moves into the cells of the blood vessels, this causes them to narrow, or contract. **Calcium channel blockers (CCBs)** block some of this calcium so that the blood vessels relax and open wider, lowering the blood pressure and causing your blood to flow more easily so your heart does not have to work as hard. Common CCB medications are:



**Norvasc** (amlodipine)



**Cleviprex** (clevidipine)



**Cardizem** (diltiazem)



**Plendil** (felodipine)



**Dynacirc** (isradipine)



**Adalat, Procardia** (nifedipine)



**Cardene** (nicardipine)



**Nimotop** (nimodipine)



**Sular** (nisoldipine)



**Calan** (verapamil HCl)

**Beta blockers**, also known as beta-adrenergic blocking agents, are drugs that block norepinephrine and epinephrine (adrenaline) from binding to beta receptors on nerves. By blocking the effect of norepinephrine and epinephrine, beta blockers reduce heart rate and dilate blood vessels, reducing blood pressure.

### Antianginals

Calcium channel blockers, beta blockers, and nitrates can be prescribed to treat angina pectoris. Another antianginal is Ranexa (ranolazine), which is prescribed alone or with other medications.

**If you have any questions or concerns, call the Samin K. Sharma Family Foundation Cardiac Catheterization Laboratory any time at 212-241-5881 and ask to speak to a nurse practitioner. We will be glad to assist you.**

## Frequently Asked Questions (FAQs)

### **Q: What should I bring with me to the hospital?**

A: You should bring your insurance card, some form of identification, and a list of the medications and supplements you take regularly as well as the dosages. You should be prepared to pay if an insurance copayment is required. You may pay by check or credit card, or with cash. You should NOT wear jewelry.

### **Q: Must I be accompanied by a family member or friend?**

A: You may come to the hospital unaccompanied. You MUST be accompanied home, however. You will not be discharged until a family member or friend is with you.

### **Q: May I take mass transit home after the procedure?**

A: You may NOT go home via subway, train, or bus. You must be driven home in a car.

### **Q: Will I experience pain or discomfort during the procedure?**

A: You will be sleeping lightly during the procedure, but you might experience angina pain or slight discomfort in your chest. If this is the case, additional pain medication, such as morphine, can be administered via IV. Usually the discomfort lasts only a few seconds and goes away as soon as the balloon is deflated. You should inform the cardiologist who is performing the procedure if pain or discomfort occurs.

### **Q: How and when do I handle payment if I am admitted to the hospital after the procedure?**

A: Depending on your insurance coverage, there may be an additional copayment if you are admitted to the hospital. For further information, call The Mount Sinai Hospital Patient Financial Services at 212-731-3600.

### **Q: If I am admitted to the hospital after the procedure, can a family member stay overnight with me?**

A: A family member is usually permitted to stay overnight with you if you are in a single room. If you are in a double room, this is usually not permitted.

# A HEALTHY LIFESTYLE



It is very important to lead a heart-healthy lifestyle in order to fight cardiovascular disease and prevent a heart attack. Maintaining heart-healthy living involves personal lifestyle changes centered on weight reduction, healthy eating including sodium reduction, and regular physical activity.

## Diet

The goal of a heart-healthy diet is to decrease your risk of heart disease. A heart-healthy diet limits fat, cholesterol, and sodium, which are associated with a higher risk of heart disease. By replacing salty, fat-laden, overprocessed foods with fresh vegetables, fruits, grains, and lean protein, patients can lower their blood cholesterol levels, improve blood pressure, and often lose weight. According to the American Heart Association, a 10 percent decrease in total cholesterol levels could reduce the prevalence of disease by 30 percent.

Not all fats are created equal. Olive and grapeseed oils are powerful aids to heart health. Not only can their mono- and polyunsaturated fats help keep your cholesterol under control, but these oils are also some of the best sources of naturally occurring vitamin E. Recent evidence suggests that these heart-healthy fats may actually help control the fat around the waistline as well. On the other end of the spectrum, coconut oil and palm oil are high in saturated fats and are best avoided. And remember, if you would like to lose some weight, oils are high in calories: about 120 calories per tablespoon.

In addition to choosing healthier foods, you can also switch to cooking methods that use a small amount of fat or none, such as: grilling, baking, steaming, sautéing, poaching, roasting, or boiling. Use the following table as a general guide to healthier eating. It is not necessary to completely omit the foods in the left-hand column of the table, but it is important to eat them in moderation.

Instead of...	Choose...
Full-fat milk, cheese, cottage cheese, sour cream, yogurt, etc.	Low-fat or fat-free dairy products
Cooking with coconut or palm oil	Poly- or monounsaturated olive, canola, sunflower, safflower, or grapeseed oil
Fried foods	Foods that are baked, broiled, roasted, or grilled
Fatty cuts of meat, like ribs	Lean cuts like tenderloin – and be sure to cut off the fat
Whole eggs	Two egg whites in place of an egg yolk
Red meat	Fish or skinless chicken
Mayonnaise	Mustard
Butter	Lemon, vinegar, nonhydrogenated margarine (Smart Balance, Promise)
Foods made with refined grains (e.g., white bread, white rice)	Whole-grain, high-fiber foods
A burger and fries	If “fast food” is your only choice, a grilled chicken sandwich and a salad
Chips, pretzels, cookies, donuts, etc., containing trans-fats	Products labeled “no trans-fats”

## Watch Your Sodium

### Consume the smallest amount possible of the following high-sodium foods:

- Canned fish such as anchovies, herring, sardines, smoked salmon, dried cod
- Processed meats such as salami, sausage, bologna, pastrami, ham, bacon, and hot dogs
- Hard and soft cheese, cheese sauces and spreads, buttermilk, party dips
- Salted crackers and breads, salted popcorn, potato chips, corn chips, salted pretzels, salted nuts
- Soy sauce, pickles, sauerkraut, canned vegetables, tomato juice, tomato puree/sauce, BBQ sauce, ketchup, unless labeled “low salt” or “reduced sodium”
- Soups not labeled “low salt” or “reduced sodium”
- Packaged foods and mixes made with MSG

### Here are a few more tips regarding sodium intake:

- Do not use the salt shaker on prepared foods.
- Read the labels and nutritional information on food packages; almost every product category is available with sodium content reduced.
- Cook with a minimal amount of salt, or better yet, without salt (remember, one teaspoon of salt contains about 2,300 mg of sodium).
- Experiment with herbs and spices to give your food flavor.

## Alcoholic Beverages

It is acceptable to enjoy alcoholic beverages, but only in moderation. The moderate consumption of alcoholic beverages is defined as one to two drinks per day (one drink is 1.5 ounces of liquor, 5 ounces of wine, or 12 ounces of beer). In fact, some studies suggest that red wine confers additional health benefits. Red wine has been suggested as the explanation for the “French paradox,” the relatively low incidence of coronary atherosclerosis in France as compared with that in other western countries. Consuming a glass of red wine a day for women and two glasses a day for men may provide a variety of benefits for your heart. If you have high cholesterol, you may have plaque buildup in your arteries, which can cause them to harden. Too much plaque will eventually stop blood flow and can cause a heart attack. Wine reduces cholesterol and inflammation to minimize this risk. It stabilizes the plaque by keeping those pathways open. Because it is good for your arteries, it also helps to bring oxygen and blood to your skin.

## Exercise

It is important to adopt an exercise program that suits your level of fitness and experience. Jumping head-first into a difficult exercise routine could result in frustration (and going back to old habits), and pushing the body too hard can be dangerous for anyone, but particularly someone with a heart condition.

How you feel will guide how long and hard you should exercise and what activities you should do. Apply the talk test: Choose a level of exertion that allows you to still talk while you exercise. You should be able to talk in short sentences, but will likely not be able to sing.



## Recommended Activities

### Walking

Walking is one of the easiest ways to get the exercise you need to stay heart-healthy. Experts recommend at least two and a half hours of moderate activity (such as brisk walking) a week.

- Start with a short-term goal. For example, walk for 5–10 minutes every day. Or increase your number of steps by 300–500 each day. (Wear a pedometer to count your steps.)
- After you have made walking a habit, set a longer-term goal. You could walk briskly for at least 30 minutes a day or work up to 10,000 steps a day, five days a week or more.
- To stay motivated, find a walking partner, such as a family member, friend, or coworker. Regularly walking your dog is a great way to keep up your exercise routine.
- Always start with a five-minute, slower-paced walk to warm up, and end with a five-minute, slower-paced walk to cool down.
- If you were a jogger before your procedure, you may ease back into jogging. Walk first!

### Swimming

Swimming is a healthy activity that can be continued for a lifetime. It works practically all of the muscles in the body and builds cardiovascular fitness and endurance. Exercising in water is perfect for people who have a hard time with land-based physical activities, because your weight in water is about one tenth of your weight on land. Another great benefit is that it minimizes the risk of injuries. As physical therapy, it gently rehabilitates and relaxes muscles and joints. And it offers a good cardiovascular workout.

Even of moderate intensity, swimming can help reduce high blood pressure in some people. It benefits your heart and lungs, has low impact on joints, increases strength, and is refreshing and invigorating. If you are not already a swimmer, it is never too late to learn how to swim. Check out your local pool or fitness center for times and/or classes.

### Managing Stress

Although human beings have evolved over thousands of years, instinctual bodily responses to perceived danger have persisted. One such response is “fight or flight.” The brain sends signals to various organ systems to prepare the organism (ourselves) to avoid the danger. Either fighting or fleeing involves physical activity; therefore the body raises the blood pressure and the heart rate in order to increase the blood supply to the muscles. A threat to one’s life is not the only stimulus that elicits the fight or flight response. Any event that is perceived as stressful (or any event that causes anxiety, frustration, anger, hostility, or depression, to name a few) can trigger this response in varying degrees.

When the perceived danger or other stressful event is over, the elicited response should resolve spontaneously. In today’s world, however, triggers are often part of our daily lives, and the fight or flight response persists for abnormally long periods of time. Such persistence can have harmful effects.



Angina (chest pain or discomfort when the heart does not get enough blood) and hypertension (high blood pressure) are considered to be stress-induced disorders. The American Heart Association (AHA) defines stress as your body's reaction to change. When you are under stress, your brain releases signals to your body through the nerves and hormones. These signals prepare your body to respond to various situations. Arteries have nerves attached to them. The nerves can either cause the arteries to relax or put more tension on their walls, narrowing them. Circulating hormones can do the same thing. Narrowing the arteries is like taking away a lane of traffic. There is still the same number of cars (the same amount of blood), but there is less space for it to flow through. It takes more energy to get the blood through the arteries, and so your heart has to work harder with each beat. When your heart has to work harder in conjunction with a higher heart rate, high blood pressure (hypertension) is the result.

There are various activities that can help you to better deal with day-to-day stress by eliciting what is called a relaxation response as opposed to a fight or flight response. Those that are widely utilized are briefly mentioned below.

### Yoga and Meditation



Yoga exercises encompass the practices of yoga postures, meditation, and pranayama (specialized yogic breathing). These practices are believed to influence the autonomic nervous system balance and our hormonal system.

After analyzing existing complementary and alternative medicine (CAM) studies, the May 2013 edition of the American Heart Association (AHA) journal *Hypertension* reported that transcendental meditation (TM) modestly lowers blood pressure by affecting the autonomic nervous system balances. The journal stated that TM may be considered in clinical practice to lower blood pressure. It further stated that there are no significant risk factors associated with the practice of TM. In general, meditation techniques have been widely believed to be beneficial in reducing stress as well. Meditation practices can be added to other lifestyle modifications such as regular aerobic exercise and a low-sodium diet.

The AHA analyzed studies that looked at yoga postures to see whether they lowered blood pressure. Their analysis resulted in no firm conclusion about yoga's effectiveness in lowering blood pressure, because only a small number of studies were available for analysis and these studies were not well designed. Yoga postures, therefore, are not recommended by the AHA as an activity to lower blood pressure. Yoga can be practiced as part of your daily exercise program for stress reduction and general well-being. We do, however, recommend that you consult with your health care provider, because some postures should only be assumed with the guidance of qualified teachers.

## Biofeedback

The techniques used in biofeedback include cognitive behavioral therapy, relaxation therapy, guided imagery, and psychological education. They are generally taught by certified providers in those specific specialties. It is believed that these modalities result in better stress management by favorably affecting the autonomic nervous system as well as the hormonal system. The AHA in its 2013 scientific statement recommended that these modalities may be considered in clinical practice to lower blood pressure. They are widely used for stress reduction and have no significant health risks.

## Tai Chi



Tai chi (t'ai chi ch'uan) is an ancient Chinese tradition that can be practiced as a martial art but today is often practiced as a graceful form of exercise. It involves a series of movements performed in a slow, focused manner and accompanied by deep breathing. Each posture flows into the next without pause, ensuring that your body is in constant motion.

Tai chi is a low-impact form of exercise and puts minimal strain on muscles and joints, making it safe for all fitness levels. The health benefits often mentioned in connection with tai chi are relaxation, improved circulation, strengthening, balance, and mind-body coordination.

One caveat about tai chi: if you have musculoskeletal or neurological concerns or have an issue with your balance, you should not try tai chi as there is a risk of falling.

The American College of Sports Medicine (ACSM) encourages mind-body exercises such as yoga or tai chi, which can be easily adapted into warm-up and cool-down routines for traditional exercises, such as walking, running, or swimming.

Many gyms, community centers, and senior centers offer classes in eastern practices including tai chi, yoga, and meditation. These classes can be an enjoyable and low-impact way to get fit and meet new people. For those who prefer to practice on their own, there are videos available that walk you through the basic steps and allow you to learn at your own pace.

## Smoking Cessation

**Smoking harms the heart. Avoid the use of and exposure to tobacco products. You will help yourself and those around you by not smoking.** It is never too late to stop smoking, even if you have smoked for years. Your body can start the repair process as soon as you quit. So if you are ready to get started, here is a plan to improve your chances for success.

### Motivational How-To Notes:

- A. **Focus on the rewards.** It is a lot more satisfying to make life changes when you focus on the positive rewards that motivate you. So today, make a list of all the benefits you will experience by tossing out those cigarettes. Think of the money you will save, and the benefits to your health (and to the health of those around you). Write down any personal benefits you can think of and keep your rewards list handy.
- B. **Plan your response to the cravings.** A common practice is wearing a rubber band around your wrist; whenever you have the urge to smoke, snap it. Review your positive motivation list. Wait 15 minutes from the rubber band snap to allow the craving to pass. If you still have the craving, go for a walk or engage in some other new activity.
- C. **Try to take it one day at a time.** The first few weeks are the toughest. And remind yourself that the difficulty is TEMPORARY. The craving to smoke will not last forever, and once you get past the first weeks, you will be well on your way to better health.
- D. **Track your progress.** Mark a big red X on your calendar for every day you succeed. It will be a visual reminder of what you are accomplishing.

### Contact the following for more information about the risks of smoking:

**Smokefree.gov**  
**National Cancer**  
1-800-784-8669  
1-800-422-6237  
[www.smokefree.gov](http://www.smokefree.gov)  
[www.cancer.gov](http://www.cancer.gov)

**New York State**  
**Department of Health**  
1-866-697-8487  
[www.NYSMOKEFREE.com](http://www.NYSMOKEFREE.com)

**American Lung**  
**Association**  
61 Broadway, Sixth floor  
New York, NY 10006  
1-800-586-4872  
[www.lungusa.org](http://www.lungusa.org)

## Cardiac Rehabilitation



Depending on a variety of factors, you may be discharged to a cardiac rehabilitation facility. A cardiac rehabilitation program can help change lifestyle habits. It can do a lot to speed your recovery and reduce your chances of future heart problems. Everything you need to know to stay healthy is in one place, and medical staff is on hand at all times.

During the rehabilitation program, you will exercise using a treadmill, a bike, or a rowing machine, or on a walking/jogging track. A nurse or other health care professional will monitor your heart rate, blood pressure, EKG, and any other changes in symptoms. As you build strength, you will move into a more intensive program, with the goal of returning you to your home and to independent living.

## Follow-up

**Be sure to call and make a follow-up appointment with your cardiologist one to two weeks after your procedure.**

If you have symptoms such as chest pain, palpitations, shortness of breath, or difficulty breathing, immediately call your doctor, call 911, or go to the closest emergency room.

If you are going to have an elective invasive procedure or surgery, you should call 212-241-8315 in advance to get instructions on when to stop taking aspirin, Plavix, Effient, or Brilinta. It is important to discuss whether you need to discontinue any medications sooner, as it may not be safe to do so. In most cases, patients are instructed to stop Plavix five days prior to surgery and resume two days after surgery. Aspirin should not be discontinued.

# GENERAL INFORMATION



## **The Mount Sinai Hospital Samin K. Sharma Family Foundation Cardiac Catheterization Laboratory**

Guggenheim Pavilion  
1468 Madison Avenue or 1190 Fifth Avenue  
New York, NY 10029



### **Getting to The Mount Sinai Hospital**

#### **By train**

Amtrak services both New York's Penn Station and Grand Central station. The Metro-North Railroad also services Grand Central Terminal.

New Jersey Transit trains arrive at Penn Station, and the PATH system services several New York City stations. Once arriving in New York, patients and visitors can take public transportation (see below); taxicabs are available for hire from the station.

#### **Public transportation**

Subway line: Number 6

Buses: M1, M2, M3, M4, M96, M98, M101, M102, M103, M106

The MTA's TripPlanner is a great resource to map out a public transportation route and is available at [tripplanner.mta.info](http://tripplanner.mta.info).

## **By car**

Parking is available for those arriving by car. Our parking garage is located on 99th Street between Park and Madison Avenues. The garage is open every day, 6 am to 1 am. Call 212-241-5125 to inquire about hourly and daily rates. Metered parking on streets bordering The Mount Sinai Hospital campus is also available.

### **From the east side of Manhattan**

Take the FDR Drive to the 96th Street exit and turn onto East 96th Street. Continue to Madison Avenue and turn right. The Mount Sinai Hospital is at 100th Street and Madison Avenue.

### **From the west side of Manhattan**

Travel the West Side Highway to the 96th Street exit. Continue across West 96th Street, through Central Park, to Madison Avenue. Turn left on Madison. The Mount Sinai Hospital is at 100th Street and Madison Avenue.

### **From Brooklyn and parts of Queens (Brooklyn Bridge)**

From the Brooklyn-Queens Expressway, take the Brooklyn Bridge exit. Follow signs to the FDR Drive North. Exit at East 96th Street and continue onto Madison Avenue. Turn right on Madison Avenue. The Mount Sinai Hospital is at 100th Street and Madison Avenue.

### **From Staten Island (Brooklyn Battery Tunnel)**

Take the Verrazano Bridge (Staten Island only) to the Brooklyn-Queens Expressway. Follow signs to the Brooklyn Battery Tunnel and make a right turn out of the tunnel. Take West Street to the West Side Highway, turning off at the 96th Street exit. Travel through Central Park to Madison Avenue. Turn left on Madison Avenue. The Mount Sinai Hospital is at 100th Street and Madison Avenue.

### **From Queens and Long Island (RFK Triborough Bridge)**

Take the Grand Central Parkway (west) to the Triborough Bridge to the FDR Drive. Exit at 96th Street. Follow until Madison Avenue. Turn right on Madison Avenue. The Mount Sinai Hospital is at 100th Street and Madison Avenue.

### **From Westchester County and New England**

Take the New England Thruway (95 South) to the RFK Bridge to the FDR Drive. Exit at 96th Street and turn right onto East 96th Street. Follow until Madison Avenue. Turn right on Madison Avenue. The Mount Sinai Hospital is at 100th Street and Madison Avenue.

### **From Upstate New York**

Take the New York State Thruway (I-87 South), which will turn into the Major Deegan Highway. Exit at the Willis Avenue Bridge and bear right. Follow signs to the FDR Drive. Exit at 96th Street. Turn right on 96th Street. Turn right again on Madison Avenue. The Mount Sinai Hospital is at 100th Street and Madison Avenue.

## From New Jersey

Cross the George Washington Bridge and follow signs for the West Side Highway. Exit at 96th Street and travel across 96th Street through Central Park to Madison Avenue. Turn left on Madison Avenue. The Mount Sinai Hospital is at 100th Street and Madison Avenue.

## Patient Accommodations and Amenities

For premium patient accommodations and services on The Mount Sinai Hospital's campus, private rooms and suites featuring 5-star, hotel-style amenities are available at Mount Sinai's Eleven West. Call 212-241-5990 to learn more.

Other accommodations within a short distance of The Mount Sinai Hospital include:

### **Courtyard by Marriott Manhattan/Upper East Side**

410 East 92nd Street  
*(between First and York Avenues)*  
Check availability and make reservations  
through Mount Sinai Guest Services  
to receive discount rates.  
Call 877-231-7914  
Discount code: M08

### **The Marmara Manhattan Luxury Hotel & Residence**

301 East 94th Street  
*(between First and Second Avenues)*  
info@marmara-manhattan.com  
212-427-3100

### **Hotel Wales**

1295 Madison Avenue  
*(between East 92nd and 93rd Streets)*  
212-876-6000 or 866-925-3746

### **Franklin Hotel**

164 East 87th Street  
*(between Lexington and Third Avenues)*  
212-369-1000 or 800-607-4009

### **Hotel Newton**

2528 Broadway  
*(between 94th and 95th Streets)*  
212-678-6500  
\* Request special Mount Sinai rates.

### **On the Ave Hotel**

2178 Broadway at 77th Street  
212-651-3351 or 800-497-6028  
\* Request special Mount Sinai rates.

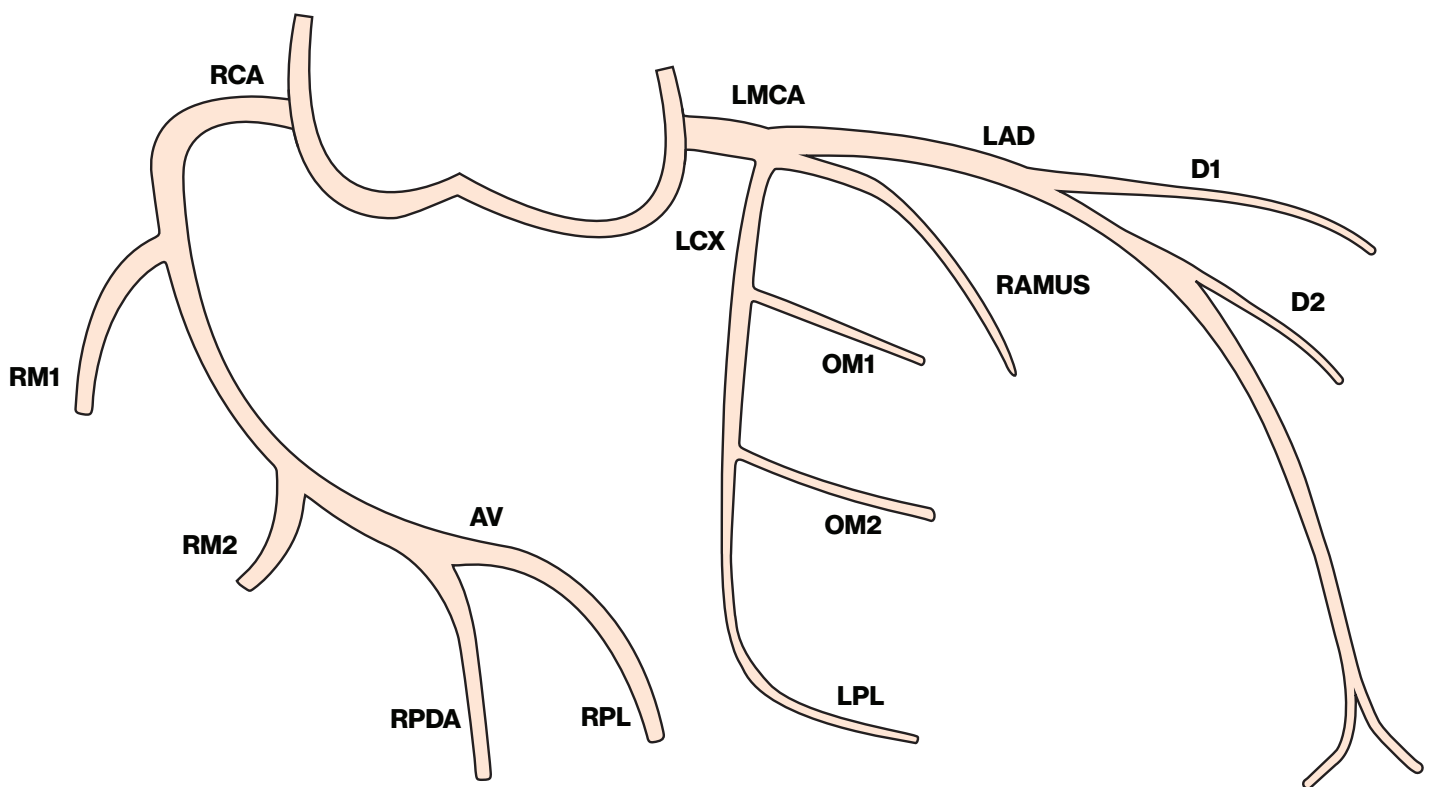
### **ALOFT Harlem**

2296 Frederick Douglass Boulevard  
*(between 123rd and 124th Streets)*  
212-749-4000 or 866-921-2995  
\* Request special Mount Sinai rates.



# DIAGRAM OF THE CORONARY ARTERY

If you have a blockage or are having a stent implanted, your doctor will show you the location using this diagram.

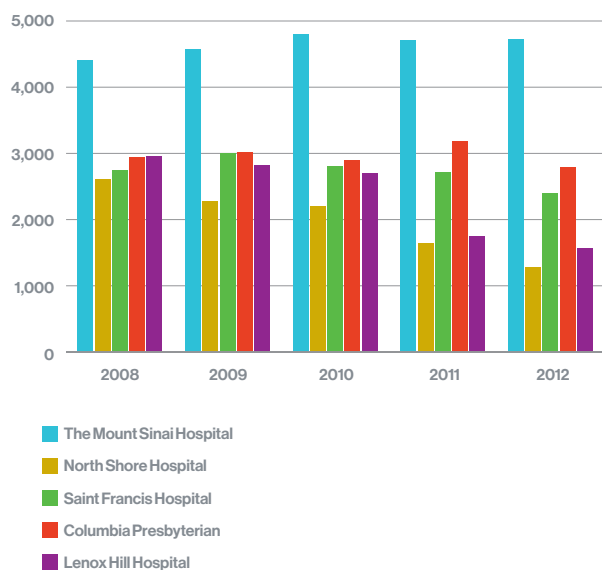




# SELECTED OUTCOMES DATA



**NYS DOH-Reported PCI Volumes for Past Five Years**



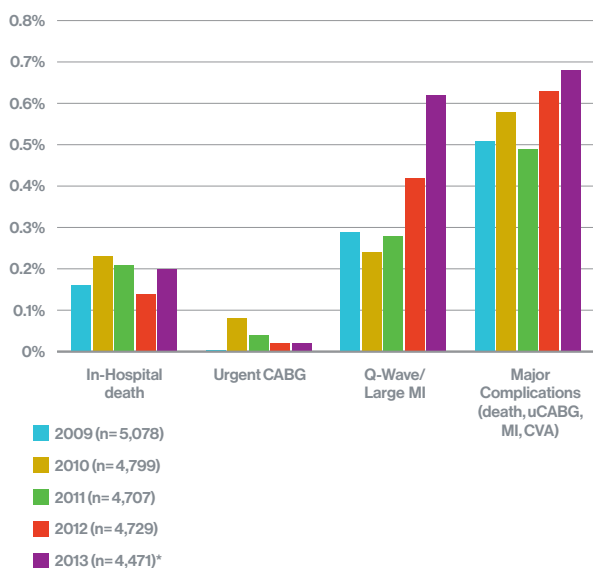
## NYS DOH-Reported PCI Volumes in Comparison to Other NY Centers

The chart at left shows The Mount Sinai Hospital's Samin K. Sharma Family Foundation Cardiac Catheterization Laboratory volume for all types of interventions over the past five years. Our lab rose to the top position among New York State hospitals in 2005 and has continued to deliver interventional care to the greatest number of patients compared to other New York State hospitals for the last eight years, according to New York State Department of Health statistics.

## Interventional Outcomes and Temporal Complication Trends

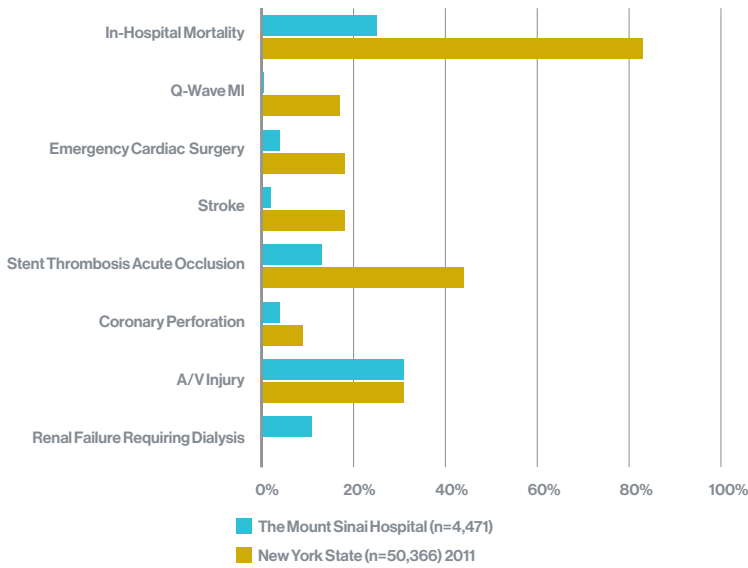
The system of established standard protocols, rigorous attention to minute detail, and a strong sense of teamwork have helped us to achieve the best interventional outcomes in the country. We continue to improve our outcomes each year, with unprecedented extremely low procedural complications in 2013; combined major complications of death, large MI, urgent CABG and CVA cases under 0.7 percent. This remarkably low complication rate has been achieved despite the high complexity of cases and comorbid medical conditions of patients being treated in the Cardiac Catheterization Laboratory. Reports of risk-adjusted PCI mortality over the last 15 years by the NYS Department of Health have consistently placed The Mount Sinai Hospital Cardiac Catheterization Laboratory among the lowest for in-hospital and 30-day risk-adjusted

**Temporal Trends in Complications of PCI at MSH**



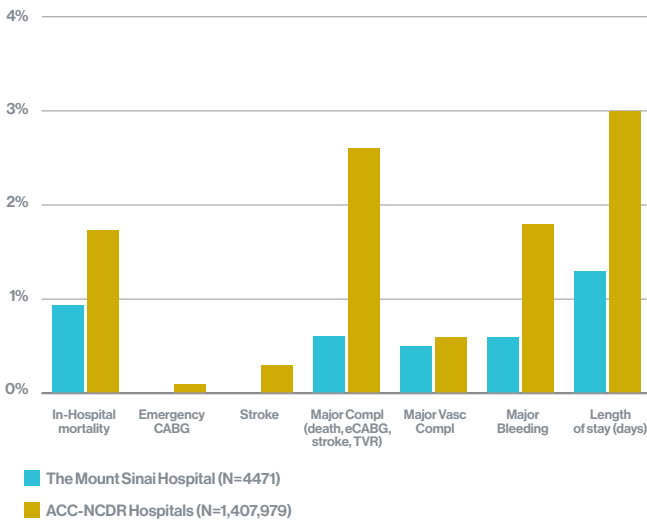
\*New post procedure MI definition = CK-MB >5x

### NYS-Reported Major Complications Following PCI 2013



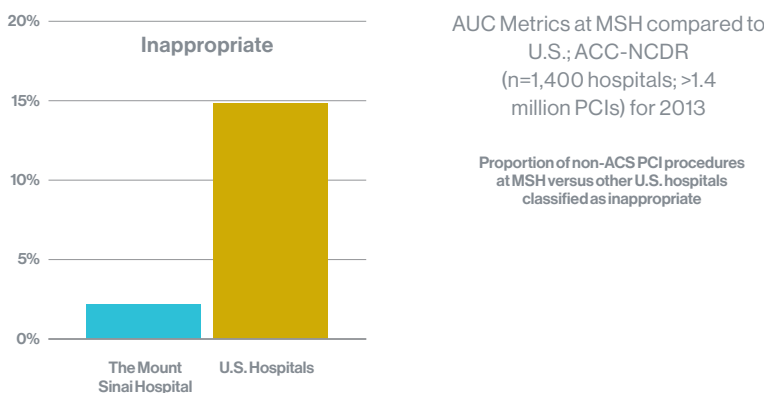
mortality. The most recent New York State DOH report of 30-day risk-adjusted mortality rate (RAMR) for year 2011 has shown our incidence of 0.79 percent for all cases, 0.55 percent for elective cases, and 2.35 percent for emergency PCI cases; which is about 30 percent lower than the statewide average. In the latest (2009-2011) PCI report, we are one of two centers to receive a double-star (\*\*) notation of superior safety in at least two PCI categories (all cases and non-emergency cases), that continue receiving the double star denoting statistically significantly lower RAMR than the statewide average over the last 15 years of NYS DOH PCI reporting. Receiving the double star every year in two PCI categories is unequalled by any PCI center in New York State.

### PCI Complications: MSH vs. ACC-NCDR Hospitals 2013



This lower 30-day risk-adjusted mortality can be attributed in large part to the experience and high procedural volume of the senior full-time interventionalists, who aggregately perform more than 4,000 cases per year. Dr. Kini and Dr. Sharma in 2007, Dr. Sharma in 2008, Dr. Moreno in 2010, and Dr. Kini in 2011 were awarded the double star by NY State, denoting significantly lower 30-day risk-adjusted mortality among approximately 600 interventionalists practicing in the state.

### Appropriateness of PCI



These low complication rates, credited to a uniform protocol across all staff, are all the more remarkable when one considers that our Cardiac Catheterization Laboratory accepts the most difficult coronary and valvular cases, many of them deemed too risky or “not-doable” elsewhere. The comparative data of patients’ clinical characteristics confirms significantly better outcomes in most of the commonly reported procedural complications despite higher adverse factors of PCI patients when compared to New York State.

### NYS-DOH Report of PCI 2009-2011

PCI Statistics 2009-2011	# Cases	All Cases	Non-Emergency Cases	Emergency Cases
<b>1. The Mount Sinai Hospital</b>	<b>14,525</b>	<b>0.71**</b>	<b>0.44**</b>	<b>2.35</b>
2. Columbia Presbyterian Hosp.	8,779	0.80	0.53	2.13
3. Saint Francis Hospital	8,698	0.74	0.44	2.75
4. Lenox Hill Hospital	7,501	0.69	0.37**	3.12
5. Saint Joseph's Hospital	6,657	0.95	0.73	2.65
6. LIJ Medical Center	5,820	0.72	0.52	1.86
7. North Shore University Hospital	5,450	0.60**	0.52	1.26**
8. Rochester General Hospital	5,326	1.16	0.72	3.78
9. Stony Brook Hospital	5,091	1.02	0.57	3.57
10. Beth Israel Medical Center	4,941	0.78	0.41	3.41
<b>NYS Total</b>	<b>158,289</b>	<b>0.91</b>	<b>0.57</b>	<b>3.02</b>

www.nyhealth.gov \*\*Risk Adjusted Mortality Rate (RAMR) significantly lower than statewide rate

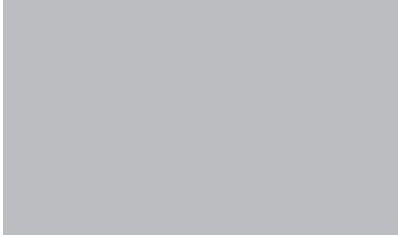
### NYS-DOH 30-day RAMR for PCI at MSH for last 5 Reports

Years/ # cases	All cases RAMR %	Non-Emergency cases RAMR%	Emergency cases RAMR%	**Interventionalist at MSH
2009-2011/ 14525	0.71**	0.44**	2.35	Dr. Kini
2008-2010/ 14414	0.64**	0.41**	2.55	Dr. Moreno
2007-2009/ 13993	0.67**	0.45**	2.21	---
2006-2008/ 13742	0.63**	0.45**	1.78**	Dr. Sharma
2005-2007/ 13030	0.64**	0.49	1.62**	Dr. Kini Dr. Sharma

www.nyhealth.gov \*\*Risk Adjusted Mortality Rate (RAMR) significantly lower than statewide rate

# XII

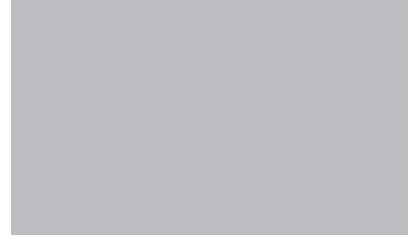
# PHYSICIANS



*Samin K. Sharma,  
MD, FSCAI, FACC*



*Annapoorna S. Kini,  
MD, MRCP, FACC*



*Pedro R. Moreno,  
MD, FACC*



*Prakash Krishnan,  
MD, FACC*



*George Dangas, MD,  
PhD, FACC, FSCAI*



*Joseph M. Sweeny, MD*



*Jason Kovacic,  
MD, PhD*



*Javed Suleman, MD*



*José M. Wiley, MD*



*Atul M. Limaye, MD*



*Sameet  
Palkhiwala, MD*



*Usman Baber,  
MD, MS*



*Jeffrey Bander, MD*



*Michael Alan  
Sicat, MD*



*Daniel Soffer, MD*



*José Meller, MD*



*Mazullah  
Kamran, MD*



*Johnny Lee, MD*



*Paul C. Lee, MD*



*Srinivas  
Kesanakurthy, MD*



*Robert A. Zaloom, MD*



*George  
Fernaine, MD*



*Farah E. Atallah-  
Lajam, MD*



*William J.  
Schwartz, MD*



*Choudhury M.  
Hasan, MD*



*Timothy G.  
Jayasundera, MD*



*Niranjan K. Mittal, MD*



*Asim Hameedi, MD*



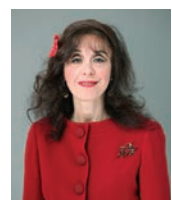
*Vinod Patel, MD*



*Anuj Shah, MD*



*Vishal Kapur, MD*



*Lynne Glasser, MD*

## **Samin K. Sharma, MD, FSCAI, FACC**

Director, Clinical and Interventional Cardiology  
President, Mount Sinai Heart Network  
Dean, International Clinical Affiliations  
Zena and Michael A. Wiener Professor of Medicine

### **Education and Training**

- MBBS: SMS Medical College Jaipur, India
- Residency, Internal Medicine: New York Infirmary; Beekman Downtown Hospital, NY
- Fellowship, Cardiology: City Hospital Center at Elmhurst, NY
- Fellowship, Interventional Cardiology: The Mount Sinai Hospital, NY

Dr. Samin K. Sharma is well known for complex coronary interventions, performing over 1,500 each year with an extremely low complication rate. According to New York State DOH reports, he had the highest angioplasty success rate among interventional cardiologists in New York State from 1994 to 2003 and 2007 to 2008, a remarkable feat considering the complexity of cases referred.



## **Annapoorna S. Kini, MD, MRCP, FACC**

Director, Cardiac Catheterization Laboratory  
Professor of Medicine, Cardiology  
Director, Interventional Cardiology Fellowship

### **Education and Training**

- MBBS: Kasturba Medical College Mangalore, India
- Residency, Medicine/Cardiology: University of Wales Cardiology, UK
- Fellowship, Cardiology: The Mount Sinai Hospital, NY
- Fellowship, Interventional Cardiology: The Mount Sinai Hospital, NY

Dr. Kini performs over 1,000 coronary interventions annually (the highest number by a female interventionalist in the United States) with an extremely low complication rate of <0.3 percent. According to New York State Department of Health Report's for 2004-2006, 2005-2007, and 2009-2011, Dr. Kini received the \*\* status for PCI safety among more than 400 other interventionalists.









**The mission of the Samin K. Sharma Family Foundation Cardiac Catheterization Laboratory at Mount Sinai Heart is:**

**To improve outcomes and safety of our interventional patients by using a team concept to deliver clinical innovations, unrivaled research, and personalized clinical care.**

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### **Important Numbers**

Cardiac Nursing	212-241-3483
Cardiology Appointments	212-427-1540
Cardiac Catheterization Laboratory Front Desk	212-241-5881
<b>Cardiac Catheterization Laboratory Assistance ("any issues")</b>	<b>212-241-0935</b>
Cardiac Catheterization Laboratory Office	212-241-4021
Cardiac Catheterization Laboratory Scheduling	212-241-5136
Coronary Care Unit	212-241-7222
Noninvasive Cardiology	855-MSHEART

