



CARDIAC SURGERY

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There are an estimated 45 million patients of coronary artery disease in India.*

An increasing number of young Indians are falling prey to coronary artery disease. With millions hooked to a roller-coaster lifestyle, the future looks grimmer than ever before.

Earlier, non-modifiable factors like age, gender, family history were mainly responsible for heart disease. But over the past few decades, heart disease seems to have surpassed all the boundaries and now controllable risk factors like diet, physical inactivity and stress largely determine the risk of heart disease.

Most of the deaths from heart attacks are caused by ventricular fibrillation of the heart that occurs before the victim of the heart attack can reach an emergency room. Survival rates increase when the patient reaches an emergency room in time. In order to optimally benefit heart attack victims and limit the extent of heart damage, the treatments to open blocked arteries should be given early during a heart attack. Knowing the early warning signs of heart attack is critical for prompt recognition and treatment. Many heart attacks start slowly, unlike the dramatic portrayal often seen in the movies. A person experiencing a heart attack may not even be sure of what is happening. Heart attack symptoms vary among individuals, and even a person who has had a previous heart attack may have different symptoms in a subsequent heart attack. Although chest pain or pressure is the most common symptom of a heart attack, heart attack victims may experience a diversity of symptoms that include:

- Pain, fullness and/or squeezing sensation of the chest.
- Pain in the jaw along with toothache and headache.
- Shortness of breath.
- Nausea, vomiting, and/or general epigastric (upper middle abdomen) discomfort.
- Sweating.
- Heartburn and/or indigestion.
- Pain in either arm (more commonly the left).

Ref: *<http://www.thehindu.com/news/national/kerala/coronary-artery-disease-killer-no1-in-india/article2932229.ece>

- Upper back pain.
- General malaise (vague feeling of illness); and
- No symptoms (approximately one quarter of all heart attacks are silent, without chest pain or new symptoms and silent heart attacks are especially common among patients with diabetes mellitus).

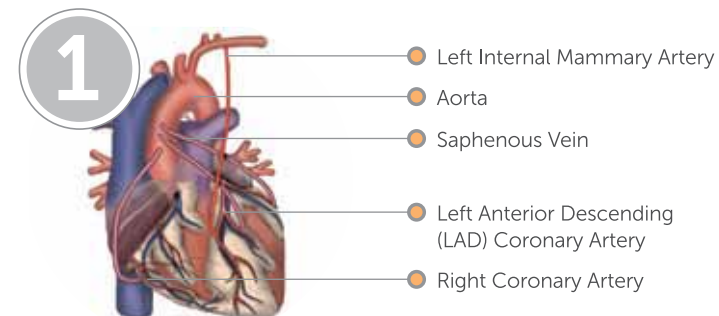
We practice the Art.....of care for your Heart.

Hinduja Healthcare Surgical (HHS), Khar has state-of-the art equipment and infrastructure to carry out complex heart surgeries.

Also, we have a team of committed and specialized doctors to carry out these complex surgeries. Add to this our excellent post-operative and rehabilitation program which sees to it that you are back on your feet as soon as possible.

We are adept at carrying out the following kinds of coronary artery bypass surgeries:

Total Arterial Revascularisation: Using arteries instead of leg veins for CABG is a superior procedure. The arteries for bypass grafting are usually obtained from inside the chest wall and/or the forearm. These are the most preferred conduits and have longer patency rates.



Coronary Artery Bypass Grafting

Coronary Artery Bypass Grafting (CABG) is a type of surgery that improves blood flow to the heart.

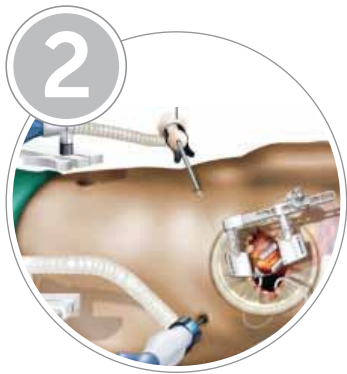
Surgeons use CABG to treat people who have severe coronary artery disease (CAD). CAD is a disease in which a waxy substance called plaque builds up inside the coronary arteries. These arteries supply oxygen-rich blood to your heart.

Over time, plaque can harden or rupture. Hardened plaque narrows the coronary arteries and reduces the flow of oxygen-rich blood to the heart. This can cause chest pain or discomfort called Angina. If the plaque ruptures, a blood clot can form on its surface. A large blood clot can mostly or completely block blood flow through a coronary artery. This is the most common cause of a heart attack. Over time, ruptured plaque also hardens and narrows the coronary arteries.

CABG is an effective treatment for CAD. During CABG, a healthy artery or vein from the body is connected, or grafted, to the blocked coronary artery. The grafted artery or vein bypasses (that is, goes around) the blocked portion of the coronary artery. This creates a new path for oxygen-rich blood to flow to the heart muscle.

The results of CABG usually are excellent. The surgery improves or completely relieves angina symptoms in most patients.

Although symptoms can recur, many people remain symptom-free for as long as 10 to 15 years. CABG also may lower your risk of having a heart attack and help you live longer.



Minimally Invasive Coronary Artery Surgery

Minimally Invasive Coronary Artery Surgery or MICAS is heart surgery performed through several

small incisions instead of the traditional open-heart surgery that requires a median sternotomy approach.

MICAS is a beating-heart multi-vessel procedure performed under direct vision through small openings.

This procedure makes heart surgery possible for patients who were previously considered too high risk for traditional surgery due to age or medical history. Patients referred for this procedure may have Coronary Artery Disease (CAD); Aortic, Mitral or Tricuspid valve diseases; or previous unsuccessful stenting.

Advantages of MICAS

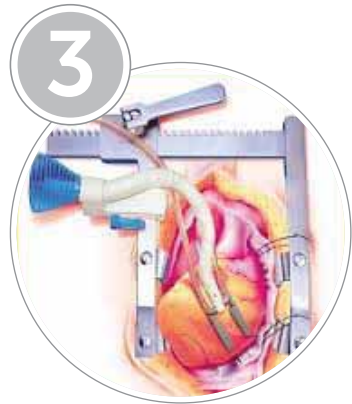
- Reduced blood loss.
- Reduced post-operative discomfort.
- Faster healing times.
- Lowered risk of infections.
- Elimination of any possibility for deep sternal wound infection or sternal non-union.
- Short Hospital Stay.
- Short ICU Stay.
- Quick discharge from Hospital.
- Improved quality of life.
- Early resumption of day to day activities.

Minimally Invasive Heart Surgery has been used as an alternative to traditional surgery for the following procedures:

- Coronary Artery Bypass.
- Mitral Valve Repair.
- Mitral Valve Replacement.
- Aortic Valve Replacement.
- Atrial Septal Defects.
- Hybrid Coronary Revascularization.

There is an alternate minimally invasive approach called the LESS (Lower End Sternal Split) procedure that can be offered to the patient to undergo bypass operation.

In this procedure only the lower half of the sternum (breast bone) is split to access the heart. This is very helpful in hiding the scars. It is particularly helpful for females where the incision is done just below the breast and hence can be camouflaged very easily. Hence, it is also called as 'bikini incision'.



Thoracic Off Pump Coronary Artery Bypass Grafting

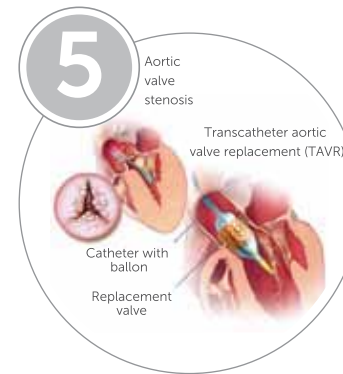
The TOPCAB (Thoracic Off Pump Coronary Artery Bypass Grafting) is another alternative approach to CABG through the side of the chest wall.

In this procedure, the approach is made through the ribcage and all the bypasses are carried out on beating heart. This enables the patient to regain the normal activity in less than two weeks' time.



Redo Coronary Artery Bypass Grafting

Second time Coronary Artery Bypass Grafting (CABG) surgery is more complicated than first time CABG. It is done in patients with blocked grafts from previous surgery or new disease in coronary arteries. Re-entry sternotomy, adherent tissues, more co-morbidities are the risk factors. It can be done on pump or off pump.



Valve Replacement/Repair

Heart valves can be afflicted with Rheumatic Heart Disease or other conditions which make them narrower or leaky, necessitating either a repair or replacement. Valve replacement can be done either using a tissue valve or a mechanical valve.

There we are.....even after & beyond the scar.

With our post-operative care, patients recover more quickly than from normal sternotomy and suffer fewer complications.

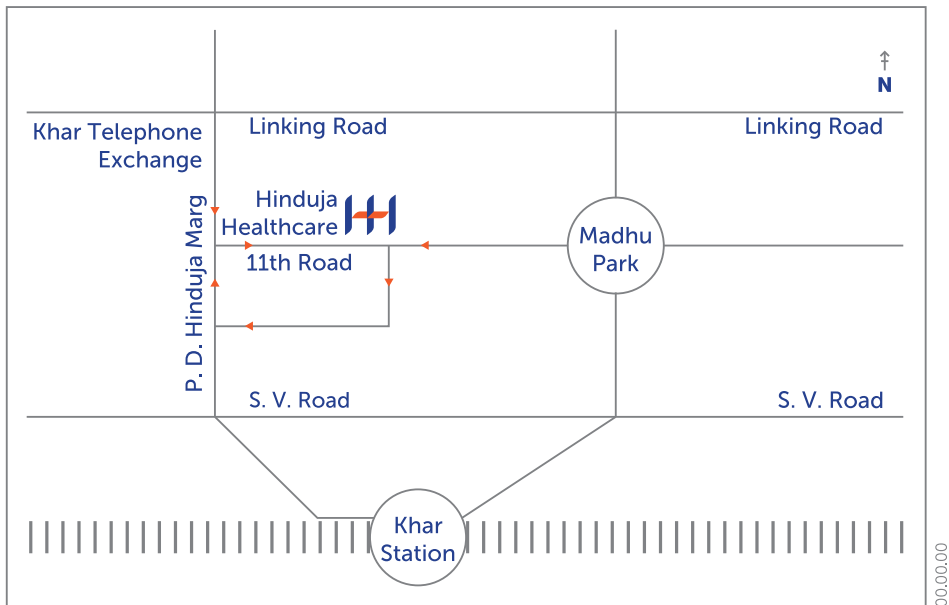
After surgery, patients are moved to the Intensive Care Unit (ICU) for upto two days where they are monitored closely. When patients awake from general anesthesia, they are groggy and somewhat disoriented. Every effort is made to minimize pain from the incision. Our personalized care and attention will make you feel at home even in the seemingly scary environment of an ICU. While in the intensive care unit, a patient breathes with the assistance of a ventilator. The breathing tube is usually removed within two to four hours after surgery. Intravenous (IV) fluids maintain hydration. One or more temporary drainage tubes exit the chest cavity to drain any excess blood or fluid that may build up after surgery. Patients may require blood transfusions during or after the operation.

We do not keep patients in the ICU longer than they need to be kept. Within 24 hours of surgery most patients are out of bed, and they are able to walk within one or two days. We make sure that in the exceptional case of the patient developing some serious complications, patients are discharged within five to seven days after surgery.

We help you recover....faster and healthier.

Possibly the most successful method for beating cardiovascular disease in most cases is making positive lifestyle changes. Our trained cardiac rehabilitation nurses help the patients make the necessary changes that could very well prolong their lives. They assist patients with tasks such as quitting smoking, reducing stress levels, and setting up an exercise regimen. They will also usually assist patients and their loved ones with diet planning, and also handle queries on how to eat more nutritious wholesome foods and maintain a healthy weight.

We have tailor-made rehabilitation programs for each patient. These usually focus on lifestyle changes, including diet and exercise as well as psychological issues. These programs are customized to each person because individual circumstances vary and different people go into surgery at different levels of health.



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