

Healthy Heart

Volume-7 | Issue-80 | July 5, 2016

Price : ₹ 5/-

Honorary Editor :
Dr. Vipul Kapoor



From the Desk of Hon. Editor:

Clinical Cardiological examination gives a preliminary insight into the likely cause of patient's complaints.

However, the preliminary diagnosis and the best possible treatment for it needs to be confirmed and evaluated by means of specifically tailored and individualised investigations deemed appropriate by the treating physician.

This synopsis of different modalities of basic and advanced Cardiac investigations is meant to simplify a layman's understanding of the same and also to solve any confusion that he/she might have as far as comprehension of any one or all of these tests is concerned.

- Dr. Vipul Kapoor

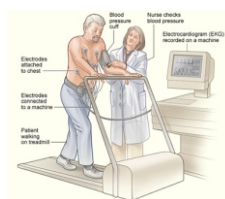
Basics of Primary Cardiac Screening

Imaging and testing are used with other diagnostic tools to find out what's going on with your heart. These can be quick scans or more involved tests that provide your doctor with a closer look at the mechanisms of your heart. Some tests combine the ability to treat heart diseases; others help your health care team recommend the next course of action to get you on the road to recovery. This section reviews tests, interventions, and surgeries most often used for patients with signs of heart disease.

Imaging and Testing

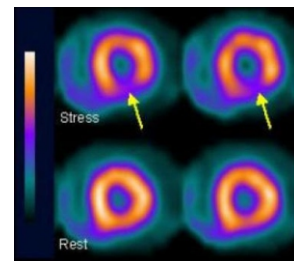
Stress Test

The most common test that can be done right in a doctor's office is an exercise treadmill test, also called a stress test. During this test, the patient will walk on a treadmill to see how his heart handles exercise. Sometimes instead of a treadmill, you can advise your patient to ride a stationary bike.



Stress Imaging

Stress imaging is another common test. This provides with a picture of the heart and shows how well the heart pumps and the blood flow to the heart during exercise.



Computerized Tomography (CT) Scans

Computerized tomography (CT) scans produce X-rays that generate cross-sectional images of the tissues and bones in the body. They can help diagnose heart disease and many other problems.



What to Expect

CT scans usually take about 15 minutes, although preparation time may take more than an hour. During a CT scan, the patients is made to lie on a narrow table while a large, doughnut-shaped scanner

Cardiologists

Dr. Satya Gupta (M) +91-99250 45780	Dr. Milan Chag (M) +91-98240 22107
Dr. Vineet Sankhla (M) +91-99250 15056	Dr. Urmil Shah (M) +91-98250 66939
Dr. Vipul Kapoor (M) +91-98240 99848	Dr. Hemang Baxi (M) +91-98250 30111
Dr. Tejas V. Patel (M) +91-89403 05130	Dr. Anish Chandarana (M) +91-98250 96922
Dr. Guntant Patel (M) +91-98240 61266	Dr. Ajay Naik (M) +91-98250 82666
Dr. Keyur Parikh (M) +91-98250 26999	

Congenital & Structural Heart Disease Specialist

Dr. Kashyap Sheth (M) +91-99246 12288	Dr. Milan Chag (M) +91-98240 22107
Dr. Divyesh Sadadivala (M) +91-8238339980	

Cardiothoracic & Vascular Surgeons

Dr. Dhaval Naik (M) +91-90991 11133
Dr. Manan Desai (M) +91-96385 96669
Dr. Dhiren Shah (M) +91-98255 75933

Pediatric & Structural Heart Surgeons

Dr. Shaunak Shah (M) +91-98250 44502

Cardiovascular, Thoracic & Thoracoscopic Surgeon

Dr. Pranav Modi (M) +91-99240 84700

Cardiac Anaesthetists

Dr. Hiren Dholakia (M) +91-95863 75818
Dr. Chintan Sheth (M) +91-91732 04454
Dr. Niren Bhavsar (M) +91-98795 71917

Cardiac Electrophysiologist

Dr. Ajay Naik (M) +91-98250 82666
Dr. Vineet Sankhla (M) +91-99250 15056

Neonatologist and Pediatric Intensivist

Dr. Amit Chitaliya (M) +91-90999 87400
Dr. Snehal Patel (M) +91-99981 49794

moves over the area being scanned. Contrast dyes are sometimes used to illuminate blood vessels or other structures being scanned. A contrast dye may be swallowed and inhaled, or it may be injected.

Precautions

CT scans use more radiation than conventional X-rays, but the benefits of accurate diagnosis usually outweigh the risks of radiation.

Cardiac Catheterization (Also Called a "CATH")

A CATH is also used to diagnose heart



disease. A thin tube is inserted into the arm, neck, or groin and is guided to the heart. The doctor then injects dye to see the blood flow in and around the heart.

What to Expect

The cardiac catheterization is a 30- to 60-minute procedure done in a hospital setting. Medicine may be given to help relax, but the procedure is done while the patient is awake so that he/she can follow

any instructions. A contrast dye is given to enhance the picture. After numbing the insertion area, the catheter is inserted and moved to the heart guided by live X-rays. Once the catheter is in place, the health care team can conduct a number of tests and treatments, including:

- Collect blood samples from the heart
- Measure blood pressure and blood flow in the large arteries around the heart and in the heart's chambers
- Measure the oxygen levels in different parts of the heart
- Examine the heart's arteries
- Biopsy the heart muscle
- Conduct angioplasty or stenting to open the artery and restore blood flow to the heart

This common procedure is safe for most patients. The rare risks include bleeding at the insertion site, blood vessel damage, and allergic reaction to the contrast dye.

Echocardiograms

Like a sonogram, these procedures use Sound waves from a transducer (wand) t

o bounce off from the heart, which produce a reflection of the heart in motion. That reflection is captured in a video image, which can help detect

structural problems in the heart. Echocardiograms can be conducted while at rest or while exercising (a stress echo). There are a few different types of these tests:



- **Transthoracic Echocardiography (TTE)** – TTEs use ultrasound to get a fuller picture of the heart's size, structure, and motion. In this simple, painless procedure, the patients lie supine while a technician moves a device over the chest. The device collects images of the beating heart.
- **Transesophageal Echocardiography (TEE)** – TEE is often used before or during heart surgery to guide post-operative treatment or see if additional work is needed before the patients leave the operating room. A physician places a long tube with an ultrasound probe in the esophagus while the patient is under sedation. The probe creates an ultrasound "movie" of the heart at work, giving a much clearer picture than is possible with an electrocardiogram (below) alone.

Electrocardiogram (ECG or EKG)

This test measures the heart's electric activity to assess its electrical output and see if there are problems.

What to Expect

This simple, painless procedure involves placing patches with electrodes to locations onto the skin to measure electrical activity of the heart, either while at rest or during activity. The activity is charted on a small screen or printed on paper. The test lets one know how fast and steadily the heart is beating and the strength of the signals at each stage of the heart's beating. The consensus is that this procedure is low risk for most patients.

Myocardial Perfusion Imaging (MPI)

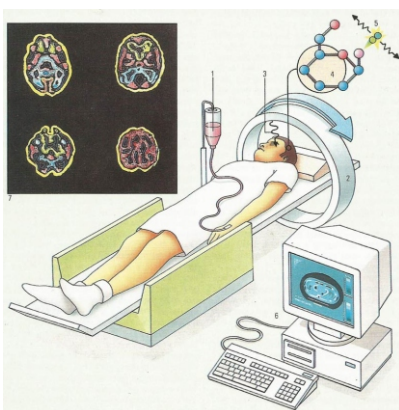
MPI, also referred to as a nuclear stress test, takes pictures of the blood flow pattern to the heart muscle using a radioactive tracer and special imaging equipment. Nuclear medicine is a powerful way to catch diseases in their earliest stages by letting doctors see molecular changes in the body.

What to Expect

A radioactive tracer is swallowed, inhaled, or injected and in time gathers near the examination site. Imaging equipment picks up on the radioactive emissions from the tracer and provides a detailed image of the area. The consensus is that this procedure is low risk for most patients.

Positron Emission Tomography (PET) Scan

PET scans also use a radioactive tracer to identify issues with the body's organs and tissues. A PET scan of the heart allows one to assess if the heart is receiving enough blood, see heart damage or scar tissue, and observe buildup in the heart muscle.



What to Expect

A heart PET scan takes about 90 minutes and is done in a facility with a PET scanner. The patient will first receive a tracer by injection. It takes an hour to travel through the bloodstream and gather in the organs and tissues. Then the patient lies on a table that moves into a tunnel-shaped scanner, which picks up signals from the tracer and generates 3-D pictures of the heart. PET scans are generally safe—the radiation used is similar to that of a CT scan, and it doesn't stay in the body for long. Some experience pain or irritation at the injection site. Women who are pregnant or breastfeeding should let their doctor know.

Heart Monitors

Small, portable monitoring devices are also used to detect heart issues or see if heart



treatments are working. Holter and event monitors are most often prescribed to diagnose and assess arrhythmias in the heart or detect silent cardiac ischemia (heart disease without symptoms). They can be worn under clothes while one performs normal activities. Here are the two main types:

- Holter Monitor – This one records all heartbeats continuously. Electrodes are attached to the chest, and the monitor picks up the electrical activity of the heart at all times, even while sleeping
- Event Monitor – Similar to a Holter monitor, this one records activities only at certain times.

What is a Cardiac Stress Test?

A cardiac stress test may be ordered to learn more about how the heart works under stress (such as physical activity). Since the heart works harder when one is exercising, the test can show problems with the heart that may not be apparent on a resting electrocardiogram (ECG).

There are 2 types of cardiac stress tests:

1. Exercise - using a treadmill or sometimes a stationary bike
2. Medicine - for people who cannot exercise or who have certain medical conditions

A stress test measures changes in the blood pressure, heart rate and rhythm, ECG, breathing, and oxygen, but does not provide any pictures of the heart. Imaging tests can be suggested at the same time as the stress test. A nuclear scan or echocardiogram provides images of the heart at rest and during stress.

What Do You Need to Know Before the Test?

Specific directions are given for the test and what is needed to do to prepare for a cardiac stress test. Before the test:

- A doctor explains what to do with prescription or over-the-counter medicines, herbs, supplements, or vitamins. Some medicines are stopped 1-2 days before the test
- No drinking or eating anything else for about 3 hours before the test
- Tobacco products are to be avoided (chewing or smoking) for 2 hours before the test
- Caffeine may need to be stopped for 12-24 hours if patient is having a medicine stress test
- Comfortable clothes and walking shoes are a must

- Someone is needed to drive the patient home
- Tiredness / shortness of breath or sweating during the test may occur
- Asthmatic patients need to let doctor's know & get their inhaler along.

What Happens During the Test?

If an imaging study is being conducted with the exercise test, an IV will be inserted before one begins to exercise. The technician attaches a heart monitor to record the heart rhythm. A blood pressure cuff is placed on the arm. A light monitor for the oxygen goes on the finger. Numbers are recorded before beginning.

Exercise Stress Test: One walks slowly on the treadmill or start pedaling if a bike is used. Rails on the treadmill or the handle bars of the bike can be used for support. As one exercise, the speed of the treadmill increases and the front is raised (incline). For the bike, tension makes the wheel harder to pedal. One continues exercising until the heart rate reaches a certain goal or until one has symptoms. The person supervising the test will ask the patient how he/she feels while exercising.

Medicine Stress Test: An IV is placed into the vein and decided medicine is given. One is to do mild exercise after the medicine is given.

For both the exercise or medicine test, it is stopped at any time if patient is uncomfortable or the patient experiences:

- Any chest pain
- Abnormal heart rhythm
- Severe shortness of breath
- Very low or high blood pressure
- Dizziness

What Are Imaging Tests?

Imaging tests may be ordered during the stress test. For the imaging test, once the target heart rate is achieved (or when one cannot exercise any longer), a radioactive tracer material is given through the vein. Then the patient will lie still for the images to be taken with a special camera or for the technician to take images of the heart.

What Happens After the Test?

After the test it can be helpful to have someone else drive the patient home as he/she may be tired. It is advisable for the patient to have a snack right after the test. Patients are advised how much fluids they should drink in the first 24 hours. Limit alcohol during this time.

CIMS MULTISPECIALITY OPD 8 AM to 5 PM (Monday to Saturday)

9 Class 100 Green OTs and labour room

350 beds

138 ICU and critical care beds

Organ Transplant Centre: Kidney
Coming up : Heart, Liver, Bone Marrow

FIRST Fully integrated "digital hospital" on GE Healthcare Centricity® enterprise "imaging and high acuity care solution" with fully digitised ICU and Operation Theatres for better and faster patient care in Western India

Cardiology Dr. Satya Gupta Dr. Urmil Shah Dr. Vineet Sankhla Dr. Hemang Baxi Dr. Vipul Kapoor Dr. Anish Chandarana Dr. Tejas V. Patel Dr. Ajay Naik Dr. Guntant Patel Dr. Kashyap Sheth (Paediatric) Dr. Keyur Parikh Dr. Divyesh Sadadiwala (Paediatric) Dr. Milan Chag		Cardio-Thoracic & Vascular Surgery Dr. Dhaval Naik Dr. Manan Desai Dr. Dhiren Shah Dr. Shaunak Shah (Paediatric) Dr. Pranav Modi		Cancer - Radiation Oncology Dr. Devang Bhavsar Dr. Maulik Bhensdadia Dr. Malhar Patel Dr. Prapti Patel Desai		Cancer - Surgical Oncology Dr. Darshan Bhansali Dr. Ashok Patel Dr. Jayesh Patel Dr. Natu Patel Dr. Tarang Patel			
Cancer - Medical Oncology Dr. Chirag Desai Dr. Rahul Jaiswal Dr. Sanket Shah		Back Pain Clinic Dr. T K B Ganapathy Dr. Purav Patel (Fast Track MRI & CT Scan facilities)		Critical Care Dr. Bhagyesh Shah Dr. Vipul Thakkar Dr. Amit Prajapati		Dentistry Dr. Parvin Chandarana Dr. Chandni Patel		Dermatology Dr. Sneha Gohil	
ENT Dr. Shaishav Sakhidas Dr. Umakant Shah		Fever & Infectious Diseases Dr. Surabhi Madan		Gastroenterology Dr. Bhavesh Thakkar		Gastro Surgery Dr. Joy Abraham		Health Checkup Dr. Hardik Shah	
Neonatal / Paediatric Critical Care Dr. Amit Chitaliya Dr. Snehal Patel		Nephrology & Renal Transplant Dr. Saurin Dalal Dr. Manthan Kansara		Neurosciences & Spine Surgery Dr. T K B Ganapathy Dr. Purav Patel		Obesity (Bariatric) Surgery Dr. Digvijaysingh Bedi		Orthopaedics & Joint Replacement Dr. Keyur Buch Dr. Pragnesh Raj	
Obstetrics, Gynaecology & IVF (9 am to 9 pm) Dr. Sneha Baxi Dr. Dipti Akshay Shah Dr. Devang Patel Dr. Hiren Suthar Dr. Rushi Shah Dr. Priyan Gandhi				Pain Clinic Dr. Dipak Desai & Team		Pulmonology Dr. Kalpesh Panchal Dr. Amit Patel Dr. Nitesh Shah		Rheumatology Dr. Puja Srivastava	
Trauma Dr. Sanjay Shah		Urology Dr. Rupesh Shah		Pathology 24 x 7 (Seven days a week)		Radiology 24 x 7 (Seven days a week) 24 x 7 (Seven days a week) First private hospital in Gujarat with 2 CT Scans for all emergencies & Fast track MRI			

24 x 7 One of the largest Emergency & Trauma room of Ahmedabad with 7 digitised private beds in a total of 15 beds

CIMS KHAMBATTA LINAC CENTRE



CIMS Khambatta Linac (Radiotherapy) Centre is an initiative of Areez Khambatta Benevolent Trust*
*Radiotherapy at reasonable rate for needy cancer patients.

CIMS EXPRESS

Same day appointment service to serve you better



Do you need an appointment today?

At CIMS, we promise you an appointment with a doctor* on the same day if you call before 12.00 Noon (Monday to Saturday) or by next morning
+91-9825066661, +91-79-30101008/1200

*A doctor of the concerned speciality team available at CIMS on that day will see the patient

24 x 7 Medical Helpline : +91-7069000000 | Ambulance & Emergency : +91-98244 50000, 97234 50000

CIMS Hospital, CIMS Hospital Road, Off Science City Road, Sola, Ahmedabad - 380060. Email: info@cims.me | www.cims.me

Revascularization in Severe Left Ventricular Dysfunction The Role of Viability Testing

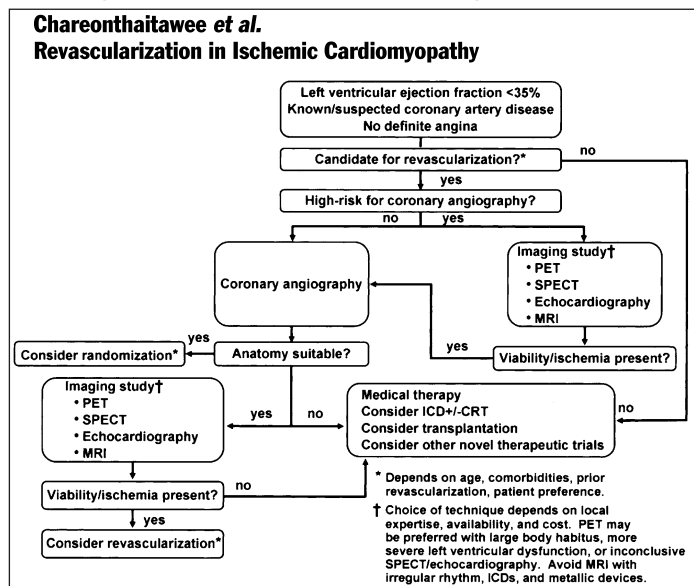
Left ventricular (LV) systolic dysfunction underlies the traditional HF paradigm. In developed nations, the leading cause of LV dysfunction is coronary artery disease (CAD). Established treatment options for ischemic HF include medical therapy, revascularization, and cardiac transplantation. Device therapy is a recent addition for eligible patients, but other modalities are investigational. Despite therapeutic advances, outcome of medical therapy in severe HF is poor. In specific subsets of patients, the potential benefits of revascularization must be weighed against the high periprocedural risks. We review the role of revascularization in moderate-to-severe LV systolic dysfunction and attempt to identify patients likely to benefit from this therapy.

Limitations of the literature are reflected in the absence of class I recommendations in current practice guidelines. The American College of Cardiology/American Heart Association (ACC/AHA) 2001 HF guidelines assigned noninvasive imaging and coronary angiography as class IIa recommendations with level C evidence for patients with known or suspected CAD without angina who are candidates for revascularization. Although the HF guidelines considered revascularization in patients with HF and CAD but without angina as a class IIb recommendation with level B evidence, the ACC/AHA 2004 Guideline Update for CABG incorporated viability in its class IIa recommendation that "CABG might be performed in patients with poor LV function with significant viable noncontracting, revascularizable

myocardium" and recognized that a subgroup of patients might experience benefit.

On the basis of the available literature, we suggest that when 25% to 30% of the LV is dysfunctional but viable by noninvasive testing, revascularization might be considered. The decision to proceed with revascularization should also consider comorbidities, prior revascularization, and patient preference. The timing of coronary angiography is important for patients whose comorbidities and preferences do not preclude revascularization. If anatomy is not suitable for coronary revascularization, viability testing, although prognostically useful, is unlikely to alter management. Moreover, noninvasive testing without prior coronary angiography in patients with LV systolic dysfunction might incorrectly suggest nonischemic cardiomyopathy in the presence of underlying CAD. For these reasons, initial coronary angiography seems appropriate for potential revascularization candidates. Another clinical issue is whether to initially embark on a trial of medical therapy, and if unsuccessful, then consider revascularization.

The choice of viability technique depends on many factors, including availability, expertise, cost, and body habitus. Although reported diagnostic accuracies differ among techniques for predicting functional recovery, there are no data to meaningfully compare individual techniques with respect to patient outcome. Observational studies report conflicting prognostic results in the absence of noninvasive viability testing. Reasonable observational evidence indicates that viability testing, despite varying diagnostic accuracies, can identify a subset of patients with reversible LV dysfunction who have improved outcome and symptomatic benefit after revascularization. Although the current literature has many limitations, revascularization should at least be considered in patients with moderate-to-severe ischemic cardiomyopathy who have a significant amount of dysfunctional, but viable, myocardium.



CIMS Cardiac Surgery Team

Dr. Dhaval Naik +91-90991 11133	Dr. Manan Desai +91-96385 96669	Dr. Dhiren Shah +91-98255 75933
---	---	---

CIMS Cardiac Anaesthetists Team

Dr. Hiren Dholakia +91-95863 75818	Dr. Chintan Sheth +91-91732 04454	Dr. Niren Bhavsar +91-98795 71917
--	---	---

**AT 82,
WE DRILLED
LIFE INTO
HER HEART.
NOW IT BEATS
LIKE 28.**



#dildilkikahani

Name: Mrs. Mohini Lalchand Bellani

Age: 82 years

Location: Adipur, Kutch, India

Mrs. Mohini, for 82 years lived life with grandeur, till she was diagnosed with Coronary Artery Triple Vessel Disease with severe calcification (accumulation of calcium in arteries). She suffered from chest pain and left arm weakness for 6 months and was advised a high risk bypass surgery.

CIMS team of Cardiologists performed globally practiced Rotational Atherectomy to treat hardening of the arteries due to calcium deposit. Rotablator device, a micro drill, was inserted into the coronary arteries to drill out hard calcium deposited in the vessel wall. Subsequently, a stent was deployed through right wrist at the site of the block.

She recovered fast and walked home the next day. Mrs. Mohini, 82 years old with a heart of gold, taught us to fight the odds and to live life to the fullest.

CIMS CARDIAC CARE

- Experts in Rotational Atherectomy
- One of the only center in India to perform all possible percutaneous cardiac interventions
- Only center certified in India as "American College of Cardiology (ACC) Center of Excellence"



Care Institute of Medical Sciences

Earning Trust with World Class Practices




www.cims.me    

APPOINTMENTS: (L) +91 79 3010 1200 / 1008, (M) +91 98250 66661, (E) opd.rec@cimshospital.org

AMBULANCE & EMERGENCY: (M) +91 98244 50000 / 97234 50000 / 90990 11234

24x7 Helpline
+91 70690 00000

CIMS Hospital, Nr. Shukan Mall, O Science City Rd., Sola, Ahmedabad – 380 060, Gujarat, INDIA

CIMS Hospital Pvt. Ltd. | CIN: U85110GJ2001PTC039962 | info@cims.me | CIMS Hospital India App on:   

Healthy Heart Registered under **RNI No. GUJENG/2008/28043**

Published on 5th of every month

Permitted to post at PSO, Ahmedabad-380002 on the 12th to 17th of every month under
Postal Registration No. **GAMC-1725/2015-2017** issued by SSP Ahmedabad valid upto 31st December, 2017
Licence to Post Without Prepayment No. **CPMG/GJ/97/2014-15** valid upto 31st December, 2017

If undelivered Please Return to :

CIMS Hospital, Nr. Shukan Mall,
Off Science City Road, Sola, Ahmedabad-380060.
Ph. : +91-79-2771 2771-75 (5 lines)
Fax: +91-79-2771 2770
Mobile : +91-98250 66664, 98250 66668

Subscribe "Healthy Heart" : Get your "Healthy Heart", the information of the latest medical updates only ₹ 60/- for one year.
To subscribe pay ₹ 60/- in cash or cheque/DD at CIMS Hospital Pvt. Ltd. Nr. Shukan Mall, Off Science City Road, Sola, Ahmedabad-380060. Phone : +91-79-3010 1059 / 3010 1060. Cheque/DD should be in the name of : **"CIMS Hospital Pvt. Ltd."**
Please provide your **complete postal address with pincode, phone, mobile and email id** along with your subscription



January 6-8, 2017

**13th Annual Scientific Symposium
22nd Year of Academics**

JIC 2017 is getting bigger with more symposium adding multispecialty dimensions to the conference.

JIC 2017 Symposium

- ◆ Cardiovascular Symposium
- ◆ Oncology Symposium
- ◆ ECMO Symposium (Critical Care)
- ◆ Internal Medicine/Clinical Cardiology Symposium
- ◆ Pediatric Cardiology & Pediatric Cardiac Surgery Symposium
- ◆ Pulmonary Medicine Symposium

For more information and registration log on to www.jicindia.org

Conference Secretariat

CIMS Hospital Nr. Shukan Mall, Off Science City Road, Sola, Ahmedabad-380060
Phone : +91-79-3010 1059 / 1060, Fax : +91-79-2771 2770
Email : communication@cimshospital.org, Web : www.jicindia.org

ORGANIZED BY

**GMERS
Medical College,
Sola, Ahmedabad**

SUPPORTED BY



Care Institute
Medical Society
for Research
and Education

IN ASSOCIATION WITH



"JIC India" Application Available



CIMS Hospital : Regd Office: Plot No.67/1, Opp. Panchamrut Bunglows, Nr. Shukan Mall, Off Science City Road, Sola, Ahmedabad - 380060.
Ph. : +91-79-2771 2771-75 (5 lines) Fax: +91-79-2771 2770.

CIMS Hospital Pvt. Ltd. | CIN : U85110GJ2001PTC039962 | info@cims.me | www.cims.me

Printed, Published and Edited by Dr. Keyur Parikh on behalf of the CIMS Hospital

**Printed at Hari Om Printery, 15/1, Nagori Estate, Opp. E.S.I. Dispensary, Dudheshwar Road, Ahmedabad-380004.
Published from CIMS Hospital, Nr. Shukan Mall, Off Science City Road, Sola, Ahmedabad-380060.**