



# CIMS News Care & Cure

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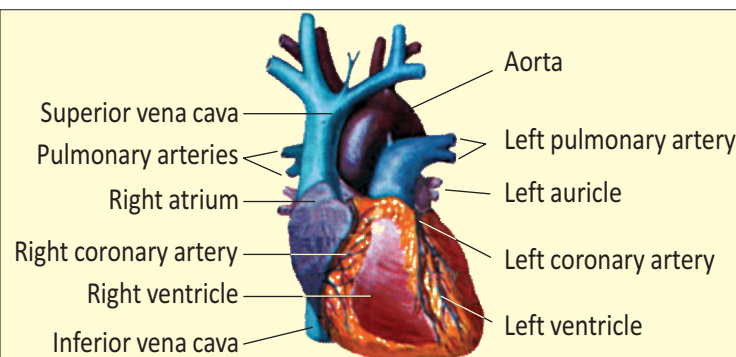
## Heart : 'What" and 'How'

All over the world, Indians have gained a dubious reputation for the greatest susceptibility to heart disease. Urbanization, stressful life-styles, widespread use of tobacco, excessive consumption of high cholesterol food, diabetes, blood pressure and a lazy life-style have increased the incidence of heart disease amongst them. Alarmingly enough it is now striking the younger age groups too. At present, over 100 million Indians suffer from Coronary Artery Disease (CAD). It is estimated that by the year 2020, 50 percent of the heart patients of the world will be Indians, and heart diseases will be the main cause of death and disability in the country. Therefore, it is high time we all learned more about the heart and its ailments.

### Fancy Electric Pump

The heart is indeed a biological miracle. Fist-sized, it pumps blood through the entire body for a whole life time, day and night, It is the blood which supplies nutrients and oxygen to the body. It is through the blood again, that waste products and carbon-dioxide are removed from it. Ironically, we hardly notice the good work of our heart, until it is sick. And when it is sick, it could be too late. Made of a special type of muscle, the heart has the remarkable capacity of beating on its own electrical impulse generator, which makes the heart beat about 60-80 times a minute at regular intervals. Irregular beats, fast or slow beats are called arrhythmia and require treatment.

**The heart muscles are different from other muscles of the body.**



**The Human Heart**

### Blood for the Heart

Although so much blood flows through the heart, it gets no nourishment on its own. The heart has to depend on the coronary arteries for blood to keep itself fit. Having to work so hard, the heart demands and gets one of the richest blood supplies in the body, A narrowing of the coronary blood vessels causes 'Angina', while a complete blockage of the coronary blood vessels causes 'Heart Attack'.

### Chambers

The heart has four chambers, two atria (atrium-chamber) and

two ventricles (cavities). There is an atrium and a ventricle on the right and one each, on the left side. Heart Failure results if the ventricles are overworked, overstrained and swollen. The heart can be compared to a four room apartment or a house.

My professor's dictum about conducting medical practice: 'Look intelligent, don't talk and only say ah and hmm...'

An apartment has doors between rooms, so does the heart have valves. Just like doors, the valves open in a certain direction when blood flows through them. If the heart valves open in the reverse direction and blood flows in a reverse direction, it is a sign of heart disease.

In an apartment we may freely move to any room, but the blood in our heart can move only in a predefined direction, between predefined chambers. If the blood flows into the wrong direction and in the wrong chambers, that could be a sign of heart disease too. Lastly, the rooms in an apartment have walls. The chambers of our heart also have walls. Rarely, these walls may have openings or a weakness in them, another sign of heart disease.

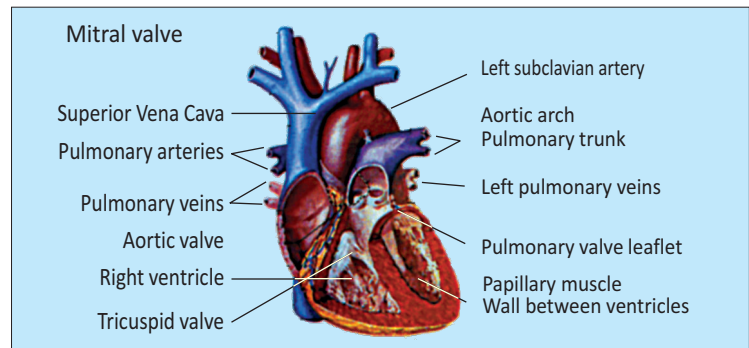
**The heart pumps for an entire lifetime, it never stops! (Except perhaps when a patient is undergoing 'On Pump' Bypass operation)**

### It goes round and round...

The atria receive blood from all the parts of the body and the lungs and push it into the ventricles. The ventricles contract and push blood through the huge aorta and Pulmonary Artery and then through the whole body and the lungs respectively. In this way, the heart keeps the blood flowing through the body, constantly. If for any reason the ventricles are overloaded, gradually the heart will become weak. Ventricles push the blood and make it flow. But equally important are the heart valves, which allow blood flow in only the desired direction.

There are four heart valves. The mitral valve is the biggest, and lies between the left atrium and the left ventricle, The tricuspid valve regulates the blood flow between the right atrium and the right ventricle. The blood always flows from the atria to the ventricles. If it flows in the reverse direction, from ventricles to the atria it is a sign of a major heart disease.

The other two valves in the heart are at the root of the aorta (aortic valve) and at the root of the pulmonary artery (the pulmonary valve) If any one or more of these four valves are diseased, the heart will not function well and its efficiency will decrease.



### How does it come back?

Blood comes back to the heart via the veins. The small veins join together to form larger veins, which in turn join to form the two largest veins, the Superior (higher) Vena Cava and the Inferior (lower) Vena Cava. The blood returns to the heart via these huge veins. This blood is poor in oxygen, The right atrium accepts this blood and sends it to the right ventricle, which sends it to the lungs for oxygenation (saturation of blood with oxygen). Passage through the lungs enriches the oxygen levels in blood.

This oxygenated blood comes to the left atrium, goes to the left ventricle via the mitral valve, and is pushed into the large aorta by the powerful contractions of the left ventricle. The walls between the two atria and the two ventricles separate the oxygen-rich blood from the oxygen-poor blood.

Any defects or holes in the walls lead to mixing of blood and causes illness. Such defects are usually present from birth and need correction by surgery or nonsurgical interventional treatment.

### King (or Queen?) of Compassion

In a way the heart is like a benevolent monarch. All its life, the sincere organ gives life blood to all the other organs of the body. If it stops, its dependent organs will suffer and eventually die.

But what about blood supply to the emperor himself? It too needs blood, which it has to get from the coronary arteries.

When these coronary arteries are narrowed and the heart gets inadequate blood, it is a serious disease process, called Coronary Artery Disease (CAD). Narrowed coronaries trigger chest pain, called 'Angina'. When the coronary arteries are completely blocked, it is a life-threatening situation, and is called a 'Heart Attack'.


**A healthy heart pumps as much as 5 to 6 litres of blood through our body every minute. After heavy exercise, the heart may pump as much as 15 to 20 litres of blood every minute!**

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Hon'ble Minister of Health & Tourism, Govt. of Gujarat  
Guest of Honour : **Smt. Vasuben N. Trivedi**  
Minister of State, Higher & Technical Education and  
Women & Child Development, Govt. of Gujarat

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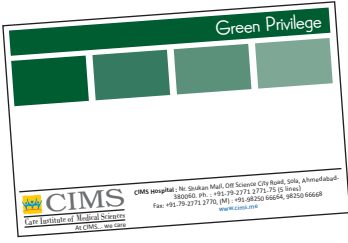
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# સીમ્સ ગ્રીન કાર્ડ



‘સીમ્સ ગ્રીન કાર્ડ’ની માહિતી મેળવવા માટે તમારા મોબાઇલમાંથી “GC” ટાઇપ કરી  
+૯૧-૯૦૯૯૦ ૬૮૯૫૯ / +૯૧-૯૦૯૯૦ ૬૬૫૩૮  
નંબર પર મોકલો

સીમ્સ ગ્રીન કાર્ડ ધરાવનારને ફાર્મસી, પેથોલોજી, રેડિયોલોજી અને હેલ્થ ચેક-અપમાં ડિસ્કાઉન્ટ\* મળશે. તે ઉપરાંત સીપીઆર ક્લાસીસમાં પણ નિ:શુલ્ક રજીસ્ટ્રેશન મળશે

\*શરતોને આધીન ભવિષ્યમાં ‘સીમ્સ ગ્રીન કાર્ડ’ રદ કરવાનો અધિકાર સીમ્સ હોસ્પિટલને રહેશે



સીમ્સ હોસ્પિટલ, શુકન મોલ નજીક, ઓફ સાયન્સ સીટી રોડ, સોલા, અમદાવાદ-૩૮૦૦૬૦.  
એપોઇન્ટમેન્ટ માટે ફોન : +૯૧-૭૯-૩૦૧૦ ૧૨૦૦, ૩૦૧૦ ૧૦૦૮ (મો) +૯૧-૯૮૨૫૦ ૬૬૬૬૪, ૯૮૨૫૦ ૬૬૬૬૮, ૯૦૯૯૦ ૬૬૫૪૦.  
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સીમ્સ હોસ્પિટલ જાહેર કરતા ગર્વ અનુભવે છે કે તે પોતાના સ્નેહી તથા દર્દીઓ માટે ખાસ ‘સીમ્સ ગ્રીન કાર્ડ’ નિ:શુલ્ક\* આપી રહ્યું છે.

‘સીમ્સ ગ્રીન કાર્ડ મેમ્બરશીપ’ હેઠળ આપને કેટલાંક વિશેષ ફાયદા સહિત સીમ્સ હોસ્પિટલ ખાતે વિશેષ-સવલતો ઉપલબ્ધ થશે.

\*શરતોને આધીન

- ‘સીમ્સ ગ્રીન કાર્ડ’ નિ:શુલ્ક લેવા માટે આ કટિંગ લઇને જ આવવું.
- જે વ્યક્તિના નામે ગ્રીન કાર્ડ જોઇતું હોય તે વ્યક્તિએ સીમ્સ હોસ્પિટલ પર આવી પોતાનું ‘સીમ્સ ગ્રીન કાર્ડ’ મેળવવાનું રહેશે.
- એક કટિંગ પર ફક્ત એક જ કાર્ડ આપવામાં આવશે.
- આ ઓફર ફક્ત જુન ૩૦, ૨૦૧૧ સુધી જ માન્ય રહેશે.

## સીપીઆર શીખીને તમારા પ્રિય વ્યક્તિની જિંદગી બચાવો



(કાર્ડિયોપલ્મોનરી રેસીટેશન / કાર્ડિયાક મસાજ)

યુએસએમાં સલાહ આપવામાં આવે છે કે દરેક ઘરના પુખ્ત વ્યક્તિ એ જાણતા હોવા જોઈએ કે કાર્ડિયાક મસાજ કઈ રીતે અપાય

હૃદયની ગતિ બંધ પડી હોય તેવા વ્યક્તિને આપવામાં આવતી તાત્કાલિક સારવાર પ્રક્રિયા કે જે કોઇપણ સામાન્ય વ્યક્તિ શીખી અને અપનાવી શકે છે.

સીમ્સ હોસ્પિટલમાં દર મહિનાના પહેલા રવિવારે ૨ કલાક માટે સીપીઆર ના ક્લાસનું આયોજન કર્યું છે.  
સમય : સવારે ૧૦ થી ૧૨

વધારે જાણકારી માટે તમારા મોબાઇલમાંથી CPR ટાઇપ કરી તેને નીચેના નંબર પર મોકલો  
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