A Guide to Survive Heart Attack

CIMSTEMI

24 X 7 HELPLINE
+91-70690 00000

A Guide to Survive Heart Attack
CIMS STEMI PROGRAM

Several studies indicate “Over 50 percent of patients suffering from heart attack die just because they are unable to reach the hospital in time”.

Unanswered Questions to Scene
1. Is this a heart attack?
2. Whom to contact?
3. Where will I get the treatment?
4. What is the treatment?
5. How fast to get the treatment?
6. Will I recover?

Scene: Chest Pain

CIMS STEMI PROGRAM AIMS TO

i) Inform and educate all to take specific actions in case of a heart attack.

ii) Give timely life saving care to local STEMI patients as well as from referring hospitals/doctors.

iii) Promote the ideal system of care for patients with ST-segment elevation myocardial infraction (STEMI: Heart Attack) and Out of Hospital Cardiac Arrest.

iv) Reduce mortality and morbidity of heart attack patients and improve their quality of life through continuum of care.

v) Improve medical care for all by adopting world class practices and demonstrate trustee ship in societal healthcare awareness and upliftment.

The Key to Surviving Heart Attack is to get Medical Help as soon as Possible.

Golden Hour = First 60 minutes
Heart Attack Warning Signs

Definition of family history of premature CAD: having first degree male relatives (grandfather, father or brother) who died of CAD before the age of 55 years or first degree female relatives (grandmother, mother or sister) who died of CAD before the age of 65 years.

Silent Heart Attack
Many diabetics and certain patients MAY NOT experience pain if they suffer a heart attack. They may have no symptoms or may have a slight shortness of breath or sweating or severe weakness. Such cases may go untreated and undetected, for people who are likely to ignore such insignificant symptoms.

Who Can Get a Heart Attack?

<table>
<thead>
<tr>
<th>Age in men</th>
<th>45 years or more</th>
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</thead>
<tbody>
<tr>
<td>Age in women</td>
<td>55 years or more or premature menopause</td>
</tr>
<tr>
<td>Family history of Heart disease</td>
<td>CAD (Coronary Artery Disease) at a younger age</td>
</tr>
<tr>
<td>Tobacco (Smoking &amp; Chewing)</td>
<td>The higher the use, the higher is the risk</td>
</tr>
<tr>
<td>High Blood Pressure</td>
<td>The longer the period of untreated HBP, the higher is the risk</td>
</tr>
<tr>
<td>Blood cholesterol levels</td>
<td>Total Cholesterol more than 160 mg/dl, HDL Cholesterol less than 40 mg/dl, LDL Cholesterol more than 100 mg/dl</td>
</tr>
<tr>
<td>Diabetes Mellitus</td>
<td>The longer the period of untreated diabetes, the higher is the risk</td>
</tr>
</tbody>
</table>

Warning Signs in Women
- Sudden onset of weakness, shortness of breath, nausea/vomiting, indigestion, fatigue, body aches, or overall feeling of illness (without chest pain)
- Unusual feeling or mild discomfort in the back, chest, arm, neck, or jaw (without chest pain)
- Sleep disturbance
- Anxiety
Heart Attack and its Types

Heart attacks are usually triggered by the rupture of a fat deposit (plaque) within the blood vessels (coronary artery) that supply oxygen to the heart muscle.

The plaque rupture forms a blood clot, leading to blockage of the artery.

The portion of the heart muscle being supplied by the blocked artery then begins to die that defines a Myocardial Infarction (MI) (Fig 1).

Types of Heart Attacks
According to their severity, Heart Attacks are divided in 2 types.

a) STEMI (ST-Segment Elevation Myocardial Infarction):
This more severe type of heart attack is usually recognized by characteristic changes it produces on the ECG - elevation of ST-segment (Fig 2).
The elevated ST segment indicates that a relatively large amount of heart muscle damage has occurred (because the coronary artery is totally occluded).

b) NSTEMI (Non-ST-Segment Elevation Myocardial Infarction):
This is a milder form of Heart Attack with no ST segment elevation (Fig 3).
What to do in a Heart Attack?

- Stop activity and lie down.
- Take a tablet of soluble aspirin. This helps in ‘thinning’ blood, and prevents blood from clotting.
- Put a nitroglycerine tablet below your tongue.
- Call for help and an ambulance (Dial CIMS 24 x 7 Helpline +91-70690 00000).
- Reaching a fully equipped hospital like CIMS as soon as possible should be the most important goal of the patient and his supporters.

Golden Hour = The First 60 Minutes

- Research has shown, that most of the deaths due to heart attacks occur in the first hour after the onset of chest pain. But, if the portion of the heart muscle deprived of blood is given blood within a short time, it fully recovers without any damage.
- Cardiological intervention during the first crucial hours may save the heart muscle and the patient from dying.
- Also, quality of life afterwards is far better if a heart attack is treated within the first few hours at a hospital equipped with a Cardiac Catheterization Laboratory.

Treatment Within The Golden Hour Saves Life.
Heart attack cases go to the Intensive Coronary Care Unit (ICCU).

The diagnosis is confirmed by the history of symptoms, physical examination, blood tests and electrocardiogram.

Once a heart attack is confirmed, the patient will be kept on continuous ECG monitoring.

Oxygen may or may not be given. Medicines like Aspirin may be given to thin blood. An intravenous nitroglycerin infusion may be started. This increases coronary blood flow.

Blood clot dissolving medicine like Streptokinase, Urokinase or TPA (Tissue Plasminogen Activator) may also be given.

Serial ECG tracings indicate how the heart attack is progressing.

Blood tests like Troponin or CPK Enzyme help confirm the diagnosis of heart attack.

Further treatment is decided after considerable thought and weighing all the options.
How Is the Blockage Treated in STEMI?

There are two general methods for opening a blocked coronary artery:

a) **Thrombolytic therapy**: consists of giving drugs, which act rapidly to dissolve the blood clot that has blocked the artery. The earlier the drug is given, the better the chances of success. The best results are obtained within the first three hours. The major side effect of thrombolytic therapy is bleeding.

b) **Angioplasty with stenting** is more effective in successfully opening a blocked coronary artery during an acute MI. The American practice guidelines recommend treatment (reperfusion) within 90 minutes (Door to Balloon time) for STEMI patients. At CIMS, we achieve this in less than 50 minutes on an average.

c) **Other drugs** include Aspirin, Heparin, Beta blockers, ACE Inhibitors, Statins.

STEMI Patient Example: This fluoroscopy image of a STEMI patient’s heart, shows dark lines that represent blood filled arteries. **Figure-1** shows blockage which prevents the blood from flowing freely in the heart. **Figure-2** The patient has been treated with a stent implant, and the blood is flowing freely through the patient’s arteries within the heart. The most important thing is to ACT quickly.
CIMS STEMI Program Saves Time to Treatment

Patient has Chest Pain

Preferred
< 5 min

Call 24 x 7 Medical Helpline
+91-70690 00000

Diagnosis with 12 lead ECG

ECG Tracing STEMI

Hospital without Angioplasty Facility
Clot buster drugs (Success rate 30-60%)

Inter-Hospital Transfer

Hospital with Angioplasty Facility
Primary Angioplasty (Success rate 95%)
Heart Attack Recovery Questions and Answers

How long will I need to rest after heart attack?
Rest is important after a heart attack, but it's just as important for you to participate in recreation and social events and to begin making physical activity a part of your daily life. Heart patients should rest before they get too tired.

When can I go back to work?
Most heart attack patients go back to work within two weeks to three months depending on the severity of the heart attack. Your doctor will determine when you can go back and if your current job is suitable for you.

Will I feel emotionally disturbed after an Heart Attack?
Heart attack patients will feel a wide range of emotions, typically for about two to six months after the event. Depression is quite normal, along with fear and anger; it may interfere with sleeping, eating, self-esteem or thoughts of suicide. For example, every time you feel a little pain, you may feel afraid it's going to happen again — afraid you are going to die. That's normal and will begin to pass as time goes by. Resentment is common after a heart attack. Try to understand that your family and friends are just as worried as you are. You should talk to your doctor and those close to you about your feelings.

What is the role of my family following a heart attack?
The family needs to be supportive and sensitive to your health needs. They should be counseled and educated for handling emergencies and taught techniques like CPR (cardiopulmonary resuscitation).

Recovery is much faster with a trusted support team of healthcare professionals, family and friends.
Is chest pain normal after a heart attack?
Not everyone will have chest pain, but if you do, it should be a light pain or pressure in your chest that quickly goes away. It will typically happen during or right after physical exertion, intense emotion or eating a heavy meal.

Why is cardiac rehabilitation important?
Rehabilitation programs can help you change your lifestyle habits. These programs are undertaken at CIMS hospital with a rehabilitation team, nurse, dietician and other healthcare professionals.

Why are lifestyle changes important?
Making changes in your lifestyle is one of the most important things to prevent another heart attack, heart disease and stroke. The ABCs of prevention are:

- **Avoid Tobacco** — If you smoke after a heart attack, your chances of having a second one are doubled.
- **Become More Active** — Regular physical activity will ease stress and depression, help control weight and help lower blood pressure and cholesterol levels.
- **Choose Good Nutrition** — Good nutrition will help control your weight, lower blood pressure and cholesterol levels and help your body heal faster.

Even if you’re taking prescription medication, it’s still extremely important to lead a heart-healthy lifestyle.

What about sex after a heart attack?
Most people can continue their same pattern of sexual activity after they recover from a heart attack. Talk to your doctor. You may be prescribed nitroglycerin if you experience chest pain (angina) during or after sex.
Three Facts to Remember About Yourself after an Heart Attack

1. You have coronary artery disease (CAD), which is a chronic, progressive medical condition.
2. Some portion of your heart muscle has been damaged, and remaining normal heart muscle is working overtime to pick up the slack.
3. Because of the scar tissue on the heart muscle, there is higher-than-normal risk for sudden death from heart arrhythmias.

STEMI is a time-critical emergency requiring prompt treatment with current therapies. Patients diagnosed with STEMI who do not receive treatment within optimal time frames, and survive, are likely to experience long-term disability, ongoing hospital visits and decreased quality of life.