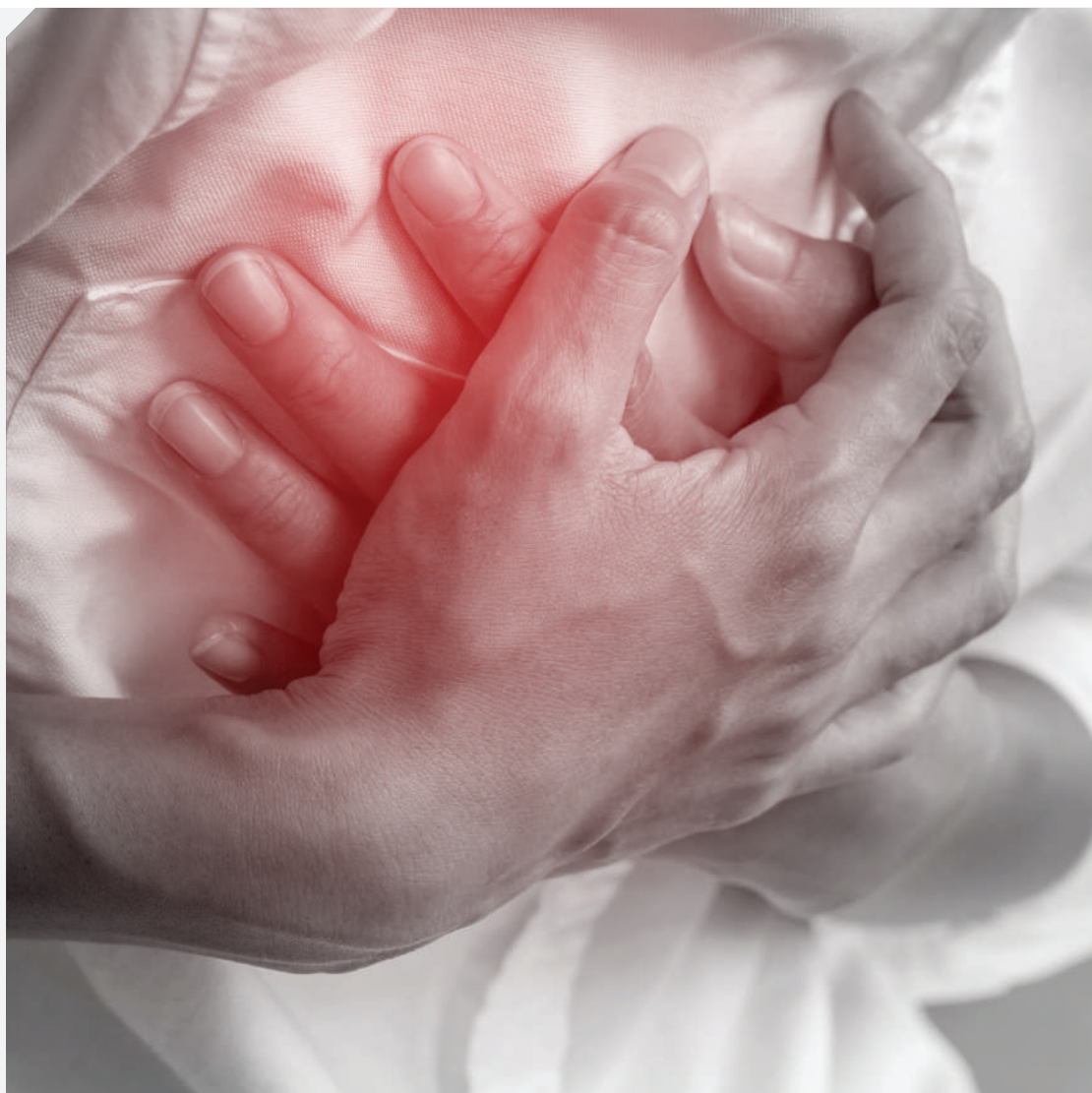


## CARDIOLOGY

# Seize the golden hour

During the sudden onset of a heart attack, timely intervention makes the difference between life and death. Learn what you can do to increase a victim's chance of survival.



**Dr Julian Tan**

*Physician & Interventional Cardiologist*

**Julian Tan Heart Specialist Clinic Pte Ltd**

3 Mount Elizabeth  
#14-09/10 Mount Elizabeth Medical Centre  
Singapore 228510  
Tel: 6235 8733  
www.juliantanheart.com

### What is a heart attack?

The heart's primary function is to ensure that blood is circulated to all parts of the body. It receives its own blood supply from the coronary arteries. A heart attack, or myocardial infarction, occurs when the internal passage of a coronary artery becomes acutely blocked due to a blood clot or arterial calcification. Due to the shortage of oxygen, a section of the heart muscle dies in the process (infarction), leading to a crushing chest pain.

The key difference between a heart attack and cardiac arrest is that the latter occurs when the heart malfunctions and stops beating suddenly, while the former is a result of disruption of blood flow to the heart.

### What are the signs and symptoms?

While chest pain is the most common indicator of an impending heart attack, it is not the only possible sign. A mild or severe

discomfort may arise in the centre or left side of the chest and make its way up to the neck, jaw or left arm. Other physical symptoms that may arise in a heart attack victim are:

- A choking sensation
- Heartburn/indigestion
- Nausea or vomiting
- Shortness of breath
- Sweating
- Palpitations
- Giddiness
- Hot flushes or cold sweats

Women are said to experience fewer characteristic symptoms than men, and around one quarter of all heart attacks are silent and non-symptomatic.

### What can I do?

During a suspected occurrence of a heart attack, the victim should be seated upright,

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For a bystander who witnesses someone having a heart attack, the necessary action to take is to call for an ambulance to rush the person to the nearest hospital for an emergency angioplasty. If the victim has collapsed, is not breathing and does not have a pulse, then CPR, if you know how to perform it, is critical to the person's survival.

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kept calm and brought to the hospital without delay. It is crucial for heart attack victims to receive prompt treatment as chances of survival decrease rapidly with every passing minute. Three minutes after the heart stops beating, brain damage sets in and death is almost certain in the absence of resuscitation within the first 10 minutes. In this light, knowledge of cardiopulmonary resuscitation (CPR) is a valuable asset for caregivers and family members of patients at high risk of experiencing a heart attack.

#### What are the survival rates?

According to cardiologist Dr Julian Tan, the survival rate for heart attack victims who arrive at the hospital conscious is more than 90%. “With the advent of interventional cardiology, heart attack patients nowadays have better chances of survival if they are taken early to the hospital for an emergency angioplasty,” he explains. “In contrast, for out-of-hospital heart attack collapses where the victim is unconscious, the survival rate is less than 20%. Younger patients with fewer risk factors, normal kidney function and with no prior history of heart problems have better chances of surviving a heart attack.”

#### What is the golden hour?

What about the golden hour, which suggests that unblocking a blocked vessel within 60 minutes of a heart attack will increase the chances of recovery without adverse effects on the heart? “The golden hour is not a definite one hour. Instead, the correct notion should be, ‘time is myocardium,’” Dr Tan advises. “This means the faster the ‘plumber’, the interventional cardiologist, unblocks the occluded heart artery, the higher the chances for the myocardium (heart muscle) to recover. The longer a heart attack is left untreated by the interventional cardiologist, the worse the outcome, with greater chances of heart failure and even death in some cases.”

