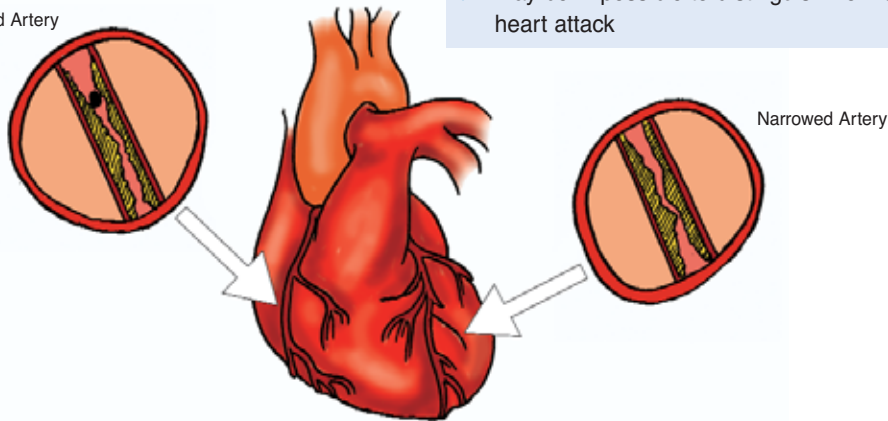


# Cardiac Conditions

The heart is a muscle that works continuously and which has a high oxygen demand. The heart muscle's oxygen supply is carried by blood vessels called the *coronary arteries*. Factors such as lack of exercise, poor diet, smoking and hereditary can cause deposits to build up inside blood vessels, including the coronary arteries. These deposits in the coronary arteries can reduce the blood supply to part of the heart and increase the chance of a complete blockage occurring. Heart disease is a leading cause of death in the developed world.

Blocked Artery



## Angina

Angina occurs when the blood flow through a narrowed coronary artery is insufficient to meet the oxygen requirements of the heart muscle.

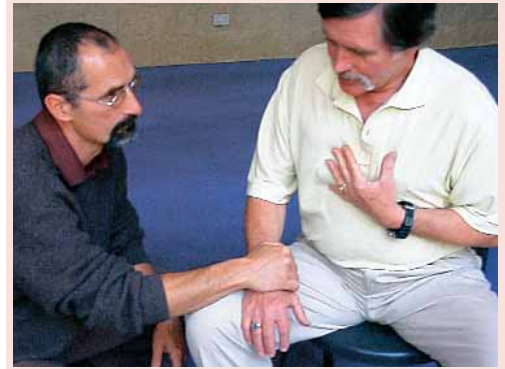
### Recognition

- Development of chest pain or tightness
  - may be gradual or sudden in onset
  - often described as heavy, dull or crushing
  - may radiate to neck, jaw, shoulders or arms
- Pale, cold and sweaty skin
- May develop shortness of breath
- May appear distressed
- May be impossible to distinguish from a heart attack

## Management

- Rest and reassure the victim
- If this is the first episode that the victim has experienced, seek urgent medical assistance
- If the victim has their own medication, assist them to take it
- Provide supplemental oxygen if able
- If no relief from medication & rest, *seek urgent medical assistance*

Common medications used for the treatment of an angina attack include anginine and isordil tablets which are inserted under the tongue or between the gum and the lip; and nitrolingual spray, which is sprayed into the mouth. These medications help to relieve the workload of the heart.



## Heart Attack

A heart attack occurs when a coronary artery has become critically blocked. A clot develops on the lining of the coronary artery, preventing blood flow beyond the clot. Early recognition and activation of the emergency medical services is critical as a heart attack may cause heart rhythm disturbances and lead to sudden cardiac arrest. In this case prompt CPR, defibrillation within minutes, and advanced life support (the Chain of Survival) are essential to maximise the chances of resuscitation.

## Recognition

- Chest pain or tightness
  - may be gradual or sudden onset
  - often described as heavy, dull or crushing
  - may radiate to neck, jaw, shoulders or arms
- Nausea or vomiting
- Shortness of breath
- Pale, cold and sweaty skin
- May appear distressed



## Management

### *If Responsive:*

- Send for urgent *medical assistance*
- Assist the person into a position of comfort
- Rest and reassurance. (Do not allow the person to move around)
- Loosen any tight clothing
- If the victim has their own medication, assist them to take it
- Provide supplementary oxygen if able
- Do not leave the person unattended
- *Be prepared for possible sudden unresponsiveness*

### *If Unresponsive:*

- Conduct a Primary Survey and act accordingly
- Provide supplemental oxygen if able

**If the first aid provider is alone and it appears that the victim has a cardiac arrest, and it is necessary to leave the victim to arrange medical assistance, place the victim in the lateral position and immediately seek urgent medical assistance - then commence resuscitation.**

## Review Questions

1. What vessels deliver the heart's blood supply?
2. List some of the causes of narrowing of the coronary arteries.
3. What is angina?
4. What is a heart attack?
5. List signs and symptoms of a heart attack.
6. List steps in the first aid for heart attack.

