

# Cardio-Pulmonary Resuscitation (CPR)



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**According to the World Health organization, coronary heart disease accounts for approximately 17 million deaths annually throughout the world.**

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## What is CPR?

It is the artificial method of circulating blood and oxygen through a body and attempting to keep the brain alive. CPR does work. When initiated within four minutes, the survival rate is 43 percent. When initiated within four to eight minutes, the survival rate is ten percent.

## Why Learn CPR?

- One in seven people will have the opportunity to use CPR in their lifetime.
- More than 1.2 million heart attacks occur each year in the United States, according to the National Institutes of Health. Approximately 460,000 of these are fatal.
- More than 300,000 die before receiving medical treatment.
- When the brain starts to go four to six minutes without oxygen, brain damage/death begins.
- On the average, it takes South King Fire and Rescue about five minutes to respond to the scene of an incident.
- When CPR is needed, South King Fire and Rescue is the first to initiate it 85 percent of the time.
- In the United States, there are 700,000 strokes a year. Approximately 25% of these are fatal.
- In the United States, there are 6,000 drowning incidents a year and 3,100 incidents of airway obstructions a year.

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## Risk Factors

### Factors that cannot be changed:

- Heredity - cannot change your genetic background
- Sex - women have lower incidents of heart attack
- Race - Blacks have a 45 percent greater chance of high blood pressure

- Age - risks increase with age, however, one in four deaths occur under age 65.

#### **Factors that can be changed:**

- Smoking one pack a day increases heart attack rate two times over a nonsmoker and stroke rate five times over a nonsmoker.
- Hypertension - (high blood pressure) is a major risk factor but with no specific symptoms. One in three adults or 58,000 Americans have high blood pressure controlled by diet, exercise and medications.
- Diet - high fat, high cholesterol foods cause plaque to collect on artery walls constricting blood flow.

#### **Other factors**

- Obesity - obese middle aged men have three times greater risk of heart attack.
  - Lack of exercise - regular aerobics exercise at least three times a week.
  - Stress - A Type A personality, with a sense of urgency, drive and competitiveness, has a greater risk.
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## **Signs and Symptoms of Heart Attack**

1. Chest pain - can be an uncomfortable pressure, tightness or feeling of indigestion, heavy squeezing pain like a weight on the chest, can radiate to left arm and neck
2. Nausea/vomiting
3. Shortness of breath
4. Pale, sweaty cold skin
5. May have no signs or symptoms (silent Myocardial infarction)

#### **Actions for survival**

1. Recognize signals
2. Stop activity, rest, lay down
3. If pain lasts more than two minutes, call for help
4. Patient's having early signs often deny having a heart attack
5. Be prepared to do CPR, if alone do CPR for one minute, then call 9-1-1.

#### **Four reasons to stop CPR**

1. Patient is revived
2. You are relieved by another trained individual
3. Become exhausted
4. Doctor is present and pronounces death

#### **Prevention**

- Avoid smoking
- Health diet (fiber, fruits, vegetables, avoid junk foods)
- Less TV, more exercise
- Know and control blood pressure and cholesterol level

## Facts

- The lungs function is to exchange carbon dioxide for oxygen.
  - Room air is 21 percent oxygen, exhaled air is 16 percent oxygen. All body organs and cells need oxygen to live.
  - During CPR, exhalation is due to normal relaxation of the chest.
  - The heart is the size of your fist with two separate halves (left and right heart). The right heart receives blood from the body and pumps it through the lungs back to the left heart. The left heart pumps fresh oxygenated blood to all body parts.
  - The heart beats 60-100 times a minute, 100,000 times a day and pumps five quarts of blood a minute or 1,800 gallons a day. Ninety percent of the time, CPR will be done on a family member or close friend.
  - People do vomit and ribs do crack sometimes during CPR.
  - Never do blind finger sweeps in the mouth on anyone.
  - The victim should lie on a flat, hard surface.
  - If you are alone, do CPR for one minute, then call 9-1-1.
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## Good Samaritan Act

Health care providers and other persons administering emergency aid are not liable. Any health care provider licensed or certified to practice as such in this state or elsewhere or any other person who renders emergency care at a public gathering or at a scene of an emergency occurrence gratuitously and in good faith, shall not be liable for any civil or other damages as the result of any act or omission by which person rendering the emergency care, or as the result of any act or failure to act to provide or arrange for further medical treatment or care for the injured persons, unless such person, while rendering such care, is guilty of gross negligence.