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How to Survive a Heart Attack

University of South Dakota School of Medicine, Vermillion and South Dakota State University Cooperative Extension Service, Brookings
How to Survive a Heart Attack

Pick two men.
Any two men.
One of them will die of a heart attack (U.S. average).
Heart attacks kill half of all men in America. Cancer plus all other diseases plus accidents and warfare kill the other half. If you are a woman, your chance of dying with a heart attack is somewhat less than your husband's. But as more women start smoking, the male/female statistics come closer together.

Rural South Dakotans are at a disadvantage because speed in getting treatment for a heart attack is so important—and 50,000 of us live 50 miles or more from a doctor; 150,000 live that far from a hospital. Here is one case where speed saves—speed in your reactions as well as in transporting the patient.

Be sure everyone in your family past the fifth grade knows:
1. Heart attack symptoms.
2. The fastest way to get help.
3. Cardio-pulmonary resuscitation.

Try not to be dead on arrival

By "heart attack" we are referring to a heart crisis brought on by conditions known as coronary thrombosis, coronary occlusion, myocardial infarction, coronary artery disease or simply as coronary.

The heart is a muscle supplied by arteries. When an artery becomes blocked the part of the heart muscle served by the artery dies rapidly and the individual has a heart attack. After the attack the rest of the heart muscle continues to pump blood if not too much muscle is lost, but if not enough blood is pumped, shock and death will result.

Of all the victims of a heart attack, 40 to 60% are "dead on arrival" at the hospital. These odds can be improved. The sooner the symptoms are recognized as a heart attack and help is sought, the better the chances. The longest delay is usually the victim's own decision time.*

Most male heart attack victims are brought to the hospital by their wives; the women became concerned. Too often men try to be tough he-men and refuse to admit anything might be wrong with them. This is an argument you can't win. The sooner reality is faced the better the chance of survival. It is better to be smart and alive than dead, dumb, and heroic.

There are three simple precautions that can save a heart attack victim's life, though he or she might live 200 miles from a hospital. They are: know the symptoms, have a plan and know how to administer cardio-pulmonary resuscitation.

Know heart attack symptoms

The symptoms of a heart attack vary by individuals and severity of attack. Most people will experience pain or severe discomfort in the chest under the breastbone or sensation of pressure on the mid-chest. Survivors describe the symptoms as "someone standing on my chest" or "a rope around my chest" or "just a squeezing sensation."

The crushing feeling or pain may move up the left shoulder to the neck and lower jaw. It may be accompanied by nausea, sweating, shortness of breath and fear of death—a most appropriate feeling under the circumstances. It means: get help fast.

Contrary to popular belief, most heart attacks are not brought on by exertion or emotion. Few occur on the job. Most occur at home. A commonly heard statement is "I didn't feel well yesterday so I stayed home from work today. That's why 64% of the sudden deaths from heart attack occur at home and less than 5% at work.

Not all chest pains are heart attacks. Angina pectoris symptoms are similar because the cause of the pain is similar. Angina is pain in the chest caused by a narrowing or constriction of an artery which supplies blood to the heart muscle. Blood supply to the heart is diminished.

Angina is usually brought on by physical exertion (especially in cold weather), unusual stress, or after a heavy meal. The pain usually is not as severe as the pain of a heart attack. The crushing sensation that usually attends a heart attack is felt in angina pectoris as a tightness in the chest and left arm. The pain or tightness usually subsides within 15 minutes.

Angina pectoris is an indicator of a heart problem and should not be ignored. It can eventually lead up to a heart attack, so see your physician at your earliest opportunity.

A sudden stabbing pain is usually muscular pain and not a signal of heart disease.

Have a plan

Symptoms which last longer than 15 minutes mean that the victim has already had an attack. Avoid exertion on his part. Make him comfortable; loosen his clothing and have him lie down. Some people have difficulty breathing while lying down, in which case put him in the most comfortable sitting position.

You must decide whether to call an ambulance or take the person to hospital in your car. Have someone call the doctor and describe the symptoms, and he can give instructions on which course of action to follow. It will probably depend upon the equipment available in the ambulance. Time is the all-important factor. If your local ambulance is equipped with a defibrillator the chances of the person being "alive on arrival" are much better.

If it isn't, your community should consider the early purchase of such equipment.

Fibrillation is a quivering of the heart muscle rather than a steady beat. No blood flows, therefore there is no pulse. The victim loses consciousness and stops breathing because the brain ceases to send nerve impulses to control respiration; the person is clinically dead. When this occurs there is a period of only 4 to 6 minutes before biological death, when the cells of the brain die and the brain has suffered irreversible damage. Defibrillation or artificial, circulation (start blood flow) and artificial respiration (air to the lungs) must begin simultaneously during this 4 to 6 minute period.

The heart attack victim is very fortunate if someone near has been trained in the cardio-pulmonary resuscitation technique (CPR). Any child above the fifth grade can learn to keep an adult alive for hours by CPR. In Seattle, Washington, where the community has a strong program of training citizens in CPR, 30% of the people who "drop dead" on the street live to walk out of the hospital because some passerby knew CPR.

The cardio-pulmonary resuscitation technique (CPR)

CPR is not a technique which can be learned by reading and pictures. It requires instruction by a qualified medical technician and then practice by each member of your family.

If not properly performed, broken ribs and/or sternum (breastbone) can result. It is only used, however, after the heart and breathing have stopped, so this is relatively unimportant; what is important is saving a life.

The chances of an untrained person being able to properly administer the technique are remote, but the technique does not require extensive medical knowledge or unusual muscular capability.

Watch Grandpa

If someone in your family is a known cardiac risk, be alert for symptoms of distress (sweating, nausea, shortness of breath and chest discomfort). Arrange a communication system whereby anyone working in the field, barn or lot can

*From Robert Talley, M.D. Sioux Falls heart specialist and professor and chairman, Department of Internal Medicine, University of South Dakota School of Medicine. Dr. Talley is the source for all the information in this fact sheet not otherwise indicated.
Cardiopulmonary resuscitation in basic life support

A • Airway

B Breathing

C Circulation

Adapted from the Journal of the American Medical Association

signal for help without exertion if heart attack strikes. A citizens band radio in the farm truck or tractor might be a good investment.

Prevention is best
Prevention starts now. You can do much to prevent a heart attack.

1. Stop smoking. Don't start. Encourage your children not to smoke. Lung damage in cigarette smokers is 76%; in non-smokers, 0.3%. Cigarette smokers have a 300% greater chance of dying of a heart attack than non-smokers. As soon as they quit, their chances drop to the non-smoker level.

2. Have your doctor check your blood pressure. High blood pressure kills. It can be controlled by treatment.

3. Watch your diet. Take off excess weight. Cut down on fats and foods containing high amounts of cholesterol. Autopsies of 17-year-old American servicemen in Korea and Vietnam showed cholesterol-containing fatty tissue already building in the heart chambers and blood vessels. The rich American diet starts young children on the way to a heart attack which usually strikes men in their 40's and 50's, women in their 50's and 60's. Japanese fishermen who live on fish and rice don't have heart attacks.

4. Exercise regularly. It may not prevent a heart attack but it can help you survive one.

Community attack on heart attacks
If your community has no CPR training classes for either children or adults, contact the Emergency Medical Division, State Health Department, Pierre 57501; Division of Biochemistry, Physiology and Pharmacology, University of South Dakota, School of Medicine, Vermillion 57069; or American Heart Association, Dakota Affiliate, Box 1287, Jamestown, North Dakota 58401, for help in organizing classes.

If your hospital and/or ambulance lack coronary care equipment, defibrillator and trained personnel, contact the State Health Department, or the School of Medicine at Vermillion.

Things to remember
1. If you do have a heart attack, you are most likely to survive with prompt treatment, so don't delay.

2. Don't fear you'll be a cardiac cripple. The great majority who survive live a normal, healthy, and active life.

3. Don't make a cardiac cripple of any member of your family who suffers a heart attack. Let your doctor be your guide about what and how much they can do.

4. Above all, prevent, plan, know and act.

This material was adapted for fact sheet by Galen Kelsey, SDSU, from an article by Dana Jennings which appeared in the June 1976 issue of "Medicine," published by the USD School of Medicine. It is the first of a series of fact sheets on rural emergency health care being prepared cooperatively by USD and SDSU.

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