

Cardio Pulmonary Resuscitation

The following lesson in Cardiopulmonary Resuscitation is intended solely as a review. We urge, encourage and require all foster families to take a formal class that meets all the appropriate guidelines.

This lesson is not intended as a substitute for formal training. The lesson is simply for review or to try and gain some knowledge regarding CPR.

According to international studies, approximately 50% of all deaths are due to cardiovascular disease. For the most part this means heart attacks. Heart attacks are the greatest killer in the United States; more people die of heart attacks than of gun shots, cancer, AIDS, or car accidents. The same studies indicate that 60-70% of these deaths occur prior to ever reaching the hospital. It's a widely accepted belief that a community trained in recognizing the signs and symptoms of a heart attack, and the steps of performing CPR could help keep many of these people alive.

As we stated earlier, this session is not intended to teach you how to perform CPR and it definitely is not to take the place of formal training. It's intended to facilitate remembering some of the steps and to give the general public an idea of what CPR entails. A refresher!



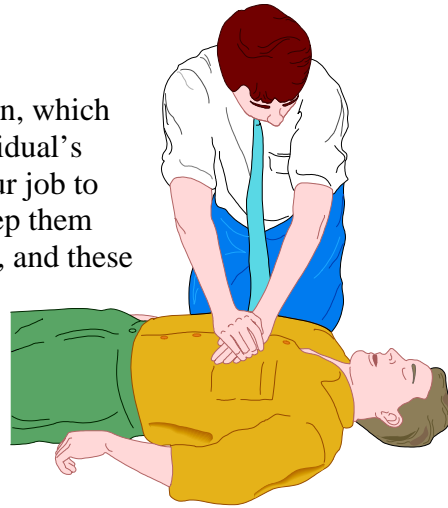
Our Window of Opportunity

There are two stages of death: Clinical death and Biological death. Our primary concern in terms of initiating CPR is the stage called Clinical death. Clinical death occurs during the first 4-6 minutes and is not necessarily permanent. At this stage it is still possible to have someone recover completely from a heart attack with no long term damage to the person.

It's imperative that we provide help to someone whose heart has stopped within those initial 4-6 minutes. If prompt attention is delayed the person could suffer some serious consequences. Most people when confronted with a medical emergency will seek help by calling 911. This is a critical step in caring for an individual, but it may not be enough. Response times will vary depending on your location. Obviously those that live near more urban areas will typically get advance care quicker than those that live in more rural locations. If you wait and don't take action to assist an individual in need, it's possible that by the time help arrives the person may be brain dead.

When do I Perform CPR?

CPR stands for Cardiopulmonary Resuscitation, which means Heart and Lung Resuscitation. When an individual's heart beat and breathing have stopped, it becomes your job to breathe for them and to beat their heart in order to keep them alive. These are the two functions that aren't working, and these are the two functions you're going to attempt to replace. Activate 911 first, but if you want to keep this person alive long enough for the fire department and paramedics to arrive, CPR may be the key to their survival.

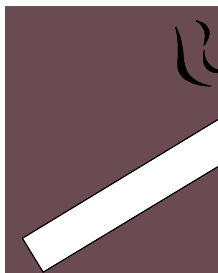


Risk Factors

Cardiovascular diseases which include strokes and heart attacks kill more people than anything else on the planet. Risk Factors are the things we do or don't do that affect our chances of having a heart attack or stroke (blockage of blood to the brain). There are basically two types. These are: non-controllable and controllable risk factors.

Let's start with controllable risk factors:

Smoking



It's no surprise to most people that smoking is bad for your health and for those around you as well. Most people are aware of lung and respiratory diseases that are caused by smoking but what many people aren't aware of is that smoking is also a leading cause of heart attacks as well! Nicotine is highly addictive stuff and is what keeps you coming back for more. It's also a vasodilator which means that it makes your blood vessels tighten up and get smaller thereby decreasing the amount of blood flow to various parts of the body including the heart. The heart needs oxygen to survive!

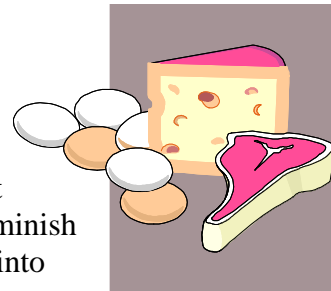
Did you also know that the same stuff that comes out of your cars tailpipe is also found in cigarettes? It's called carbon monoxide. This chemical robs oxygen from the red blood cells in your blood. The red blood cells are like a bus that delivers oxygen. The problem is that the stuff that carries the oxygen is 250 times more attracted to carbon monoxide (the bad stuff) than oxygen (life sustaining stuff). So now we've decreased the amount oxygen within our blood!

Smoking will also make the smoker more susceptible to blood clots. If one of these blood clots gets loose and gets stuck in the brain causing a stroke or block an artery in the heart causing a heart attack, it increases the chances of death.

Think twice before taking that next smoke break!! Especially think about the children that live among us.

Diet

We all know that a diet high in fat can cause a heart attack. Too much fat in the body will simply move to the bloodstream making it a white milky substance that will tend to stick to your arteries thicken the walls and diminish the free flow of blood. Control the amount of fat you put into your body.



Exercise

If any of the previous topics concern you, maybe you would benefit from a little exercise. Exercising will help alleviate stress and will also increase the function of your heart.

The best type of exercise for your heart is aerobic exercise. This type of exercise will increase your heart beat and respirations for a prolonged period of time. It will also make your heart a more efficient 'pump'. A good aerobic program could help eliminate some if not all the dangers associated with controllable risk factors. It can help improve circulation, lower blood pressure and occasionally develop new blood vessels. Be sure to check with your physician before starting a fitness program.

Let's take a quick look at non-controllable risk factors. These include:

Heredity

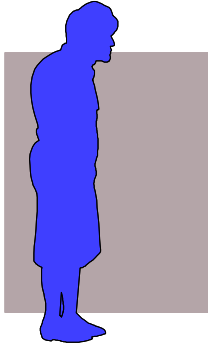
If your family is prone to having heart attacks, then you will be more susceptible to a heart attack.

Gender

Whether you're male or female also plays a part in your chances of having a heart attack. Women are at lower risk of having a heart attack because of the estrogen in their bodies.



Age



We cannot control how old we get. But we can control how healthy we are when we get there. By assuring a healthy life style now we can avoid problems in the future.

Our advice is to reduce the controllable risk factors every day. By stopping or slowing your smoking, by increasing your activity level and reducing the amount of fat and cholesterol in your diet, you may reduce the chances of having a heart attack.

Recognizing a Heart Attack

Recognizing the signs and symptoms of a heart attack and knowing what to do can be the most critical step in saving your life or the life of a loved one. If an artery leading to the heart becomes blocked it will prevent blood from getting to certain parts of the heart. The tissue of the heart will almost instantly start to die. This is called a heart attack. A heart attack does not mean that the heart has stopped. Rather it's a warning; indicating that the heart may stop at any moment. **DO NOT** perform CPR on a person that is still breathing or has an obvious pulse. Call 911 immediately!

Signs and symptoms of a heart attack

- 1) Pain in the chest. This is the most common sign. The pain may move around to other parts of the body. You may begin feeling pain in the jaw or arms. Women especially may feel pain in other parts of the body such as in the belly or back.
- 2) Tightness of the chest. The person may describe a sensation as if someone were sitting on their chest, causing difficulty breathing. Any chest pain or breathing difficulty should be reported to 911.
- 3) Sweating along with cool, pale skin is another sign.
- 4) Nausea or vomiting.
- 5) Denial. Who wants to admit that they're having a heart problem? Usually no one. Denial is another sign usually accompanied by anyone of the signs listed above. Heart attack victims often say that they're having pains due to indigestion, heartburn, asthma, or illness. The longer you argue with the person about the validity of their symptoms the less time they may have to live. Go to the other room if necessary and call 911 from there. Don't wait until the heart stops.

As the heart tissue continues to die, the heart may actually stop beating. This is called Cardiac Arrest. If the person in cardiac arrest doesn't get help immediately they will likely die. Do not hesitate to call 911.

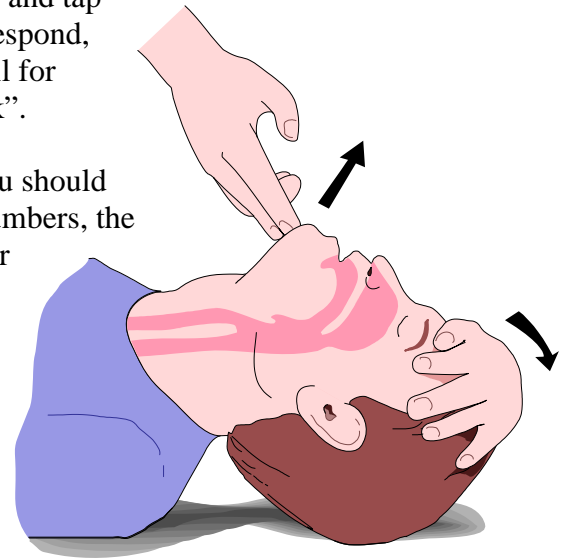
Performing CPR

The first step in determining if there is a true emergency is to find out if the person really requires help. Approach the victim cautiously and tap them as you ask, "Are you O.K.?" If the person does not respond, Activate 911 immediately. Call 911 or have a bystander call for you. Make eye contact and shout "Call 911 and come back".

It may take several minutes for help to arrive, so you should begin the ABC's of CPR. Before we go into details with numbers, the ABC's apply to everyone, whether they're an adult, child or an infant. Lets' go over them first.

Airway

Open the airway. Place one hand over the victim's forehead, and two fingers under the bony part of the chin. Gently tilt the head backward. This will open the airway and lift the tongue off the back of the throat.



Breathing

Lean over the victim's face and look, listen and feel. Look for the chest to rise. Listen for air movement and feel for air movement. If the victim is not breathing, continue tilting the head back, pinch the nostrils and administer 2 effective rescue breaths. You should blow until the victim's chest slowly stops rising.

Circulation

Look, listen and feel for signs of circulation. While attempting to find the victim's pulse, look to see if there's movement, listen for sounds of movements or moaning, and feel for movement and pulse. If the victim has a pulse but is not breathing begin Rescue Breathing for the victim by giving them one breath every 5 seconds. If there's no pulse present begin CPR. You should wait no more than 10 seconds to find a pulse. If you don't know or are just unsure begin CPR.

Let's now look at the details of administering CPR. We've divided the lesson into three separate tables. Each table will give details about administering CPR to an adult, child and to an infant. All of them will begin the same. Remember, the initial ABC's check will be the same for all victims regardless of age.

CPR TABLE

	Ratio	Rate Beats per Minute	Depth
Adult	2breaths/15compressions	100 beats/min	1.5-2 inches
Child (1-8 years)	1breath/5compressions	100 beats/min	1-1.5 inches
Infant	1breath/5compressions	100+beats/min	.5-1 inch

Adult CPR

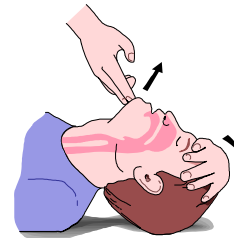
1 Is the victim unconscious?

Tap the victim, and ask "Are you OK?". If there's no response, call 911, or ask someone else to call.



2 Open the victim's airway

Open the victim's airway by tilting his/her chin gently with one hand, while pushing back on his/her forehead with the other hand.



head-tilt/chin-lift maneuver

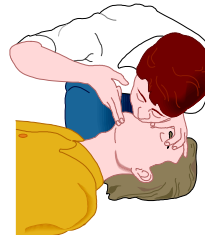
3 Is the victim breathing normally?

Check the victim's breathing. Sometimes, a person in cardiac arrest will make grunting, gasping or snoring sounds. Don't confuse this with normal breathing.



4 Start mouth-to-mouth resuscitation

Pinch the person's nose, take a deep breath, and blow into the victim's mouth. Pause and repeat. Look for signs of circulation and/or pulse. If there's no pulse go on to the next step. If there is a pulse but the victim is not breathing, give the victim 1 breath every 5 seconds for 1 minute and then check for circulation again.



5

Start compressions

Find the xiphoid process at the end of the sternum where the ribs meet and place the heel of one hand two finger widths above this point.

Place your other hand on top and interlace your fingers.

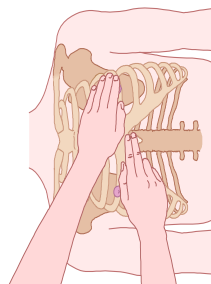
Now, straighten your arms, lock your elbow, and position your shoulders directly over your hands.

Push down on the victim's chest 1.5 to 2 inches for an adult.

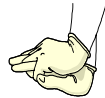
Do four sets of 15 compressions and 2 breaths over a 1-minute period.

Do not stop to check for a pulse during your four sets. After four sets, check for signs of circulation and/or pulse (no more than 10 sec)

If there's no pulse continue CPR. If there's a pulse but no breathing return to step 4.



find the xiphoid process




hand position



Child CPR (1-8years)


1 **Is the victim unconscious?**

Tap the child victim, and ask "Are you OK?". If there's no response, call 911, or ask someone else to call.



2 **Open the victim's airway**


Open the child victim's airway by tilting his/her chin gently with one hand, while pushing back on his/her forehead with the other hand.



head-tilt/chin-lift maneuver


3 **Is the victim breathing normally?**

Check the child victim's breathing. Sometimes, a child in cardiac arrest will make grunting, gasping or snoring sounds. Don't confuse this with normal breathing.



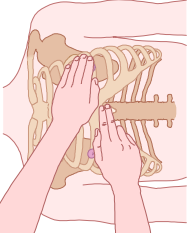
4 **Start mouth-to-mouth resuscitation**

Pinch the child's nose, take a deep breath, and blow into the victim's mouth. Pause and repeat. Look for signs of circulation and/or pulse. If there's no pulse go on to the next step. If there is a pulse but the child victim is not breathing, give the victim 1 breath every 5 seconds for 1 minute and then check for circulation again.

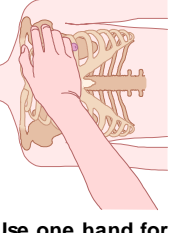


5 **Start compressions**

Find the xiphoid process at the end of the sternum where the ribs meet and place the heel of one hand two finger widths above this point.
Place your other hand on the child's forehead and maintain an open airway.
Now, straighten out your arm, lock your elbow and position your shoulder directly above your hand.
Push down on the victim's chest 1 to 1.5 inches for a child.
Give 5 compressions and 1 breath for about 1 minute.
Do not stop and check for a pulse during that minute of CPR. After the minute stop and check for signs of circulation and/or pulse (no more than 10 seconds)
If there's no pulse, continue CPR. If there's a pulse but no breathing, return to step 4.



find the xiphoid process




Use one hand for a child.

Infant CPR

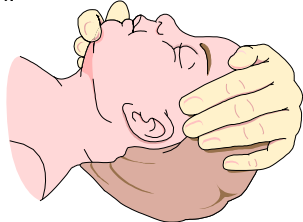
1 Is the victim unconscious?

Tap the infant victim, and attempt to arouse him/her. If there's no response, call 911, or ask someone else to call.



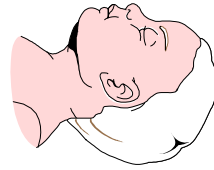
2 Open the victim's airway

Open the infant victim's airway by tilting his/her chin gently with one hand, while pushing back on his/her forehead with the other hand. Don't over extend the neck. Maintain a "sniffing" position.




3 Is the victim breathing normally?

Check the infant victim's breathing. Sometimes, a child in cardiac arrest will make grunting, gasping or snoring sounds. Don't confuse this with normal breathing. If there's no breathing proceed.




4 Start mouth-to-mouth resuscitation

Cover the infants nose and mouth with your own. Blow gently into the baby's mouth. Pause and repeat. Look for signs of circulation and/or pulse. If there's no pulse go on to the next step. If there is a pulse but the infant is not breathing, give the infant 1 breath every 5 seconds for 1 minute and then check for circulation again.



Finding a pulse on an infant

The best way to find an infants pulse is to feel between the bicep and tricep. Right in the middle of the arm. Use two fingers.(No more than 10 seconds)



5 Start compressions

Picture an imaginary line across the baby's nipples and place two fingers slightly below that line in the center of the chest.

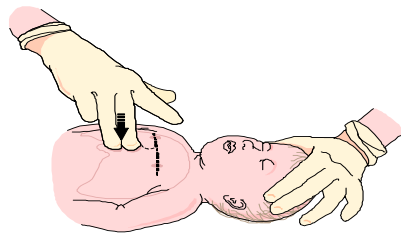
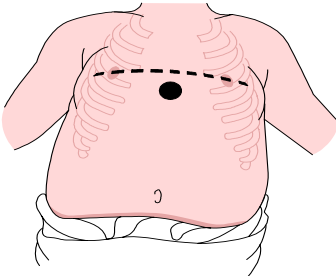
Begin pushing downward at a rate of 100+ beats per minute.

Push down on the victim's chest .5 to 1 inch for an infant.

Do 20 sets of 5 compressions and 1 breath over a 1-minute period.

Do not stop to check for a pulse during your 20 sets. After 20 sets, check for signs of circulation and/or pulse (no more than 10 sec).

If there's no pulse continue CPR. If there's a pulse but no breathing return to step 4.



Use 2 fingers for an infant