



MSU-ES Dawg Tracks

February, 2015



Safety Tips: **Cardiopulmonary Resuscitation**



In the USA, heart disease is the leading cause of death for men and women.

- **600,000 people die of heart disease in the USA every year.**
- **Over 1/2 of these deaths occurred in men in 2009.**
- **Coronary heart disease is the most common type of heart disease, killing approximately 380,000 people each year.**
- **Coronary heart disease alone costs the USA \$108.9 billion dollars each year, which includes health services, medications, and loss productivity.**

We want to discuss the use of **CPR**, which is a life-saving technique useful in many emergencies, including heart attacks or drowning, in which someone's breathing or heart beat has stopped. The **American Heart Association (AHA)** recommends that everyone - untrained bystanders and medical personnel alike - begin CPR with chest compressions.

The **AHA** says that it is better to do something than to do nothing at all - if you're fearful that your knowledge or abilities aren't 100% complete. Remember, the difference between you doing something and doing nothing could be someone's life.

Here's some advice from the American Heart Association:

Untrained – If you're not trained in CPR, then provide hands-only CPR. This means uninterrupted chest compressions of about 100 per/minute until paramedics arrive (described in more detail below). You don't need to try rescue breathing.

Trained and ready to go – If you're well-trained and confident in your ability, begin chest compressions instead of first checking the airway and doing rescue breathing. Start CPR with 30 chest compressions before checking the airway and giving rescue breaths.

Trained, but rusty – If you've previously received CPR training but you're not confident in your abilities, then just do chest compressions at a rate of 100 a minute. (Details described below.)

The descriptions above pertain to adults, children, and infants, but not newborns.

CPR can keep oxygenated blood flowing to the brain and other vital organs until more definitive medical treatment can restore a normal heart rhythm.

When the heart stops, the lack of oxygenated blood can cause brain damage in only a few minutes. A person may die within 8 to 10 minutes. To learn **CPR** properly, you need to enroll in an accredited First Aid/CPR course, which we now have available through our MAFES Risk Mgmt./Loss Control department. Leslie Woolington is now a licensed and certified instructor for First Aid/CPR training. We shall be working with the MAFES stations and other MAFES departments to keep all employees current in their certification and certifying new employees.

Following are the steps in performing **CPR**: **Before starting CPR, check:**

- Is the person conscious or unconscious?
- If the person appears unconscious, tap or shake the victim's shoulder and ask loudly, **"Are you OK?"**
- If the person doesn't respond and another person is present, ask them to call **911 or a local emergency number** and then you can begin **CPR**. If you are alone and have a phone, call **911**- then start **CPR** – unless you think the person is unresponsive (because of drowning as an example), then start CPR for 1 minute, then call 911 or the local emergency number.
- If an AED is immediately available, deliver **ONE** shock, if instructed by the device, then begin **CPR**.

REMEMBER-to spell C-A-B:

The **American Heart Association** uses the acronym **CAB-circulation, airway, and breathing** -to help people remember the order to perform the steps of CPR.

Circulation: Restore the blood circulation with chest compressions -

- ✓ Put the person on their back on a firm surface.
- ✓ Kneel next to the person's neck and shoulders.
- ✓ Place the heel of one hand over the center of the person's chest, between the nipples. Place your other hand on top of the first hand. Keep your elbows straight and position your shoulders directly above your hands.
- ✓ Use your upper body weight (not just your arms) as you push straight down on (compress) the chest at least 2 inches. Push hard at a rate of about 100 compressions a minute.
- ✓ If you haven't been trained in **CPR**, continue chest compressions until there are signs of movement or until emergency medical personnel take over. If you have been trained in **CPR**, go on checking the airway and rescue breathing.

Airway: Clear the airway -

- ✓ If you're trained in **CPR** and have performed 30 chest compressions, open the person's airway using the head-tilt, chin-lift maneuver. Put your palm on the person's forehead and gently tilt his head back. Then with the other hand, gently lift the chin forward to open the airway.
- ✓ Check for normal breathing, taking no more than 5 to 10 seconds. Look for chest motion, listen for normal breath sounds, and feel for the person's breath on your cheek and ear. Gasping isn't considered normal breathing. If the person isn't breathing normally and you are trained in CPR, begin mouth to mouth breathing. If you believe the person is unconscious from a heart attack and you haven't been trained in emergency procedures, skip mouth to mouth rescue breathing and continue chest compressions.

Breathing: Breathing for the person -

Rescue breathing can be mouth-to-mouth breathing or mouth-to-nose breathing if the mouth is seriously injured or can't be opened.

- ✓ With the airway open (using head-tilt, chin-lift maneuver), pinch the nostrils shut for the mouth-to-mouth breathing and cover the person's mouth with yours making a seal.
- ✓ Prepare to give **TWO** rescue breaths. Give the first rescue breath—lasting **ONE** second - and watch to see if the chest rises. If it does rise, give the **2nd** breath. If the chest doesn't rise, repeat the head-tilt, chin-tilt - maneuver and then give the **2nd** breath. Thirty chest compressions followed by **TWO** rescue breaths is considered one cycle.
- ✓ Resume chest compressions to restore circulation.
- ✓ If the person hasn't begun moving after **FIVE** cycles (about 2 minutes) and an automatic external defibrillator (AED) is available, apply it and follow the prompts. Administer **ONE** shock, then resume CPR- starting with chest compressions - or **TWO** more minutes before administering a **2nd** shock. If you're not trained to use an AED, a 911 or other emergency medical operator may be able to guide you through its use. Use pediatric pads, if available, for children 1 through 8. Do not use an AED for babies younger than age 1. If an AED isn't available go to step 5 below.
- ✓ Continue CPR until there are signs of movement or emergency medical personnel take over.

Children and baby CPR methods will be discussed at another time. Adult CPR is more relevant to our situation and needs.