

The background features abstract, overlapping green geometric shapes in various shades, creating a modern and dynamic look. The shapes are primarily triangles and polygons, some with thin white outlines, set against a white background.

# In the News 2015 CPR Updates and Zika

March 2016 EMD CE

Silver Cross EMSS

# 2015 CPR updates

- ▶ Every 5 years the American Heart Association comes out with updated recommendations for changes, based on science and research that is ongoing.
- ▶ The current changes are minor and mainly a reiteration of the 2010 changes with some tweaks.
- ▶ Current CPR certifications are good until they expire and new standards will be taught at the next recert course you take.
- ▶ New materials are projected to be out, later this spring.
- ▶ Keep these changes in mind when you are giving EMD instructions and encourage callers to do the best CPR possible.

# Compressions

- ▶ Just like the 2010 guidelines changes, the focus is again on high quality CPR, namely good compressions
- ▶ The rate of compressions to strive for is now 100 -120 per minute, sets are still 30:2 with compressions now done in about 15-18 seconds
- ▶ Proper depth is also stressed
  - ▶ Adults - at least 2 inches (5 cm) and no more than 2.4 inches (6 cm)
  - ▶ Infants and children - 1/3 of the depth of the chest, 1 ½ - 2 inches (4-5 cm)
- ▶ Complete recoil (letting the chest rise back up to normal position, between compressions) is also important
  
- ▶ **PUSH HARD AND FAST!**

# Breaths

- ▶ No changes
- ▶ Two breaths should still be attempted, between sets of 30 compressions
- ▶ Breaths should be enough to see the chest rise, given over about 1 second
- ▶ If the 1<sup>st</sup> breath does not go in, the airway should be repositioned and a 2<sup>nd</sup> breath attempted, immediately returning back to compressions
- ▶ Interruptions should be minimal

# EMD Instructions

- ▶ There are no immediate plans to change the EMDPRS, since the changes are minor and just a reiteration of what we are already doing
- ▶ Just remember to encourage your callers to push hard and fast and minimize interruptions when doing CPR
- ▶ When the EMDPRS are updated, you will be notified and trainings will be held to review any changes

## CPR PROTOCOL - ADULT/CHILD (Ages 1 and up)

- Does anyone there know CPR? (Trained bystander may still need instructions)
- Get the phone next to the patient if possible
- Listen carefully, I will tell you what to do
- Get the patient flat on their back on the floor if there is no breathing or only gasping
- Move or remove clothing from patient's chest
- Kneel by their side
- Put the heel of your hand on the center of the patient's chest on the breastbone, right between the nipples
- Put your other hand on top of that hand
- Push down firmly only on the heels of your hands about two (2) inches deep
- Do this thirty (30) times, push hard and fast (Count 1, 2, 3, 4 . . . 30)
- Put one hand on the patient's forehead and the other under the chin, lift the chin so the head tilts back. (Put the hand that's closest to the head on the forehead and use your other hand to tilt the head up and back.) Patients with laryngectomy or tracheostomy will require rescue breaths to be delivered mouth to stoma. For these patients, do NOT tilt the head back; keep the head in a straight line.
- Pinch the nose closed

## CPR PROTOCOL - ADULT/CHILD (Ages 1 and up) - Continued

- Completely cover the patient's mouth with your mouth and blow two (2) breaths of air into the lungs - Just like you were blowing up a balloon. If patient has a stoma, breaths must be directed into the stoma by pinching nose, covering mouth and breathing directly into stoma, keeping head in a straight line.
  - Make sure the chest rises
  - Did the chest rise?
    - YES? - Continue, resuming with another 30 chest compressions
    - NO? - Try that again
      - Pinch the nose
      - Lift the chin so the head tilts back
      - Completely cover the patient's mouth with your mouth
        - Breathe two (2) breaths of air into their lungs and watch for chest rising
- Is the patient moving or breathing?
  - YES? - Roll the patient on their side and monitor breathing until the ambulance arrives
  - NO? - Listen carefully. I will tell you what to do next
    - Continue with 30 compressions (Push hard and fast) then
    - Continue with two (2) breaths
    - Continue alternating compressions and breaths until the patient starts breathing on their own or until the ambulance arrives
- I will stay on the phone with you

NOTE: If the patient was choking or their chest was not rising with breaths, check the mouth between compressions and breaths for any objects or vomit. Sweep out any visible objects with your finger if you can. Continue with CPR steps if patient is still not breathing.

## CPR PROTOCOL - INFANT (0-1 YEARS)

- Does anyone there know infant CPR? (Trained bystander may still need instructions)
- Get the phone next to the infant, if possible
- Listen carefully, I will tell you what to do
- Get the infant flat on their back on a hard surface (a table or countertop)
- Move or remove clothing from the baby's chest
- Position yourself by the baby's side
  - Is the baby moving or breathing?
    - YES? - Roll the baby onto their side and monitor their breathing until medical help arrives
    - NO? - Listen carefully and I will tell you what to do
      - Put your first and middle fingers on the center of the baby's chest, right between the nipples
      - Press down 1 ½ inches (at least 1/3 of the chest diameter)
      - Do this thirty (30) times, push hard and fast (Count 1,2,3,4, . . . . 30)
      - Next lift the chin slightly, making sure the neck remains LEVEL
      - Completely cover the baby's nose and mouth with your mouth and blow two (2) small breaths of air into their lungs
        - Make sure the chest rises
        - Did the chest rise?
          - YES? - Continue with 30 compressions again
          - NO? - Slightly re-tilt the baby's head back and completely cover the baby's nose and mouth with your mouth and blow two (2) small breaths of air into their lungs
          - Continue with 30 chest compressions and 2 breaths (alternating)
          - Continue to do this until medical help arrives, I will stay on the line with you

NOTE: If infant was choking or chest was not rising with breaths, check the mouth between compressions and breaths for any objects or vomit. Sweep out any objects you can see in the baby's mouth with your finger. Continue with CPR steps if baby is still not breathing.



## CPR PROTOCOL - CPR - LARYNGECTOMY/TRACHEOSTOMY

- LARYNGECTOMY -** Patients who have this condition have a permanent opening at the base of the neck called a stoma. The stoma connects the trachea (airway) to the outside of the neck. Patients will have no air flow from the mouth and nose. Rescuers will not be able to provide mouth to mouth breathing. Rescuers will need to provide mouth to stoma breathing.
- PARTIAL LARYNGECTOMY -** Different from a laryngectomy because patient can have airflow from the nose and mouth. When providing mouth to stoma breathing, the rescuer will need to cover the patient's nose and mouth with one hand.
- TRACHEOSTOMY -** An artificial opening into the trachea (airway) through the neck. There can be some airflow from the mouth and nose in these patients. When providing mouth to stoma breathing, the rescuer will need to cover the patient's nose and mouth with one hand.

**NOTE:** The method of ventilation in all of these patients is direct mouth to stoma. **INSTRUCT THE CALLER NOT TO TILT THE PATIENT'S HEAD BACK, INSTEAD, KEEP THE HEAD IN A STRAIGHT LINE.**

## CHOKING - ADULT/CHILD (Ages 1 and up) (CONSCIOUS)

- Ask the patient if they are choking
  - 1.YES – Proceed to step 2
  - 2.NO - Go to DIB (Difficulty in Breathing) Protocol
- Is the patient able to talk? Cough? Breathe?
  - 1.YES – Stop and do no more. Place patient in a position of comfort and wait for responders.
  - 2.NO -
    - Stand behind the patient
    - Wrap your arms around the patient's waist (See NOTE below)
    - Make a fist with one hand and place it against the stomach, slightly above the belly button, but below the ribs
    - Grasp your fist with your other hand
    - Press into the stomach with quick, upward thrusts (abdominal thrusts)
    - Repeat the thrusts until the item causing the obstruction is expelled or patient becomes unconscious (If the patient becomes UNCONSCIOUS, go to ADULT/CHILD CPR protocol)

NOTE: If the patient is obese or in the late stages of pregnancy, chest thrusts on the center of chest between the nipples should be substituted for abdominal thrusts.

## CHOKING - INFANT (0-1 YEARS OF AGE) - (CONSCIOUS)

1. Is patient able to cry, cough, or breathe?
  - YES? - Stop and do no more, monitor breathing until ambulance arrives.
  - NO? - Proceed to step 2
2. I am going to give you instructions to help the baby:
  - Turn the infant face down so that it lies along your forearm
  - Rest your forearm on your thigh and support the infant's jaw in your hand.
  - Tilt the infant with the head slightly down
  - Give up to five (5) back slaps with the heel of your free hand right between the infant's shoulder blades
  
  - If the object does not come out after five (5) back slaps, turn the infant onto its back on a hard surface
    - Move or open the clothes from the front of the chest, only if you can do so quickly
  - Give up to five (5) chest thrusts using 2 fingers of your free hand to push on the breastbone in the same place you would push for CPR compressions
  - Alternate between giving five (5) back slaps and five (5) chest thrusts until the object comes out and the infant can breathe, cough or cry, or until the infant stops responding.
    - Is the infant awake and breathing?
      - NO? - Go to INFANT CPR
      - YES? -
        - Open infant's mouth and, if you see anything, try to sweep it out with your finger
        - Do NOT push the object down the infant's throat
        - Roll the infant on its side and monitor breathing until the ambulance crew arrives

# Facts About Zika

According to the CDC, the Zika virus is spread to people primarily through the bite of an infected *Aedes* species mosquito. The most common symptoms of Zika are fever, rash, joint pain and conjunctivitis (red eyes). The illness is usually mild with symptoms lasting for several days to a week after being bitten by an infected mosquito. People usually don't get sick enough to go to the hospital, and they very rarely die of Zika. For this reason, many people might not realize they have been infected. Once a person has been infected, he or she is likely to be protected from future infections.

# Background

Zika virus was first discovered in 1947 and is named after the Zika forest in Uganda. In 1952, the first human cases of Zika were detected and since then, outbreaks of Zika have been reported in tropical Africa, Southeast Asia and the Pacific Islands. Local mosquito-borne transmission of Zika virus have been reported in the Commonwealth of Puerto Rico, the US Virgin Islands, and American Samoa. Because the symptoms of Zika are similar to those of many other diseases, many cases may not have been recognized.

# Concerns in the U.S.

Since the mosquito that carries the virus is not native to the United States, the virus in the U.S. is only travel related, at this time.

There have been 107 cases, to date, reported in the U.S., and 4 in Illinois. All cases in the U.S. have been travel related.

There have been documented cases of transmission from blood transfusions in Brazil and cases of transmission through sexual contact. There is also a concern of mothers passing it to their unborn children.

Zika virus usually remains in the blood of an infected person for about a week but it can be found longer in some people.

About 1 in 5 people infected with Zika virus becomes ill.

# Diagnosis

There is a test available to diagnose Zika. If it is approved to run by the county health department, the cost is about \$1000.00 and many insurance companies are not approving payment due to Zika being a viral illness with no treatment available. They are only paying if the person with symptoms is pregnant and for tracking purposes only.

# Treatment

- ✓ There is no vaccine to prevent or specific medicine to treat Zika.
- ✓ Treatment is mainly supportive, treat the symptoms. Those that are afflicted should:
  - ✓ Get plenty of rest.
  - ✓ Drink fluids to prevent dehydration.
  - ✓ Take an OTC medicine to relieve fever and pain, such as acetaminophen.
  - ✓ Should not take aspirin and other non-steroidal anti-inflammatory drugs.
  - ✓ If taking medicine for another medical condition, they should talk to their healthcare provider before taking additional medication.
- ✓ Someone that has Zika, should prevent mosquito bites for the first week of the illness.
  - ✓ During the first week of infection, Zika virus can be found in the blood and passed from an infected person to a mosquito through mosquito bites. An infected mosquito can then spread the virus to other people.



# Recent Concerns

Evidence suggests an association of Zika virus infection with an increased risk for congenital microcephaly and other abnormalities of the brain and eye. This prompted the World Health Organization to declare the Zika virus outbreak a Public Health Emergency of International Concern on February 1, 2016. Microcephaly is a neurologic condition which causes an infant's head to be significantly smaller and abnormal brain development in the womb. Children with this condition often have developmental issues.

# Prevention

- When traveling to countries where Zika virus or other viruses spread by mosquitoes are found, take the following steps:
- Wear long-sleeved shirts and long pants.
- Stay in places with air conditioning or that use window and door screens to keep mosquitoes outside.
- Sleep under a mosquito bed net if you are overseas or outside and are not able to protect yourself from mosquito bites.
- Use Environmental Protection Agency (EPA)-registered insect repellents. When used as directed, EPA-registered insect repellents are proven safe and effective, even for pregnant and breast-feeding women.
  - Always follow the product label instructions.
  - Reapply insect repellent as directed.
  - Do not spray repellent on the skin under clothing.
  - If you are also using sunscreen, apply sunscreen before applying insect repellent.
- ▶ Recommendations courtesy of the CDC

# Callers with flu-like symptoms

## Key questions

1. What is the patient's complaint? What hurts?
  - ▶ If specific, proceed to proper **protocol**
2. How long has the patient been feeling ill?
3. Has the patient recently been under a doctor's care?
4. Does the patient have any chronic illnesses?

**Add:** Has the patient traveled recently?

## Pre-arrival instructions

1. Place the patient in a position of comfort.
2. Call back if the patient's condition worsens prior to the arrival of medical personnel.

# Sources

American Heart Association 2015 guidelines

<https://eccguidelines.heart.org/index.php/american-heart-association/>

Center for Disease Control

<http://www.cdc.gov/zika/index.html>

Will County 9-1-1 EMDPRS