



## JOYMAC TRAINING Person Centred

# Frequently Asked Questions about Chest-Compression-Only CPR

### How do you know if it's primary cardiac arrest?

- The person is fine one moment and you suddenly see or hear them collapse.
- You then check for responsiveness by “shaking and shouting” (are you alright?) and rub the sternum with your knuckles. This helps to determine whether the person had some other reason for the event or if they are indeed in cardiac arrest. If you have no response you should assume that the person has experienced cardiac arrest.
- Tell someone to **CALL 999** or make the call yourself. You need to get emergency responders on their way as soon as possible.
- Start chest compressions.

Just do your best. If you do nothing, the person is likely to die. Studies have shown that there is almost no chance that you will hurt the person. While it is rare that a rib will be broken during CPR, doctors are able to repair broken ribs, but they cannot repair death.

### Is this the same as a heart attack?

No. In the case of a heart attack, blood flow through one of the coronary arteries becomes blocked. Remember, time is heart muscle. To preserve heart muscle, it's important to understand early heart attack symptoms:

- Chest discomfort. The discomfort lasts for more than a few minutes or it may go away and come back. The discomfort may feel like pressure, squeezing, fullness, or pain.
- Discomfort in other areas of the upper body. This may include pain or discomfort in one or both arms, the back, neck, jaw, or upper stomach.
- Shortness of breath may occur with or before chest discomfort.
- Other symptoms may include breaking out in a cold sweat, nausea, dizziness or light-headedness, “feeling of impending doom,” weakness/fatigue.

If this happens to you or you witness someone who exhibits these signs: **CALL 999.**

### **Should I stop compressions if the victim gasps?**

No! Gasping is a sign of cardiac arrest and often occurs for a while soon after the arrest and will continue when effective compressions are being delivered. It is NOT an indication of recovery. Continue chest compressions until paramedics arrive; gasping is a sign you are doing a good job.

### **Can you damage someone's heart if you perform CPR while it is beating?**

The physicians and scientists at the Sarver Heart Center, have found that the old saying "Never perform CPR on beating heart" is not valid. According to these professionals, the chances that a bystander could harm a person by pressing on their chest are slim to none, even if the heart is working normally. Therefore, they recommend following the "Better safe than sorry" approach and begin chest compressions. It is better to perform a few unnecessary chest compressions for someone with a beating heart, rather than withhold chest compressions and circulation from someone in cardiac arrest.

### **Why don't you check for a pulse?**

We do NOT recommend that lay public rescuers waste time trying to assess for a palpable pulse. During Dr. Kern's tenure as AHA National ACLS Chairman, the AHA came to the same conclusion. Public lay rescuers cannot reliably detect the absence of a pulse in a timely fashion, hence in the 2000 and 2005 AHA CPR Guidelines (Circulation 2005; 112(24): IV-3), this requirement was removed.

Studies have also shown that even if a person manages to locate the correct spot for detecting a pulse, there is a high chance that the pulse they may detect is their own, especially considering heightened stress levels in such situations. Rather than wasting time trying to detect a pulse that may or may not be the victim's own pulse, it is better to get perfusion to the brain by continuous chest compressions.

The correct response to a witnessed cardiac arrest is to:

- Check for responsiveness (shake and shout).
- IF NO RESPONSE, **CALL FOR HELP ("999")** or ask someone else to call.
- Begin uninterrupted forceful continuous chest compressions immediately.
- Call for an AED if one is nearby and available.

### **Don't you need to check the airway first?**

If you see or hear someone suddenly collapse and they did not show any sign of choking, you don't have to worry about checking the airway. Assume it's a sudden cardiac arrest and follow the 3 Cs: Check for responsiveness (shake and shout), **Call 999** and Compress at a

rate of 100 per minute, about 2 inches deep. If by some chance an object is lodged in the throat, effective compressions likely will dislodge the object, similarly to the way the Heimlich Maneuver dislodges objects.

### **Do I have to remove a person's clothes to do Chest-Compression-Only CPR or only when using an AED?**

It is not necessary to remove a patient's clothing in order to do chest-compression-only CPR. However, if an AED is available, turn on the device and follow the instructions, which state to "remove patient's clothing." Defibrillator pads must be placed directly on the patient's skin in order for the electrical current to be conducted.

### **How does the victim get oxygen with Chest-Compression-Only CPR?**

When someone's heart has stopped, blood is no longer circulated through the body and therefore hardly any of the oxygen in the blood is used. The person was breathing normally only seconds ago, so their blood contains enough oxygen to tide them over for several minutes. However, it is crucial to deliver blood and oxygen to the brain by performing chest compressions continuously.

Remember: Your hands become their heart and each chest compression becomes their heart beat. Performing adequate chest compressions also increases the likelihood that the patient will gasp or continue to gasp, allowing the lungs to obtain fresh oxygen.

### **What if the person has an ICD or a pacemaker?**

Fortunately, the answer is short and simple: Don't worry about it. If the person in cardiac arrest has an ICD, the ICD is not functioning properly, since its purpose is to PREVENT cardiac arrest from happening. Pacemakers have a different function, but the answer remains the same, continuous chest compressions should be performed. It is important to recognize that someone in cardiac arrest is either dead or will be dead unless you intervene.

### **What if the person recently underwent open heart surgery, couldn't this crack the chest bone?**

The key message here is that you cannot do more damage. It is important to recognize that someone in cardiac arrest is dying or will soon be dead unless you intervene. Since this person's heart is no longer functioning properly on its own, your compressions are doing the heart's job. Yes, if the person has had recent surgery, you might break the wires in their breast bone. However, the alternative is death.

## **Can I be held liable for performing Chest-Compression Only CPR?**

The Good Samaritan law protects bystanders and their actions when they decide to help someone in an emergency. Chest-Compression-Only CPR and conventional CPR are both covered under the Good Samaritan Law. It does not matter whether you are certified or not.

## **Will chest compressions alone bring the person back or restart the heart?**

It is highly unlikely that chest compressions alone will result in recovery. However, by maintaining uninterrupted chest compressions, you can dramatically increase the chance of survival by maintaining the patient's heart in a state that increase the likelihood that shocks from a defibrillator, administered through bystanders using an Automated External Defibrillator (AED), or administered by paramedics will result in survival.

## **Can this method be used in all arrests?**

For unresponsiveness in young children (age 8 or under), drowning cases, or drug overdoses, follow conventional CPR guidelines (30 chest compressions followed by two mouth-to-mouth ventilations). This is because in infants or children, respiratory arrest is more common than primary cardiac arrest. However, even in these cases, Chest-Compression-Only CPR is better than doing nothing. To learn conventional CPR, a certification class is recommended.

## **When did the CPR guidelines change?**

In October, 2010 the American Heart Association issued new guidelines for the performance of CPR. The major change compared to the prior guidelines is to start with chest compressions rather than ventilations. Thus the new sequence is:

1. Check for unresponsiveness and lack of breathing or abnormal breathing.
2. Activate emergency response **(Call 999 in Ireland)**.
3. Perform 30 chest compressions - push hard and push fast in the center of the chest at a rate of 100 per minute.
4. If you are trained give 2 ventilation and then alternate 30 compressions with 2 ventilations.
5. If you are not trained in ventilations continue with chest compressions.

## **Why did these guidelines change?**

Recent animal and human data suggests that CPR is more likely to succeed if the heart is full of blood, especially just prior to a defibrillatory shock, and the best way to accomplish this is with adequate chest compressions. Since it is very difficult for an untrained persons to perform adequate mouth-to-mouth ventilations it is better that emphasis be placed on continuous chest compressions.

## **When should I do hands-only CPR?**

The American Heart Association recommends hands-only CPR in the following circumstances: If a bystander, not trained in standard CPR, sees an adult suddenly

collapse or come upon a collapsed person then he or she should call 911 and provide chest compressions by pushing hard and fast in the center of the chest. Interruptions should be kept to a minimum until trained rescuers arrive. For bystanders previously trained in standard CPR, hand-only CPR may be performed if the bystander is not confident or is unwilling to perform mouth-to-mouth ventilation.

**What is the correct action where someone needs to be moved to perform CPR, such as a car accident? Does the risk of additional harm (such as spinal injury or bleeding) outweigh the benefits of CPR if nobody qualified is on scene?**

If the person is in need of CPR and must be moved, move the person and begin CPR. Remember if you don't do CPR the person will die. The neck injury is only theoretical if you move the person. Death, if you don't do CPR, is 100% certain. Whenever you move a person with a possible neck injury try to support the head during movement and keep it as straight as possible.

**During the CPR, what is the percentage of heart efficiency as a pump?**

The best estimate of the heart efficiency during CPR is 20-30% of normal.

**I heard that no matter if a person is unconscious that you should perform CPR. Is this true? When should you not perform CPR?**

It is true that sometimes a person may be unconscious and their heart is still beating and they may still be breathing. Such a situation, for example, may occur in someone who has just had a grand mal seizure. If you tried to do CPR on such a person he or she would probably groan and even try to push you away. This would be your clue that CPR was not needed. CPR is intended only for someone whose heart and breathing has stopped. If the victim moves or pushes you away, you should stop CPR.

**What is the ratio of 2-person CPR?**

The ratio of chest compressions to mouth-to-mouth is the same for 2 person CPR as for 1 person CPR, namely 30:2.

**How do I perform CPR on a person who has a tracheal stoma? Do I have to cover their mouth or just breathe directly into the stoma?**

There are two types of stomas, one which communicates to the nose and mouth and one which doesn't. Since you won't know which type you are dealing with, it is best to pinch the victim's nose closed, keep the victim's mouth closed and breathe directly into the stoma opening.

**When you are giving mouth to mouth are you actually breathing oxygen into the victim's lungs or are you trying to stimulate breathing by breathing carbon dioxide into their lungs?**

You are breathing oxygen into the lungs. Your exhaled breath contains 16% oxygen which is close to the 20% contained in the air you breathe in.

**When performing CPR, how do I know if it's working?**

You can tell if the chest rises with ventilation. It is hard to determine if the chest compression results in a pulse. Do the best you can and don't stop. It's better to perform CPR imperfectly than not at all.

**If a person has had bypass surgery, and a situation occurs that they require CPR, are there any special considerations that need to be made?**

No, CPR should be done in the regular fashion.

**Is it easier to break an overweight person's ribs or a skinnier person's ribs when performing CPR?**

The weight of the victim has little to do with the chances of breaking a rib, instead the age of the victim seems to determine the fragility of the bones.

**Can I kill someone if I do CPR incorrectly?**

No. Remember the person in cardiac arrest is already clinically dead. CPR can only help. Even if it's not done "letter perfect" it will probably provide some benefit to the victim.

**What if I crack a rib when I do CPR?**

Frequently ribs are broken with the pressure CPR places on the sternum. Some studies quote up to 30% of cardiac arrest victims have broken ribs as a result of CPR. This happens more frequently the older the victim since the cartilage is less compliant and the bones more easily crackable. But remember, it's better to have a cracked rib than be dead.

**Will CPR always save a life?**

No, in fact, most instances of CPR for cardiac arrest are unsuccessful.

**What is the recovery position?**

Assuming the person has a pulse and is breathing, the recovery position means placing the person on his or her side. This allows for the person not to choke on saliva and helps keep the airway open. The downside arm may be raised to support the head.

**What should you do for a person who has been accidentally shocked by electricity?**

A person with electric shock (assuming the shock doesn't severely damage the body) often dies from the heart going into ventricular fibrillation. Such a person needs CPR and it should be performed in the regular fashion. If CPR begins quickly and if a defibrillator arrives quickly this person has an excellent chance of survival.

**I want to know what the current teachings are on helping a choking victim. I have heard conflicting information on back blows for an adult. Is it still recommended, or discouraged?**

The first action to take in adults and children is the Heimlich Manoeuvre. Back blows are the first thing to do only in infants who are conscious. In doing the back blows the infant should be in a face down position with the head lower than the body.

**What if the victim vomits?**

Vomit is obviously unpleasant. If it happens (and it may in one out of 20 cardiac arrests) merely turn the head to the side and wipe out the vomit as best you can with your finger.

**If someone has an asthma attack and collapses, what should a person do? Will CPR help?**

If someone collapses from an asthma attack, it is because he or she is not getting enough oxygen. This is because all the lung's small airways have narrowed and are not allowing enough air to reach the air sacs. Mouth to mouth respiration may help a little. The real need is to get this person to an emergency department so that the patient can receive medications and emergency endotracheal intubation (a tube in the main airway).

**What are some of the causes of CPR being used for in infants and children?**

Usually CPR in infants and children is performed for respiratory arrest such as severe asthma. Ventricular fibrillation is rare in children but very common in older adults.

**In regards to administering the Heimlich Manoeuvre to a victim while they are lying down, should the head be facing up, as when administering CPR (in order to clear the airway), or to the side?**

The victim's head should be facing up with the victim on his/her back. Since the airway is blocked you shouldn't spend much time positioning the head. The Heimlich Manoeuvre is the most important thing to do and should unblock the airway.

**What if the victim is wearing dentures?**

Keep them in place if possible as they will allow for a better seal of your mouth on his/hers.

**Can I get AIDS from doing CPR?**

No. There has never been a documented case of AIDS transmitted by CPR.

**Can I get sued if I perform CPR?**

You theoretically could but there has never been a successful suit brought against someone performing CPR.

**Does the Good Samaritan law protect me?**

Yes, if you give assistance, including CPR, for a medical emergency Good Samaritan laws cover you.

**What are agonal respirations?**

When the heart stops beating in cardiac arrest the breathing center in the brain is still alive for a couple of minutes and will cause the victim to take a few abnormal breaths. These abnormal breaths associated in dying are called agonal respirations. They may appear like snoring, gasping, or snorting and will disappear in a couple of minutes. Don't let abnormal breathing stop you from starting CPR.

**In cardiopulmonary arrest occurring outside of a hospital what are statistics regarding successful uncomplicated recovery? Also in this situation how many patients are successfully resuscitated but are then in a vegetative state?**

The statistics vary from locale to locale. In New York City or Chicago the survival rate (discharge alive from the hospital) is 2 or 3%. In Seattle the survival rate is 20% overall and 45% for ventricular fibrillation. Less than 5% of those discharged have severe

neurologic damage. Over 60% return to their prior level of mental status. Persistent vegetative states are very unusual.

### **Can CPR be performed on dogs?**

CPR can be performed on dogs. To give respiration you will need to keep the dog's mouth and lips closed and breathe through the nose. Cover the dog's nose completely with your mouth to prevent air from leaking out. You should see the chest rise if you are doing it properly. To give chest compressions you might need to press side to side instead of straight down on the chest. This is especially true for funnel chested dogs. The rates of respiration to chest compression are the same as for humans. In general, most instances of CPR for dogs will involve accidents of smoke inhalation or drowning. Respirations may indeed prove lifesaving especially if the dog has a heartbeat. Once the dog's heart stops beating it is unlikely that CPR will be of benefit.

### **If a person moves when I do CPR should I stop?**

Yes, if a person moves his arms or legs they don't need CPR.

### **When should I stop CPR?**

When help arrives to take over, or the victim starts to move.

### **What chance does the person (on whom I perform CPR) have of surviving?**

If you do CPR on a person whose heart has stopped beating there is a 30% chance the person will live if a defibrillator can arrive within several minutes to shock the heart.

### **What should I do if I'm alone and I do not know CPR?**

If you are alone and don't know how to do CPR **CALL 999** and ask the emergency dispatcher to give you instructions over the phone.

### **If a pregnant woman chokes should I do the Heimlich Manoeuvre or can it harm the baby?**

You should do the chest thrust in a very pregnant woman. This is like the Heimlich except you grab around the middle chest instead of the upper abdomen.

### **What is the reason calling 999 occurs after 2 minutes of CPR for infants and children whereas for adults, the call is made immediately?**

It is because airway problems are the main cause of cardiac arrest in infants and trying to correct that problem takes precedent over calling 911.

### **If successful CPR is dependent on a defibrillator arriving, are there any portable defibrillators available?**

Portable defibrillators which operate automatically (they are called automated external defibrillators - AEDs) are available and may be purchased without a prescription. They cost around €1500. The training is very simple and takes only minutes. You should talk to your doctor as to whether one of these might be indicated in your situation.

**In a trekking guidebook I own it states that if there has been a trauma fall and the victim has no pulse, then CPR is futile, is this true?**

Doing CPR in the wilderness is futile. I would, however, make an attempt to open the airway and perhaps give several ventilations. You may be dealing with respiratory arrest and a little mouth to mouth could be lifesaving.

**Is it true that if a victim "regains" a pulse after doing CPR he/she has probably had a pulse all along?**

You are partially correct. The most common cause of cardiac arrest is VF and this cannot be converted with CPR alone. Electricity is required. However there are some instances when the heart is going very slowly and CPR can oxygenate the system enough to get the heart going again.