CPR BASICS

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Imagine you're walking through a mall when someone suddenly collapses. Would you know what to do? In an emergency like this, knowing CPR could mean the difference between life and death.[1]

What Is CPR?

CPR is an emergency procedure used when a person's heart suddenly stops beating and they stop breathing, a condition known as cardiac arrest.1 CPR helps keep oxygen-rich blood flowing to the brain and other vital organs until professional medical help arrives.1 It is a key component of Basic Life Support (BLS), which also includes using an automated external defibrillator (AED) and relieving choking.[2,3] In the United States, more than 350,000 people experience out of hospital cardiac arrest each year, and survival increases significantly when CPR is started immediately.[3]

When Should I Perform CPR?

CPR should be performed when a person is unresponsive without a pulse, not breathing, and/or is gasping for air.

Signs that someone may be in cardiac arrest include:[4]

- Sudden loss of responsiveness
- No reaction when tapped on the shoulders or spoken to
- No chest rise (indicative of lack of breathing)

Cardiac arrest can occur due to many different conditions. In children, adolescents, and adults younger than 35 years, sudden cardiac arrest is more commonly caused by electrical or structural problems of the heart.[5] In adults older than 35 years, the most common cause is a heart attack from underlying coronary artery disease (CAD).[6,7]

Common underlying risk factors for coronary artery disease include:[7]

- High blood pressure
- Diabetes
- Smoking
- Obesity

Sudden cardiac arrest can also result from emergencies such as:

- Drug overdose
- Drowning
- Suffocation
- Severe trauma
- Electric shock

Why Does CPR Matter?

When the heart suddenly stops beating effectively, the brain and organs begin to lose oxygen within minutes.[10] Without treatment, permanent brain injury or death can happen quickly. Every minute without CPR and/or defibrillation decreases the chance of survival. Immediate bystander CPR can double or even triple a person's chance of survival.[4] This means ordinary people - not just health care professionals - can become lifesavers.

What Is a CPR Action Plan?

A CPR Action Plan is a predetermined emergency response plan that outlines what people should do if someone experiences a cardiac arrest. Many schools, workplaces, and community organizations have Action Plans in place that designate roles, such as calling 911, beginning CPR, retrieving an AED, and guiding

emergency responders to the person.8 Knowing the location of nearby AEDs is an important part of the plan. They are often in clearly marked wall cabinets near entrances, hallways, or high-traffic areas. Creating and practicing an action plan before an emergency occurs can help people respond confidently and efficiently when every second counts.

How Do I Perform CPR?

If you see someone collapse, it is important to act quickly and follow a simple action plan:[8,9]

1. **Ensure the scene is safe.**
2. **Check responsiveness**. Tap the person's shoulders and shout "Are you okay?"
3. **Call 911** or direct someone nearby to call and **retrieve an AED.**
4. **Check for normal breathing.** If the person is not breathing or is only gasping, begin CPR immediately. If you are not trained in CPR, perform hands-only CPR (continuous chest compressions without rescue breaths) until an AED or emergency responders arrive.[10]
5. **Place your hands in the center of the chest and push hard and fast** at a rate of 100–120 compressions per minute, allowing the chest to fully recoil between compressions.
6. **Use an AED** as soon as it is available and follow the voice prompts.
7. **Continue CPR** until emergency responders arrive, the person begins breathing normally, or you are physically unable to continue.

The American Heart Association's *Chain of Survival* outlines the critical steps that give someone the best chance of surviving cardiac arrest.10 Learn more about the Chain of Survival here: https://cpr.heart.org/en/resources/cpr-facts-and-stats/chain-of-survival.

Pediatric CPR: What Is Different for Children and Infants?

Children and infants require a few modifications to CPR because cardiac arrest is more often triggered by breathing problems or lack of oxygen than it is in adults. This may occur because of drowning, choking, or respiratory illness.[11]

If you need to perform CPR on a child or infant:[11]

- Follow the same first steps as for adults: ensure the scene is safe, check for responsiveness, call 911, and retrieve an AED.
- If the child or infant is not breathing normally or is only gasping, begin CPR.
- Compress the chest about one-third of its depth at a rate of 100–120 compressions per minute.
- If you are trained in CPR, provide rescue breaths along with chest compressions, as oxygen is especially important in pediatric cardiac arrest.
- Use an AED as soon as one is available. If pediatric pads are available, use them. If not, use adult pads as directed by the AED.
- Continue CPR until emergency responders arrive, the child or infant begins breathing normally, or you are physically unable to continue.

The most important message is simple: doing something is better than doing nothing. Call 911, start CPR, and use an AED as quickly as possible.

Do I Need to Be Certified to Perform CPR? Where Do I Get Certified?

You do not need certification to perform hands-only CPR during an emergency.[9,11] However, certification provides hands-on practice, increases confidence, and teaches additional skills for adults, children, and infants. It also provides more complete skills for adults, children, and infants, which can include giving rescue breaths.[2]

CPR and BLS certifications are widely available through organizations such as the American Heart Association and American Red Cross.[2,3] Many hospitals, colleges, fire departments, and gyms also offer courses.

There are different course formats:

- In-person classes with hands-on practice
- Blended learning (online lessons plus in-person skills testing)
- Online-only CPR awareness courses for knowledge only (does not meet certification requirements for most healthcare or workplace positions).

Most CPR classes can be completed in a few hours. BLS courses often take about 4-6 hours depending on the format. Certifications are commonly valid for two years.[3]

- American Heart Association Heartsaver CPR & First Aid Courses
- American Red Cross CPR Training

Learning CPR is one of the simplest ways to prepare for an emergency. Just a few hours of training can provide the knowledge and confidence to help save a life. Whether you are at home, at school, at work, or in your community, CPR skills can make a critical difference when every second counts.

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