

# Immediate CPR from Bystanders Can Improve Cardiac Arrest Survival

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## STORY AT-A-GLANCE

- › Survival rates for cardiac arrest victims go down by 10% with each minute of delay
- › Only 42% of bystanders perform cardiopulmonary resuscitation (CPR) in public settings despite over 350,000 Americans experiencing out-of-hospital cardiac arrests (OHCA) annually
- › Hands-only CPR (100 to 120 compressions per minute, 2 inches deep) is recommended for untrained bystanders, while health care workers should use the 30-to-2 compression-to-breath ratio
- › Immediate actions during cardiac arrest include calling emergency services, locating an automated external defibrillator if available, and beginning CPR promptly without hesitation
- › Heart attacks (arterial blockages affecting blood flow) differ from cardiac arrest (electrical problem causing arrhythmia), though heart attacks sometimes lead to cardiac arrest

According to a report from The Washington Post, more than 350,000 people in the United States experience a cardiac arrest outside of a hospital setting. And in nine out of 10 cases, the person experiencing cardiac arrest dies because help doesn't arrive quickly enough.<sup>1</sup>

One way bystanders can help increase the chances of survival is administering cardiopulmonary resuscitation (CPR). However, help isn't offered enough. Based on data gathered by the report, only 42% of bystanders in a public setting performed CPR.<sup>2</sup> If you don't know how to do CPR, I have included a video below, and I strongly encourage you to watch it. The information there will mean the difference between life and death.

## **Bystander CPR Training Makes a Life-Saving Difference**

In a study published in the American Heart Association's (AHA) journal *Circulation*, researchers investigated the relationship between the level of public training in CPR and the survival outcomes for individuals experiencing out-of-hospital cardiac arrest (OHCA).<sup>3</sup>

OHCA refers to instances where people experience cardiac arrest while out in public. The study analyzed data from numerous communities, comparing locations with widespread CPR training against those with limited or no such training programs.

- **The benefits of CPR training are clear** — According to the researchers, survival rates for cardiac arrest victims dramatically improve when bystanders intervene immediately by performing CPR, underscoring the importance of CPR education in the community.

In communities where extensive CPR training programs existed, survival rates rose notably compared to groups lacking such training.

- **Immediate CPR improves recovery** — The study highlighted better outcomes not only in survival, but also in the quality of life after resuscitation. Victims who received immediate CPR from trained bystanders experienced fewer severe neurological issues and had a far greater likelihood of returning to normal life after recovery.
- **Timing is crucial for survival** — According to the study, performing CPR within the first few minutes of cardiac arrest greatly influenced survival outcomes. For each minute that CPR is delayed, the chances of survival dropped by approximately 10%.

Immediate CPR significantly slowed this decline, emphasizing the importance of not only knowing CPR but being willing and confident enough to administer it promptly.

- **Education is important to give bystanders the knowledge to help** – According to the researchers, identifying the symptoms of cardiac arrest is important to increasing survival rates:

*“In a study of lay responders who witnessed an arrest, nearly half did not identify that the individual was in cardiac arrest. Barriers to recognition include the inability to determine the bluish color of the patient, inability to distinguish potential seizure activity, and difficulty assessing what is abnormal breathing.”<sup>4</sup>*

- **Familiarization is better even if there’s no formal certification** – While a certificate will give you assurance, the researchers emphasize that this isn’t required:

*“Training is traditionally delivered by a certified instructor (who may or may not have ever performed CPR) in a classroom setting for many hours and at a cost to students ...*

*More recently, however, multiple studies have demonstrated that video or image-based self-instruction can be equal to instructor-led courses and that instruction by peers is as effective as instruction by trained health care professionals, which may improve public interest in training.”<sup>5</sup>*

## **Other Ways to Help Save Lives Besides CPR**

In the book “Strategies to Improve Cardiac Arrest Survival: A Time to Act,” the authors emphasized the importance of immediate defibrillation – the process of restoring normal heart rhythm using an AED – in victims of sudden cardiac arrest (SCA) in an OHCA setting. Other recommendations, which require drastic systemic changes, were also outlined by the authors.<sup>6</sup>

- **Automated external defibrillators (AEDs) help save lives** – These are small, portable devices that deliver electric shocks to the heart, “with the intent of restoring normal cardiac electrical activity and contractions.” In the featured Circulation study,<sup>7</sup> AEDs were also noted to boost the effectiveness of manual CPR. Communities with widespread access to and training in both CPR and AED use had the highest survival rates overall.
- **However, don’t rely on AEDs alone** – While having AEDs in public spaces ensure help is always nearby right away, it is by no means the only way to save a life. According to the authors, it is not effective for all types of cardiac arrest rhythms, nor will it help with global ischemia (lack of blood flow to the brain). Therefore, it’s important to be familiar with CPR, as well as call emergency services right away to have all your bases covered.
- **Gathering data is important** – Cardiac arrest is a national responsibility that must be shouldered by authorities, and the data they collect will help save lives. According to the authors:

*“Reliable and accurate data are needed to empower states, local health departments, EMS systems, health care systems, and researchers to develop metrics, identify benchmarks, revise education and training materials, and implement best practices.”<sup>8</sup>*

- **Engaging the community helps people respond better** – As noted by the featured study, many people are apprehensive about performing CPR due to various reasons, such as **fear** of causing harm. In other cases, bystanders don’t personally know the person suffering from cardiac arrest, making them reluctant to help.

However, the book says that the nature of cardiac arrest implies a sense of “societal obligation of bystanders to be prepared and willing to deliver basic life support before the arrival of professional emergency responders.” Now, one way to do that is by fostering a positive culture by promoting better access to AED and CPR training. Awareness campaigns will also increase the number of bystanders willing to help.

- **Leadership sets the quality of care** – Strong leaders (both private and state) make a big impact in helping people experiencing cardiac arrest:

*“Communities that have demonstrated higher cardiac arrest survival rates and favorable neurologic outcomes typically have strong civic, EMS, and health care system leaders, who establish accountability for these outcomes to their communities through increased public awareness efforts, widespread training in CPR and AED use, and sustained investment in outcome measurement, data reporting, and self-assessment.”<sup>9</sup>*

## How to Perform CPR

If you see someone having a cardiac arrest, act quickly; It’s important to start CPR right away to help save their life. For bystanders, the AHA recommends performing hands-only CPR (also known as compression-only CPR). This method focuses on chest compressions alone. The video above provides an easy guide, but you can also follow these steps:<sup>10</sup>

1. Put the heel of one hand in the center of the victim’s chest, and your other hand on top of the first.
  2. Perform chest compressions at a rate of 100 to 120 per minute. Here’s a tip to keep maintain a steady pace – CPR is roughly the same speed as the Bee Gees song “Stayin’ Alive,” which has 100 beats per minute.
  3. Press down hard and fast at the center of the chest to compress the chest about 2 inches deep for an average adult.
  4. Do not stop; minimize any interruptions to keep blood flow continuous.
  5. Avoid leaning on the chest between compressions to allow it to fully recoil.
- **Have someone else call emergency responders** – As you perform CPR, have another person dial 911 and follow the instructions given by the emergency

dispatcher. Don't wait or hesitate – time is crucial during a cardiac emergency. If there's no other person around, call 911 yourself and put them on speakerphone so you can hear their instructions while you're doing CPR.

- **Ask someone to look for an AED** – Ask other bystanders to look for an AED. These devices are required by law to be stored in public spaces, such as schools, gyms, casinos, and golf courses (depending on state regulations).
- **CPR for health care workers is different** – If you're already received training for CPR or work in a hospital setting, the AHA recommends traditional CPR with the 30-to-2 ratio, meaning 30 chest compressions followed by two rescue breaths, repeating this sequence.
- **Don't be afraid to help a person in need** – It's natural for many people to hesitate out of fear and shock, especially if you've never encountered cardiac arrest out in public. But remember that at this point, the person is clinically dead and can't get any worse.

Hands-only CPR from bystanders and the timely arrival of an AED will significantly improve the chances of survival and eventual recovery. Additionally, all states have Good Samaritan laws in place,<sup>11</sup> offering legal protection for those who help in good faith.

## **Cardiac Arrest and Heart Attack – What's the Difference?**

While cardiac arrest and heart attack seem similar, they are two distinct conditions. But, there is an overlap.

- **Heart attack means there's a blockage** – This occurs when an artery eventually stops delivering blood to the heart, whether from a partial or complete blockage. Then, the affected cardiac muscle begins to die because it doesn't get oxygen.<sup>12</sup>

However, the only time to give CPR during a heart attack is when the person is unconscious.<sup>13</sup> If the person experiencing a heart attack is still conscious, help them sit down, rest and remain calm until paramedics arrive.

- **Aspirin can help** – It thins the blood, prevents blood clots, and improves blood flow to the heart. However, only give it if you're sure that the patient is not allergic to this medication or any other drug that would make taking it dangerous.
- **Cardiac arrest is an electrical pulse problem** – This is a problem with electricity in the heart, causing arrhythmia that leads to loss of blood into the brain, lungs, and other vital organs.<sup>14</sup> That being said, a heart attack doesn't always lead to cardiac arrest. However, when cardiac arrest does occur, the AHA says that a heart attack is a common cause.<sup>15</sup>

## **Other Strategies to Remember in Case Someone Has a Heart Attack**

In addition to knowing CPR, there are two other strategies that will help increase chances of survival, especially for someone who just had a heart attack – methylene blue and melatonin.

- **Methylene blue helps protect your heart** – This chemical, a precursor to hydroxychloroquine and chloroquine, helps mitigate reperfusion injury in heart attack survivors. This type of damage occurs to tissues and organs when blood flow is restored after being deprived of oxygen for some time.
- **Dosing recommendations for methylene blue** – Proper administration of methylene blue is important to avoid overdose. I recommend using a microspoon for precise measurement using a pharmaceutical-grade product, which is 99%+ pure. Measure the dose with a microspoon – even **a dose below 50 milligrams** may help save a life.

For long-term, nonacute treatments like dementia prevention, post-stroke care, cognitive enhancement and overall health optimization, follow a dose 0.5 to 1 mg per kilogram of body weight.

- **Melatonin isn't just a sleep aid** – I recommend keeping 10 milligrams of melatonin in sublingual form. This hormone helps reduce reperfusion injury when administered after a heart attack. Likewise, methylene blue also needs to be given right away – within minutes of a heart attack to meet the critical time threshold.<sup>16</sup>
- **Don't forget to take care of your heart** – Methylene blue and melatonin will only get you so far when it comes to saving your life. What's more important is addressing the root cause – making sure your heart is in top shape.

To start, I recommend you minimize your intake of vegetable oils high in **linoleic acid** (LA), as excess intake drives chronic disease, including obesity, diabetes, and inflammation – a prime contributor to heart disease. In this regard, I also recommend you optimize your gut health, as an imbalanced microbiome also contributes to inflammation.

For more in-depth tips on this topic, read [“What Is the Difference Between a Heart Attack and Cardiac Arrest?”](#)

## **Frequently Asked Questions (FAQs) About the Importance of CPR for Cardiac Arrest**

**Q: Why is CPR training important?**

**A:** CPR training significantly improves survival chances for people experiencing cardiac arrest outside hospitals. Communities with widespread CPR education see better survival rates, and victims have better neurological outcomes and quality of life after recovery.

**Q: How quickly should CPR be administered after cardiac arrest?**

**A:** Immediate CPR is crucial, ideally within minutes. Survival odds decrease by about 10% every minute CPR is delayed. Quick action dramatically increases the victim's chances of survival and eventual recovery.

**Q: Should bystanders use CPR alone or combine it with an AED?**

**A:** Combining CPR with AEDs provides the highest survival rates. AEDs restore normal heart rhythm and significantly boost CPR effectiveness. Dual training in CPR and AED usage is strongly recommended.

**Q: Do you need formal CPR training to help during an emergency?**

**A:** No formal certification is required to help. Even basic self-taught or video-based CPR instruction effectively empowers bystanders to save lives. Hands-only CPR (chest compressions alone) is recommended for the public.

**Q: What's the difference between heart attack and cardiac arrest?**

**A:** A heart attack is caused by a blockage stopping blood flow to the heart, whereas cardiac arrest results from an electrical problem disrupting the heart's rhythm. A heart attack may lead to cardiac arrest, but they are distinct conditions requiring different immediate responses.

## Sources and References

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- <sup>1, 2, 11</sup> [The Washington Post, April 28, 2025](#)
- <sup>3, 4, 5, 7</sup> [Circulation Volume 145, Issue 17, March 21, 2022](#)
- <sup>6, 8, 9</sup> [Strategies to Improve Cardiac Arrest Survival: A Time to Act](#)
- <sup>10</sup> [AHA, What Is CPR?](#)
- <sup>12, 13</sup> [Mayo Clinic, "Heart Attack"](#)
- <sup>14, 15</sup> [AHA, "Heart Attack and Sudden Cardiac Arrest Differences"](#)

- <sup>16</sup> Rumble, Children's Health Defense, Good Morning CHD, Episode 82 July 22, 2022, 4:58