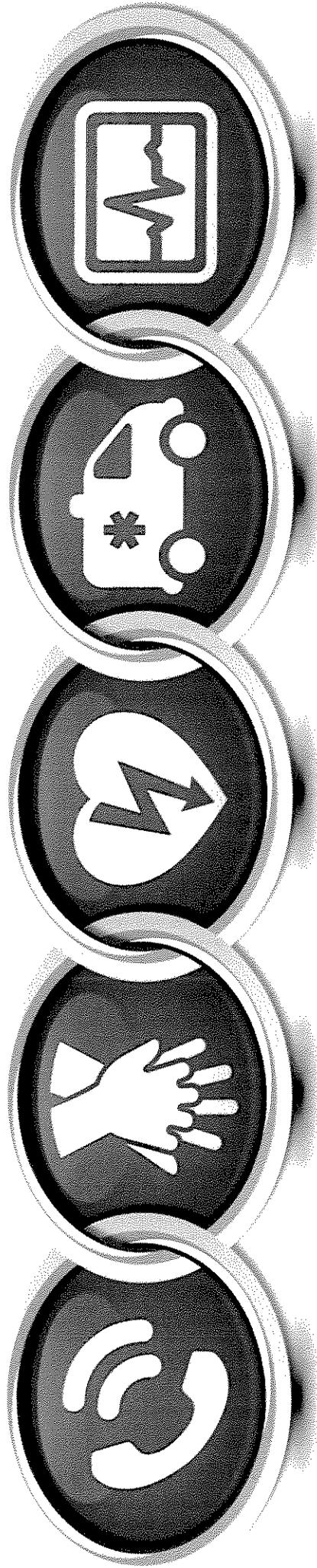


AHA Chain of Survival - 2010



Hands-Only CPR Simplifies Saving Lives For Bystanders

ScienceDaily (Apr. 2, 2008) — Chest compressions alone, or Hands-Only Cardiopulmonary Resuscitation (CPR), can save lives and can be used to help an adult who suddenly collapses, according to a new American Heart Association scientific statement.

Hands-Only CPR is a potentially lifesaving option to be used by people not trained in conventional CPR or those who are unsure of their ability to give the combination of chest compressions and mouth-to-mouth breathing it requires.

"Bystanders who witness the sudden collapse of an adult should immediately call 9-1-1 and start what we call Hands-Only CPR. This involves providing high-quality chest compressions by pushing hard and fast in the middle of the victim's chest, without stopping until emergency medical services (EMS) responders arrive," said Michael Sayre, M.D., chair of the statement writing committee and associate professor in the Ohio State University Department of Emergency Medicine in Columbus.

About 310,000 adults in the United States die each year from sudden cardiac arrest occurring outside the hospital setting or in the emergency department. Without immediate, effective CPR from a bystander, a person's chance of surviving sudden cardiac arrest decreases 7 percent to 10 percent per minute. Unfortunately, on average, less than one-third of out-of-hospital cardiac arrest victims receive bystander CPR, which can double or triple a person's chance of surviving cardiac arrest.

By using Hands-Only CPR, bystanders can still act to improve the odds of survival, whether they are trained in conventional CPR or not, Sayre said.

"Many times people nearby don't help because they're afraid that they will hurt the victim and aren't confident in what they're doing," he said. "We want people to know that they can help many victims, just by calling 9-1-1 and doing chest compressions. Don't be afraid to try it. We are sure many lives will be saved if the public does Hands-Only CPR for adult victims of sudden cardiac arrest."

The new recommendation for Hands-Only CPR for adults who suddenly collapse is an update to the 2005 American Heart Association Guidelines for CPR and ECC, which previously recommended that lay rescuers use compression-only CPR only if they were unable or unwilling to provide breaths. The update puts Hands-Only CPR on par with conventional CPR when used for an adult who has suddenly collapsed.

This change was supported by evidence published from three separate large studies in 2007, each describing the outcomes of hundreds of instances of bystanders performing CPR on cardiac arrest victims. None of those studies demonstrated a negative impact on survival when ventilations were omitted from the bystanders'

actions. Hands-Only CPR is easier to remember and results in delivery of a greater number of chest compressions, with fewer interruptions, until more advanced care arrives on the scene.

Conventional CPR is still an important skill to learn, and medical personnel should still perform conventional CPR in the course of their professional duties. The new recommendations apply only to bystanders who come to the aid of adult cardiac arrest victims outside the hospital setting.

Hands-Only CPR should not be used for infants or children, for adults whose cardiac arrest is from respiratory causes (like drug overdose or near-drowning), or for an unwitnessed cardiac arrest. In those cases, the victim would benefit most from the combination of chest compressions and breaths in conventional CPR.

The public is still encouraged to obtain conventional CPR training, where they will learn the skills needed to perform Hands-Only CPR, as well as the additional skills needed to care for a wide range of cardiovascular- and respiratory-related medical emergencies, especially for infants and children.

The new statement is intended to increase how often bystander CPR is performed. It emphasizes the importance of "high-quality" chest compressions -- deep compressions that allow for full chest recoil, at a rate of about 100 per minute -- with minimal interruptions.

The statement, from the association's Emergency Cardiovascular Care (ECC) committee, is published in *Circulation: Journal of the American Heart Association*. Co-authors are: Robert A. Berg, M.D.; Diana M. Cave, R.N., M.S.N.; Richard Page, M.D.; Jerald Potts, Ph.D.; and Roger D. White, M.D.

Email or share this story:

| [More](#)

Story Source:

The above story is reprinted (with editorial adaptations by *ScienceDaily* staff) from materials provided by [American Heart Association](#).

Need to cite this story in your essay, paper, or report? Use one of the following formats:

☉ APA

☉ MLA

American Heart Association (2008, April 2). Hands-Only CPR Simplifies Saving Lives For Bystanders. *ScienceDaily*. Retrieved July 22, 2011, from <http://www.sciencedaily.com/releases/2008/03/080331165040.htm>

Note: If no author is given, the source is cited instead.

Disclaimer: *This article is not intended to provide medical advice, diagnosis or treatment. Views expressed here do not necessarily reflect those of ScienceDaily or its staff.*



(http://www.burstnet.com/ads/ad14522a-
map:ggBCPG181949266752317886VTS=36BXQ3A93K-ADS_120/ADS_1100/ADS_1100SZ-120X60/44-2337)



(http://www.facebook.com/momsteam)



(http://twitter.com/#/Momsteam)



(http://www.youtube.com/user/momsteam)

Follow Us

Login (user) | Register (user/register)

(http://www.momsteam.com/health-safety/cardiac-safety/general/chain-of-survival-for-sudden-cardiac-arrest?page=0%2C20) | Home | About Us | Contact Us | Videos | Advertise | Blog | Forums | News | Fundraising & Grants

Home » Health & Safety Channel » Cardiac Safety Center » General » Chain of Survival for Sudden Cardiac Arrest

Chain of Survival for Sudden Cardiac Arrest

Quick execution improves survival odds

By [LINDSAY BARTON \(USERS/LINDSAY-BARTON\)](#) Reviewed by [GLENN LAUB, M.D. \(USERS/GLENN-LAUB\)](#)

The Chain of Survival is a five-step process for providing treatment to victims of [sudden cardiac arrest \(SCA\) \(node/361\)](#). It was first developed by the American Heart Association (AHA) in 1990 after several decades of research into SCA and was designed in recognition of the fact that most episodes of SCA occur outside of a hospital, with death occurring within minutes of onset without treatment. Quick execution of each and every link is critical because the chances of survival decrease 7 to 10% with each passing minute.

Emergency systems that can effectively implement these links can achieve ventricular fibrillation cardiac arrest survival of almost 50%.

More people can survive SCA if the following steps occur in rapid succession:

1. Cardiac arrest is immediately recognized and the [emergency response system \(node/387\)](#) is activated;
2. Early [cardiopulmonary resuscitation \(node/354\)](#) (CPR) is started with an emphasis on chest compression;
3. [Rapid defibrillation \(node/354\)](#) occurs;
4. Effective advanced life support is begun; and
5. Integrated post-cardiac arrest care is provided.

The AHA developed the Chain of Survival concept to communicate this sequence in a useful and easy-to-understand way.

Five links in chain of survival:

1. Immediate recognition that the victim has experienced a cardiac arrest, based on unresponsiveness and lack of normal breathing, immediate activation of the emergency response system (e.g. [call 911 \(node/387\)](#)), and get an AED/defibrillator.

- **Immediate call crucial.** The sooner 911 or your local emergency number is called the sooner early [advanced life support \(node/354\)](#) arrives. A delay of just a few minutes could prove fatal.
- **Sets Chain of Survival in motion.** Calling 911 gives the next two links, CPR and Early Defibrillation, the greatest opportunity for success.

2. Early CPR. Once an SCA victim collapses and a bystander calls 911, the next step in the Chain is to immediately begin chest compressions ([Cardiopulmonary Resuscitation or CPR \(node/354\)](#)). The AHA now recommends¹ that **all rescuers, regardless of training, or skill level, victim characteristics, or available resources, should provide chest compressions to all cardiac arrest victims**, with rescuers who are able adding ventilations (mouth-to-mouth) to chest compressions. Rescuers should start CPR immediately. The directive to "look, listen, and feel for breathing" is no longer recommended.

- **Focus should be on delivering high-quality CPR:**
 - providing chest compressions of adequate rate (at least 100/minute)
 - providing chest compressions of adequate depth

- adults: a compression depth of at least 2 inches
- infants and children: a depth of at least 1 1/2 inches in infants and about 2 inches in children
- allowing complete chest recoil after each compression
- minimizing interruptions in compression
- avoiding excessive ventilation
- **Hands-Only** (compression only) CPR for untrained rescuer.
- **Buys time:** During SCA, the heart twitches irregularly, most often due to [ventricular fibrillation \(VF\)](#) (/node/354), and cannot pump oxygenated blood efficiently to the brain, lungs, and other organs. The victim quickly stops breathing and loses consciousness. Prompt CPR can help sustain life during VF. Chest compressions help oxygenated blood flow to the person's brain and heart until an [AED](#) (/node/300) can be used to attempt to restore normal heart pumping or advanced medical personnel arrive.
- **Ineffective by itself:** Only when combined with early defibrillation and early advanced care can CPR significantly increase an SCA victim's chance for long-term survival.
 - CPR alone cannot fully resuscitate a person in SCA because it does nothing to restore normal heart rhythm
 - While better than no treatment, the survival rate for victims in SCA treated by CPR alone is very small (between 2 to 5%);
 - The longer CPR is performed, the less the chance of survival.

Strength of link depends on increased training. Lay people initiate CPR in more than half of SCA cases in which someone has witnessed the incident. The strength of this link is dependent on the number of lay people trained in CPR and the number of training programs in your schools and community.

Average:

Average: 5 (1 vote)