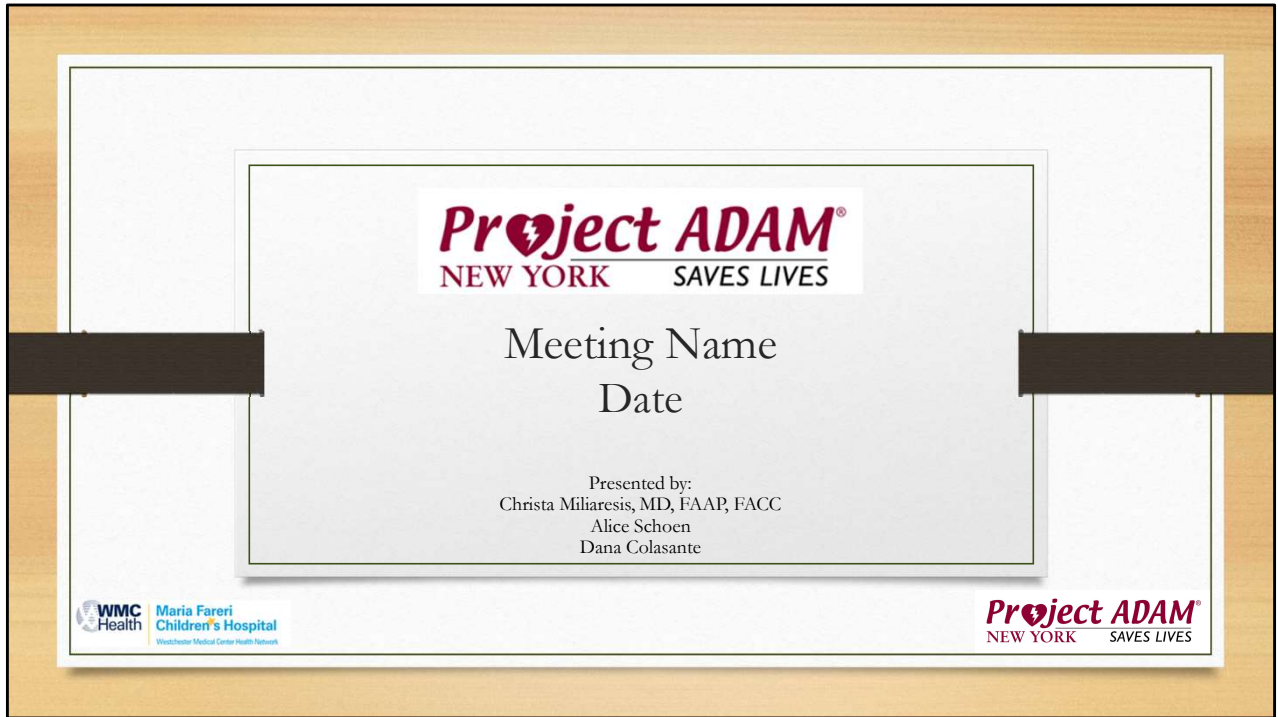


Project ADAM New York, a youth Heart Safe Program sponsored by Maria Fareri Children's Hospital at Westchester Medical Center. We are here to discuss how to recognize and respond to a sudden cardiac arrest.



Thank you for having us here today.

## Damar Hamlin



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Last year millions of us across the world watched in disbelief as Damar Hamlin went into sudden cardiac arrest and collapsed during an NFL game. While the scene was shocking, the rapid response of medical personnel was amazing — and undoubtedly saved his life. While Damar benefited from the world-class medical care provided by the NFL, that kind of quick, life-saving action should be available to anyone, anywhere. And Project ADAM is dedicated to making that happen.

# Elijah Brown-Garcia

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12/27/10 - 2/10/23

 **WMC Health**  
Maria Fareri  
Children's Hospital  
Westchester Medical Center Health Network

**Project ADAM**  
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Most people don't know about Elijah Brown-Garcia... a 12-year-old boy from Newark, New Jersey.

On February 17, 2023, Elijah had a sudden cardiac arrest and died during his youth league's football practice. There was no AED and none of the coaches knew CPR. It is reported that the coaches only poured water on him!

# The Birth of Project ADAM

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1/6/82 - 1/22/99

**WMC** Health  
Maria Fareri  
Children's Hospital  
Westchester Medical Center Health Network

## Project ADAM

- Automated
- Defibrillators in
- Adam's
- Memory

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Project ADAM was started in 1999 in memory of Adam Lemel, a 17-year-old boy in Wisconsin who collapsed and died from a Sudden Cardiac Arrest while playing basketball. CPR was initiated but no AED was available within the school.

# Mission and Objective

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**Mission:**

Project ADAM saves lives by empowering schools and communities to be prepared for a sudden cardiac arrest.

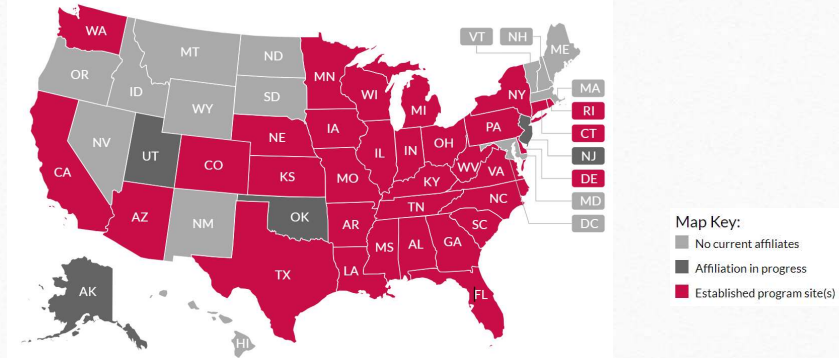
**Objective:**

To educate, give guidance and provide resources to all schools, sport programs and communities on developing cardiac emergency response plans including CPR/AED training and accessible AEDs.



Project ADAM's mission is to save lives by providing resources to schools, youth sports programs, camps and communities to be prepared for a sudden cardiac arrest.

## 48 Hospital Affiliates in 33 States



**Project ADAM affiliate programs are responsible for saving more than 250 lives!**



Since 1999, Project ADAM has expanded to 48 pediatric hospital affiliates in 33 states and growing

Project ADAM affiliate programs are responsible for saving more than 250 lives!

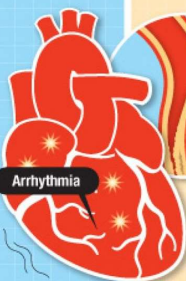
# What is Sudden Cardiac Arrest (SCA)?

## CARDIAC ARREST VS. HEART ATTACK

**Cardiac Arrest  
is NOT a  
Heart Attack**



Cardiac arrest is an  
"ELECTRICAL" problem.



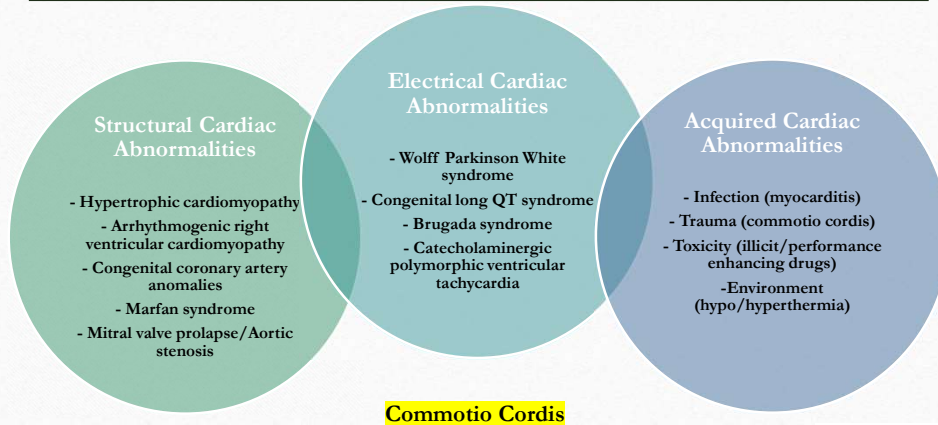
A heart attack is a  
"CIRCULATION" problem.

Sudden Cardiac Arrest is NOT a heart attack. It is an electrical problem that causes the heart to malfunction and suddenly stop beating. A heart attack is a plumbing problem when the arteries get blocked.

This symptom comparison is important because SCA does not present like a heart attack which most people think it does. Heart attacks are associated with consciousness and chest pain. SCA is associated with sudden loss of consciousness and often not preceded by symptoms. Heart attacks can precede a SCA in adults but rarely is the cause of SCA in children.

SCA can strike without warning, leading to death in minutes if the person does not receive immediate help. This can happen to people of all ages who may seem healthy, even children and teens. It is the primary cause of death in young athletes but also happens in non athletes.

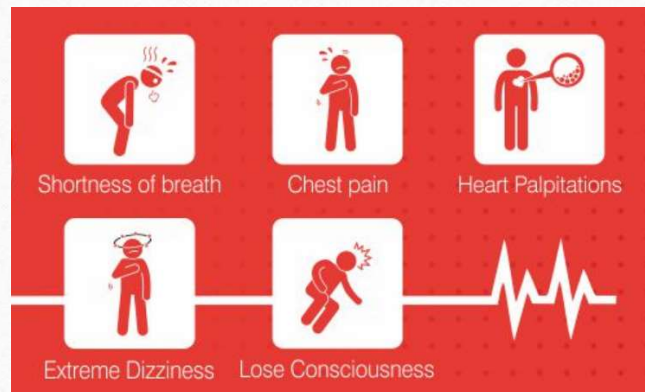
# Causes of SCD in the Young



This is a list of diagnoses that increase a child's risk of SCD. When a child is known to have one of these diagnoses, they can receive treatment and restrictions to significantly decrease their risk for arrhythmia events.

Commotio Cordis is another cause of SCA in athletes. This is the disruption of the heart rhythm that occurs as the result of a blunt blow to the chest area directly over the heart, such as being hit by a baseball, hockey puck or another player. This is what happened to Damar Hamlin.

## Signs and Symptoms of SCA



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Often there are no warning signs that identifies a person at risk of SCA,

Symptoms, when present, can include:

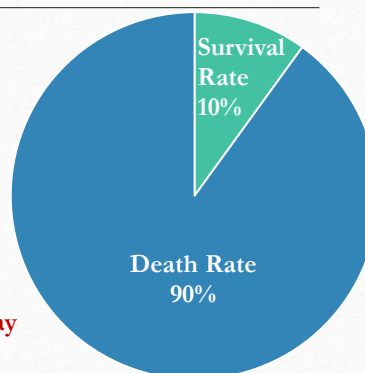
- Fainting, dizziness
  - Excessive fatigue, shortness of breath
  - Chest pain or chest discomfort
- WITH EXERCISE and the person should see a doctor.

Signs to Recognize a Sudden Cardiac Arrest when it happens are

- The person has Collapsed and is Unresponsive
  - The person is Not breathing, or appears to have Distressed or Agonal gasping type breathing
  - Sometimes Seizure-like Activity may be present
- 
- If an athlete suddenly collapses while playing sports when there is no contact, you should automatically assume it is SCA and start the cardiac chain of survival which we will review.

## Sudden Cardiac Arrest Statistics

- **#1 Cause of Death in Young Athletes**
- 436,000 out-of-hospital cardiac arrests (OHCA) annually
- 23,000 OHCA are children younger than 18 years old
- 90% of sudden cardiac arrests lead to death
- 39% of youth sudden cardiac arrests are sports related
- **20% of a community is in its schools on any given day**



SCA is the No. 1 killer of Americans, and the primary cause of death in young athletes.

There are over 436,000 out-of-hospital cardiac arrests (OHCA) annually\*

Over 23,000 OHCA are children younger than 18 years old\*

90% of sudden cardiac arrests lead to death\*

Sports-related SCAs account for 39% of SCAs in children ages 18 years old or less\*

Because approximately 20% of a community is in its schools on any given day, including students, teachers, staff and family members, a focused effort on cardiac arrest preparedness in schools is critical to protecting our children and others in the community and beyond.

Although SCD is a rare event for most schools, even one event carries a heavy burden on families, schools, communities and our state.

## Survival Rate Using an AED

### Every Second Counts

Within One Minute – 90% chance of survival

Within Three Minute – 75% chance of survival

Within Five Minute – Drops to 49% chance of survival



ONLY 10% SURVIVE SCA! However, research shows immediate help with CPR and shock of an automated external defibrillator (or AED) can improve survival rates to as high as 90%

As you can see from this graph, survival rate goes down significantly for every minute an AED is not applied to an SCA victim.



According to the American Heart Association, immediate treatment including CPR and shock of an AED, should be provided within three minutes of collapse to be effective. Even the fastest EMS may not be able to reach a victim this quickly as the Avg EMS response time is 6-12 min.

That is why prompt action by bystanders is so critical, and why it is so important to have AEDs on-site and more laypersons trained in CPR and how to use an AED.

It is very important to understand that immediate CPR is not just crucial to save someone's life, but to also prevent brain damage and other organ damage to preserve quality of life.

We like to use the mantra CALL PUSH SHOCK as a reminder of the:

**CARDIAC CHAIN OF SURVIVAL which includes:**

- Early recognition of Sudden Cardiac Arrest (SCA)
- CALL 911 right away
- PUSH Start CPR immediately
- SHOCK Get an AED to restore the heart to its normal rhythm
- EMS will begin advanced life support and transfer the patient to a hospital

# Critical Public Health Issue in Schools

## CPR/AED Requirements in New York State:

- AEDs accessible in schools and athletic events
- CPR/AED training for at least one school staff member and athletic coaches
- Hands-only CPR/AED training for high school students

## NOT Required:

- Cardiac Emergency Response Plan

**Preparation is the essential key to savings lives!**



14

NY State Education Law requires schools to have AEDs and at least one staff person trained in CPR/AED use on-site and at school sponsored athletic contests held at any location.

In addition, NYSPHSAA requires all coaches to be CPR/AED trained.

Students are required to receive instruction in hands-only cardiopulmonary resuscitation(CPR) and the use of an automated external defibrillator(AED) in order to graduate high school.

However, the law does NOT mandate schools to develop a Cardiac Emergency Response Plan, a written document that would establish specific steps to reduce death from cardiac arrest in school settings.

Preparation is the essential key to savings lives!

## How Can Project ADAM Help?

- Resources on developing a Cardiac Emergency Response Plan
- CPR/AED Training Resources
- AED Purchase Resources
- SCA Response Training Drills
- Education about Sudden Cardiac Arrest

[mariafarerichildrens.org/project-adam](http://mariafarerichildrens.org/project-adam)  
[projectadam.com](http://projectadam.com)



Project ADAM can assist schools in establishing an emergency response plan to be prepared for a sudden cardiac arrest with resources such as:

CERP templates

CPR/AED training resources

AED Purchase resources

How to conduct a SCA training drill

Many of these tools are available on the Project ADAM NY webpage on the Maria Fareri Children's Hospital website and the Project ADAM national website,

projectadam.com

# Heart Safe Checklist

1. The Heart Safe Checklist is a tool to serve as an initial assessment of your school, sport program and community center.
2. There are checkpoints based upon best practices for cardiac emergency preparedness.
3. The main categories are:
  - **AEDs**
  - **CPR-AED Training/Education**
  - **Drills**
  - **Cardiac Emergency Response Plan**



Project ADAM's signature tool is the Heart Safe Checklist which serves as an assessment of your school, sports league or community's preparedness for a cardiac emergency.

The main categories on the list are:

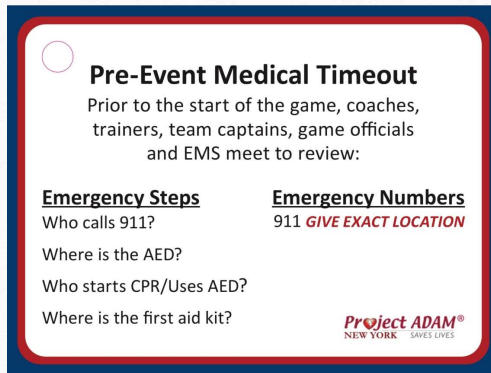
**AEDs** - where are they located and are they accessible within 3 minutes from any location?

Is there enough obvious signage so anyone can find an AED quickly if needed?

**CPR & AED** training for staff and coaches including cardiac emergency response **Drills**.

A written **CERP** that is reviewed periodically to ensure they are prepared for a SCA.

# Tools for Youth Sports



**Pre-Event Medical Timeout**  
Prior to the start of the game, coaches, trainers, team captains, game officials and EMS meet to review:

<b>Emergency Steps</b>	<b>Emergency Numbers</b>
Who calls 911?	911 <i>GIVE EXACT LOCATION</i>
Where is the AED?	
Who starts CPR/Uses AED?	
Where is the first aid kit?	

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- **Pre-Event Medical Timeout Card**
- **SCA Awareness Fact Sheet**
- **NFL Video**



Since the athletics programs should be included in a school's CERP, I want to share a few very simple but effective tools to easily implement into any sports program.

1. We created this Pre-Event Medical Timeout Card for coaches to carry on their equipment bags or in their First Aid kits. It includes 3 simple reminders. Where is the AED? Who will call 911? and Who will start CPR? The idea is for these 3 questions to be reviewed between coaches and game officials before the start of a game when they usually already meet to go over the game rules.
2. We can also provide a one-page sca awareness fact sheet to be shared with athletes, parents, and coaches so everyone knows the signs and symptoms of sca, and how to recognize and respond quickly to a sca.
3. Additionally, in 2019, the NFL league distributed a short video on the best practices for recognition and treatment of Sudden Cardiac Arrest in athletes. It is a great resource for coaches. We can share that link with you as well.  
<https://www.playsmartplaysafe.com/newsroom/videos/recognize-react-rescue-effectively-treating-sudden-cardiac-arrest>

# Project ADAM HSS Designation



Schools that complete the Project ADAM 14-step program are awarded the Heart Safe School Designation with a certificate and banner you can proudly display at your school.

## Summary

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- **Sudden Cardiac Arrest is the #1 cause of death in the U.S.!**
- CPR and shock of an AED should be provided within three minutes of collapse.
- Even the fastest EMS may not be able to reach victims this quickly.
- Cardiac Emergency Response Plans are essential to preventing sudden cardiac death!
- Be Prepared! Project ADAM New York is here to help!

**Project ADAM affiliate programs are responsible for saving more than 250 lives!**



19

It is not enough to have an AED and staff trained in CPR. Lives are saved when you are prepared with a documented plan and a cardiac response team who is well-trained and practiced on how to respond immediately in the event of a cardiac emergency.

CPR and shock of an AED should be provided within three minutes of collapse.

Even the fastest EMS may not be able to reach victims this quickly.

Be prepared! And reach out to us if you need any help or resources developing your cardiac emergency response plan!



THANK YOU!

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<https://www.mariafarerichildrens.org/project-adam>



Feel free to contact us with questions or if you wish to participate and we'll get you on your way!

Here is our direct contact information and website. We have a list of additional resources that we are happy to share as a follow up to this presentation.

Thank you!

# AHA Heartsaver Training Videos



## Hands-Only CPR



### AHA HeartSaver **Adult CPR** Video Lessons

- Lesson 2: Scene Safety and Checking for Responsiveness (1:22)
- Lesson 2: Phoning 9-1-1 (1:26)
- Lesson 2: Checking for Breathing (:53)
- Lesson 2: Chest Compressions (4:28)

### **Infant CPR** Video Lesson

- Lesson 2: Putting It All Together (Infant CPR) (1:21)

Save Station 3D CPR in Action Video (3:48) Next Slide

<https://www.youtube.com/watch?v=Kdf1VfPBSuw> (English with Spanish subtitles)

# AHA Heartsaver Training Videos

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## How to Use an AED



### AHA HeartSaver **Adult AED** Video Lesson

- Lesson 3: Using and AED (5:19)

### Child **CPR AED** Video

- Lesson 2: Using an AED for Children (1:14)

## AEDs



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24

Examples of what different AEDs look like.

Whenever you pass an AED, in a school or gym or at a store, check that there is a green flashing light or check mark to indicate it is in working order and ready to shock a victim.

## CPR/AED for Adults vs Children

### Adult

- Ages 8+ (55+ lbs)
- Adult AED Pads:
  - Place One Pad Top Right of Chest & One Pad Bottom Left Side Below Chest
- Compressions:
  - Heal of Hand in Center of Breast Bone, Elbows Locked
  - 2" Depth
  - 100-120/minute

### Child

- Ages 1-8
- Pediatric AED Pads:
  - If No Pediatric Pads, Use the Adult Pads
  - Top Right/Bottom Left Or If Child Small, One Pad Center of Chest and One Pad on Back
- Compressions:
  - Heal of Hand in Center of Breast Bone, Elbows Locked
  - 2" Depth
  - 100-120/minute

### Infant

- Ages 0-1
- Pediatric AED Pads:
  - If No Pediatric Pads, Use the Adult Pads
  - Place One Pad Center of Chest and One Pad on Back
- Compressions:
  - Two Fingers in Center of Breast Bone
  - 1 ½" Depth
  - 100-120/minute



25

A few points to remember.

Listen to the AED. It will instruct when to shock and when to continue CPR. If it says to shock, do not hesitate. Do It! It might instruct a shock multiple times.

Adults: Ages 8+, Child: Ages 1-8, Infant: Ages 0-1

Pads: Adults/Children: place top right of chest and bottom left side below chest.

Small Children/Infants: place in center of chest and on back. If not pediatric pads, you can use adult pads on children.

Compressions : 2"(adult/child-heal of hand) and 1 ½"(infant-two fingers) or 1/3 depth of chest

100-120/minute, "Staying Alive"

Women in SCA receive less help than men because bystanders are afraid of being accused of sexual harassment. But it is important to perform CPR and shock any SCA victim with an AED. Otherwise, they will die.

# Hands-Only CPR vs. Rescue Breathing

## Hands-Only CPR

- Compressions Only
- Start Compressions & Don't Stop until AED arrives, or EMS arrives
- Why Hands-Only?
  - No barrier device
  - Person is bleeding from the mouth
  - Prevent spread of disease
- Studies show when someone goes into SCA there is enough oxygen in the body to pump around with chest compressions only

## Rescue Breathing

- 30 compressions: 2 breaths
- Provide Chest Compressions and Rescue Breaths until AED arrives, or EMS arrives.
- Why Rescue Breaths?
  - You are comfortable performing
  - Face Shield or CPR Mask
  - Family Member
  - Friend
  - Infants/Young Children

## Why Aren't People Helping?

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- Liability? GOOD SAMARITAN
- Fear of doing something wrong
- Fear of hurting someone
- Not comfortable giving rescue breaths
- Women (fear of inappropriate touching & sexual harassment)

Good Samaritan laws protect bystanders who try to help in good faith from legal liability.

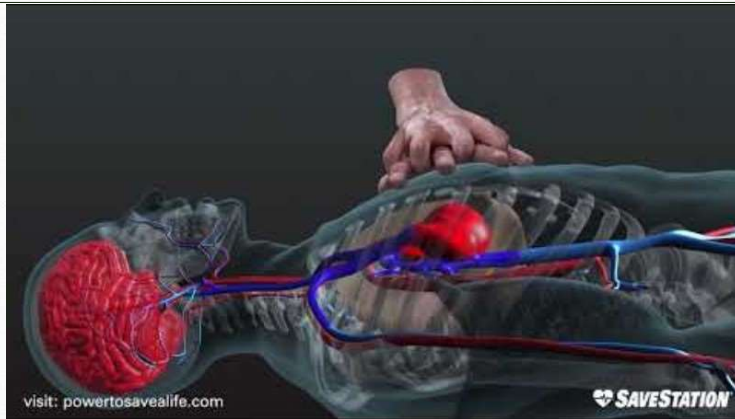
You can only help in this situation, otherwise the person will die.

You don't have to do rescue breaths. Proper chest compressions (CPR) is enough to buy time until EMS gets there, or an AED applies a shock.

Don't stop CPR, even if you break a rib, the victim throws up or you are afraid you did something wrong.

Women in SCA receive less help than men because bystanders are afraid of being accused of sexual harassment. But it is important to perform CPR and shock any SCA victim with an AED. Otherwise, they will die.

## CPR in Action



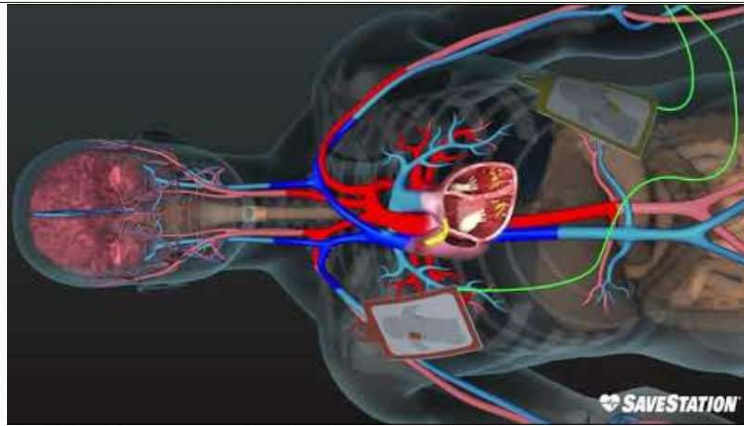
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<https://www.youtube.com/watch?v=Kdf1VfPBsuw>

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Play after AHA HeartSaver videos

## AED in Action



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<https://www.youtube.com/watch?v=bMDLU5ma3f0>

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Play after AHA HeartSaver videos

# Taking Action



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<https://www.youtube.com/watch?v=UgSvIwDINGs>

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Optional...