

World Restart A Heart

Two hands can save a life!

What is World Restart a Heart Day?

This initiative was launched by ILCOR (International Liaison Committee on Resuscitation) in 2018. It aims to promote awareness regarding the importance of performing CPR and utilizing an AED during a cardiac arrest. Heart & Stroke Canada is one of the many regional resuscitation councils which have chosen to participate in this event. It is encouraged that training and awareness be shared on or around this day, particularly for school-aged children.

[International Liaison Committee on Resuscitation \(ilcor.org\)](http://ilcor.org)

This Toolkit includes:

- Lesson Plan for grades K-6
- Lesson Plan for grades 7-12
- Activity sheets for grades K-3
- Kids Save Lives recommendations made by WHO
- Additional resources and supports

Importance of teaching CPR to children

While this concept may seem imposing or traumatic to discuss with students, it is critical to familiarize children with these live-saving acts early on. Children who are comfortable with the idea of performing CPR grow into adults who are willing to step in and save a life during a medical emergency. In addition to this, children are eager to share their knowledge with family and friends, which in turn spreads further awareness about CPR and AED use.

Younger children (under the age of 12) typically cannot physically perform CPR in an effective manner, and therefore the emphasis for this age group should be on the importance of calling 9-1-1 during an emergency and further discussion about how to do this. Older children may be able to perform CPR effectively and will be able to do so if they have been trained and familiarized from a young age.

There is a tendency to underestimate children and their ability to engage in CPR/AED training. They are often very quick to understand these concepts, and enthusiastic to practice them. There are sadly many instances of children having to call 9-1-1 and assist during medical emergencies, and time and time again they have proven themselves to be incredibly capable.

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Facts for Educators

- Cardiac Arrest is a medical emergency. It happens when a person's heart stops beating properly, they become unresponsive and stop breathing.
- When a cardiac arrest happens, quickly starting CPR and using an AED can save lives.
- Even those without any previous training can do CPR and use an AED, but it is best to be trained and prepared to act in an emergency.
- Heart & Stroke Canada has recommended the implementation of CPR/AED training for all school-aged children and suggested making it mandatory.
- An estimated 35 000 cardiac arrests occur in Canada annually.
- It is estimated that over 400 lives are saved each year in Canada thanks to publicly available AEDs (Alberta Heart Safe, Heart & Stroke and ILCOR all aim to increase this number).
- Current estimates put the survival rate of an out-of-hospital cardiac arrest (OHCA) at less than 10%.
- Bystander usage of an AED during cardiac arrest increases survival rates dramatically (up to 75% if done within the 3 minutes of the arrest occurring).
- Researchers conducted mock scenarios using training AEDs, with school children (approximate ages 10/11) with no prior knowledge of AED usage. In every practice scenario, the children were able to apply and utilize with AEDs without intervention by adults. They were typically able to administer the AED and initiate the first shock within 90 seconds. Trained Responders accomplished the same task in 60 seconds.

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FAQ

What is a Sudden Cardiac Arrest?

A Cardiac Arrest happens when the electrical impulses that keep the heart beating are no longer functioning properly. The heart may go into an irregular rhythm, called Ventricular Fibrillation, where the heart quivers and shakes, but is unable to pump blood. This causes the patient to go unresponsive and stop breathing. This may happen suddenly, with no prior symptoms or indication.

What is CPR? When is it used, and what for?

CPR, or Cardiopulmonary Resuscitation, is a live-saving measure that can be done by trained or untrained rescuers during a medical emergency. If a patient is determined to be unresponsive and not breathing, then CPR should be started immediately. This can be done by rescuers with First Aid training, or bystanders can be coached on how to perform this with the assistance of an Emergency Medical Dispatcher when calling 911. CPR is done with chest compressions, and possibly rescue breaths (often called mouth to mouth). Current recommendations commonly suggest performing chest compressions only, as this is functional in many situations. CPR will keep the blood circulating, which will ensure oxygen is reaching the vital organs. That is why CPR needs to be done immediately, and as continuously as possible- maintaining oxygen delivery throughout the body.

What is an AED?

An AED is an Automated External Defibrillator. It is a medical device that can be used by trained and untrained rescuers when a patient is experiencing a Cardiac Arrest in order to attempt to restore a normal heart rhythm. All modern, publicly available AEDs include easy to understand voice prompts, which will start when the machine is opened or turned on. They will give clear instructions to bystanders on scene that will help them apply and utilize the AED. The AED will include two pads, which will be removed from a protective pouch and applied to the patient's chest. These pads will then assess the patient's heart rhythm and recommend a shock if appropriate. Some AEDs are fully automated and will initiate a shock after giving verbal warning. Other machines are semi-automated and will advise when a shock is needed. The bystanders will then have to push a button to administer the shock. Regardless of device type, an AED will only shock when appropriate to do so and cannot hurt a patient. There are many manufacturers of AEDs, and each device will vary slightly, but regardless of make or model, they all have very similar functionality and ease of use.

What if I've never been trained on CPR or using an AED?

This knowledge can still be reviewed and shared. Many excellent resources are available to support awareness. When calling 9-1-1, the Dispatcher can help assess the situation to determine if CPR needs to be done, and they will give clear instructions on how to do it. AEDs are extremely user friendly, with clear vocal prompts and some devices even have images showing what to do, as well as an LCD screen with instructions. Many machines include CPR coaching, and feedback on how effectively it is being done. They are designed to be used by people with no medical experience or First Aid Training. Whenever possible, it is a good idea to be trained in CPR and First Aid as this knowledge can be invaluable in emergencies, but even those without training can do what is needed during a Cardiac Arrest.

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Can someone be sued for doing CPR? What if they make a mistake?

The Province of Alberta has legislation called the Emergency Medical Aid Act (sometimes called ‘Good Samaritan Laws’), which protects rescuers from being sued after helping out in a medical emergency. As long as a person act within reason in their attempts to help, even if a mistake is made, they cannot be sued. There has never been a successful case of litigation in Canada against a First Aider or lay rescuer for their reasonable attempts to help in a medical emergency.

Is this lesson mandatory in schools?

No- while many councils have recommended mandatory CPR and AED training in schools, it is still entirely optional. This information is being supplied as a resource for educators who would like to share more information in schools.

Does this have to be done on October 16th?

Definitely not! This lesson can be delivered at any time, and we encourage educators to fit this training in any way that works best with their current curriculum. This could be on or around Oct 16th, or it could be any other time of the year.

Do I have to follow the lesson plan? Which delivery method works best?

The lesson plan is available as a resource but does not need to be followed to a tee. As long as the information being delivered is accurate, educators can feel free to pick and choose which elements of the lesson will work best for their class.

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Correcting Common Misconceptions

A cardiac arrest and heart attack are not the same thing.

These are two different medical emergencies. A heart attack involved a blockage of the blood vessels of the heart, stopping or restricting blood flow to the heart. A cardiac arrest is an issue with the electrical activity of the heart, which stops the heart from beating properly. A heart attack is most commonly seen in older individuals and is often accompanied by symptoms such as chest pain, difficulty breathing and cold/clammy skin (although heart attacks can happen minimal symptoms as well). A sudden cardiac arrest could potentially happen to anyone, even the very young or those with no medical history. There are generally no indications prior to the occurrence, and the patient may suddenly collapse, become unresponsive and stop breathing. A cardiac arrest may happen suddenly, and on its own, or it could be caused by other circumstances (for example, suffocation, drowning or a heart attack can all cause the heart to stop beating properly and the patient may go into cardiac arrest). Someone having a heart attack will initially be conscious and breathing and will not need CPR or an AED at this time. As the Heart Attack progresses, it causes damage to the heart muscle and can result in the patient going into cardiac arrest. At this time, the patient would become unresponsive and stop breathing. Recognizing the signs of a heart attack early is essential access treatment before it progresses into a cardiac arrest.

Even without First Aid Training, you can still use an AED and do CPR.

While it does help to have the extra knowledge and experience of First Aid and CPR training, even those with no experience will be able to use an AED and perform CPR. When calling 911, Emergency Medical Dispatchers can give instructions to trained and untrained bystanders alike on how to perform CPR. Publicly available AEDs are designed to be extremely user friendly, and can be utilized by anyone, regardless of experience level. AEDs feature audio vocal prompts which will give instructions on steps to follow during a medical emergency. Some AEDs feature audio instructions in multiple languages, some have pictures and LCD display screens with instructions. Many will include instructions on how to perform CPR and will even give the rescuer feedback on the CPR being done.

An AED does not jump-start a heart.

There are two heart rhythms which an AED can shock, and potentially restore to a normal heart rhythm. Those are called Ventricular Fibrillation and Ventricular Tachycardia. These are irregular heart rhythms which may return to a normal rhythm after a shock is delivered. Asystole, which is commonly called 'Flatline' will not be shocked by an AED, as a shock is not beneficial to this heart rhythm.

The patient could look like they're breathing, but they might not be.

When a patient goes into cardiac arrest, they may exhibit a reflex that looks like breathing. This is called 'Agonal Respirations.' The patient may seem like they are gasping or snoring, and sound irregular. They are not getting oxygen; this is not effective breathing. Be sure to watch the patient's chest for movement. Confirm if they are breathing by watching for rise and fall of the chest. When you call 911, Trained Emergency Medical Dispatchers will help you assess the patient to see if they are breathing effectively. Remember that an AED will never shock a patient whose heart is beating properly. You cannot harm the patient or yourself by opening up an AED and placing the pads on the patient. The AED will automatically detect the heartbeat and only shock the patient if it's necessary.

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An AED cannot hurt the patient.

AEDs have built in heart monitors that will detect the patient's heart rhythm. The AED will only shock a patient who has a lethal heart rhythm. The device cannot shock a patient with a healthy heart rhythm. There are many different possible heart rhythms, and an AED is able to read the patient's heart, determine what is going on and provide a shock if appropriate to do so. There are no documented cases of a public access AED inappropriately shocking a patient. There are also no documented cases of an AED causing significant injury to a patient or rescuer.

Cardiac Arrest can happen to anyone, at any time, without warning.

There may be no symptoms experienced prior to the patient becoming unresponsive. It may happen to children and to people with no history of heart problems. Any time a patient is not responding, and not breathing effectively, an effort should be made to perform CPR and obtain the nearest AED if possible.

For further information, please contact the Alberta Public Access to Defibrillation Program:

www.heart-safe.ca

PAD@ahs.ca

1-866-786-1440

Additional Resources

[CPR training | Heart and Stroke Foundation](#)

[International Liaison Committee on Resuscitation \(ilcor.org\)](http://www.ilcor.org)

[World Restart a Heart Day October 16 \(heartandstroke.ca\)](http://www.heartandstroke.ca)

[First Aid Tips and Resources - Canadian Red Cross](#)

[Cardiac Arrest | American Heart Association](#)