

2020 AHA HEARTSAVER CPR UPDATES

Systems of Care: Using Mobile Devices to Summon Rescuers

2020 (New): The use of mobile phone technology by emergency dispatch systems to alert willing bystanders to nearby events that may require CPR or AED use is reasonable.

Why: Most communities experience low rates of bystander CPR and AED use.

A recent systematic review from the International Liaison Committee on Resuscitation (ILCOR) found that notification of lay rescuers via a smartphone app or text message alert is associated with shorter bystander response times, higher bystander CPR rates, shorter time to defibrillation, and higher rates of survival to hospital discharge for individuals who experience out-of-hospital cardiac arrest.

ADULT OUT-OF-HOSPITAL CARDIAC ARREST



Opioid Overdose Response for Lay Rescuers

- If a person is unresponsive and not breathing normally, and you suspect that the person has had an opioid overdose, phone 9-1-1. Get an AED and naloxone, if they are available.
- Start CPR and use the AED. Give the naloxone as soon as you can, but do not delay CPR to give naloxone.

Cardiac Arrest in Pregnancy

Do not delay providing chest compressions for a pregnant woman in cardiac arrest. High-quality CPR can increase the mother's and the infant's chance of survival. If you do not perform CPR on a pregnant woman when needed, the lives of both the mother and the infant are at risk.

Perform high-quality chest compressions for a pregnant woman in cardiac arrest as you would for any victim of cardiac arrest. Use an AED for a pregnant woman in cardiac arrest as you would for any victim of cardiac arrest. If the woman begins to move, speak, blink, or otherwise react, stop CPR and roll her onto her left side.



Infant Compressions

A single rescuer may now use 2 thumbs or the heel of 1 hand for infant compressions.

2020 (New): For infants, single rescuers (whether lay rescuers or healthcare providers) should compress the sternum with 2 fingers or 2 thumbs placed just below the nipple line (mammary line).

2020 (New): For infants, if the rescuer is unable to achieve guideline-recommended depths (at least one third the diameter of the chest), it may be reasonable to use the heel of 1 hand.

Why: Systematic reviews suggest that the 2-thumb–encircling hands technique may improve CPR quality when compared with 2-finger compressions, particularly for depth. However, there are limited data comparing the various hand positions.

Stroke Recognition

2020 (Updated): To recognize a possible stroke, first aid providers can use the signs of weakness in the face (eg, droop), arm, or grip on one side of the body, or speech disturbance and should activate emergency services as quickly as possible if any of these signs are present.

Why: Stroke outcomes improve with the prompt recognition of stroke signs and early access to time-sensitive interventions.

Several stroke-recognition tools identify stroke based on the following signs: weakness in the face, arm, or grip on one side of the body or speech disturbance.

The F.A.S.T. acronym can be helpful in recognizing a stroke:

F—Facial drooping

A—Arm weakness

S—Speech difficulty

T—Time to call 9-1-1

Observational studies of stroke-recognition tools found reductions in the time from symptom onset to treatment among patients with stroke, improved stroke diagnosis rates, and improved time to definitive treatment, especially thrombolysis.

Aspirin for Adults With Nontraumatic Chest Pain

2020 (Updated): While awaiting the arrival of emergency services, first aid providers may encourage alert adults experiencing nontraumatic chest pain to chew and swallow aspirin, unless the person experiencing pain has a known aspirin allergy or has been advised by a healthcare provider not to take aspirin.

Why: Aspirin, when given early to a patient having a heart attack, can improve survival. In prior versions of the Guidelines, first aid providers were advised to offer aspirin only to persons with chest pain symptoms suggestive of a heart attack. However, it can be difficult to distinguish chest pain due to a heart attack from other causes of chest pain. While there are no studies that evaluate the benefits or risks of first aid providers administering aspirin to individuals experiencing nontraumatic chest pain, it was the opinion of the First Aid Writing Group that the potential benefits of early administration of aspirin outweighs the potential risk of a single dose of aspirin.

Control of Life-Threatening Bleeding

2020 (New): A manufactured tourniquet should be used as first-line therapy for life-threatening extremity bleeding and should be placed as soon as possible after the injury.

2020 (New): If a manufactured tourniquet is not immediately available or if a properly applied manufactured tourniquet fails to stop bleeding, direct manual pressure, with the use of a hemostatic dressing if available, should be used to treat life-threatening extremity bleeding.

2020 (New): For individuals with life-threatening external bleeding, direct manual pressure should be applied to achieve initial bleeding cessation for wounds not amenable to a manufactured tourniquet or when a manufactured tourniquet is not immediately available.

2020 (New): If a hemostatic dressing is available, it can be useful as adjunctive therapy to direct manual pressure for the treatment of life-threatening external bleeding.

2020 (New): If a manufactured tourniquet is not available and direct manual pressure with or without the use of a hemostatic dressing fails to stop life-threatening bleeding, a first aid provider trained in the use of an improvised tourniquet may consider using one.

Why: Prior versions of the Guidelines have provided recommendations for the control of bleeding. The 2020 Focused Update provides new recommendations for the subset of people with life-threatening bleeding associated with rapid blood loss. Life-threatening bleeding can be recognized by pooling of blood on the ground, blood that is rapidly flowing or spurting from a wound, or bleeding that continues despite direct manual pressure. Several studies have shown that tourniquets can stop extremity bleeding safely and reduce mortality. Because a tourniquet may not always be immediately available, direct manual pressure should be used until a tourniquet is available. Direct manual pressure should also be applied in cases of life-threatening bleeding from wounds that are not amenable to tourniquet use. Existing evidence suggests that hemostatic dressings, which are materials that help promote blood clotting, result in more rapid control of bleeding and decreased blood loss compared with direct pressure alone. Hemostatic dressings can be used by first aid providers as adjunctive therapy to direct manual pressure.

Control of Life-Threatening Bleeding: Packing a Wound

If the bleeding is life-threatening and is located on a body part that is not the arm or leg — like the head, neck, chest, or abdomen, — you should pack a wound and then apply pressure. Packing can also be done if they tourniquet does not stop the bleeding in the arms and legs.

Packing the wound means taking a material like gauze or clean cloth and placing it tightly into the wound. Continue to apply direct pressure until the bleeding stops. You would then apply pressure and a compression dressing.

Hypoglycemia

2020 (New): For an individual with suspected hypoglycemia who is awake and able to swallow, the first aid provider should encourage the individual to swallow oral glucose. Emergency services should be activated if symptoms do not resolve within 10 minutes or if symptoms worsen.

For children with suspected hypoglycemia who are awake but unwilling or unable to swallow oral glucose, it may be reasonable to apply a slurry of granulated sugar and water under the tongue.

Why: Timely treatment of individuals with mild symptoms of hypoglycemia prevents progression to more severe symptoms. Studies found that oral glucose that is swallowed has been shown to raise blood glucose levels higher than glucose absorbed through the mouth. For children, when needed, a slurry of sugar has been shown to be absorbed better than granulated sugars.

Cooling Techniques for Exertional Hyperthermia and Heat Stroke

2020 (New): For adults and children with exertional hyperthermia or heat stroke, first aid providers should move the individual from the hot environment, remove excess clothing, limit exertion, and activate emergency services.

2020 (New): For adults and children with exertional hyperthermia or heat stroke, it is reasonable to initiate immediate active cooling by using whole-body (neck-down) cool-to-cold water-immersion techniques (1-26°C [33.8-78.8°F]), when safe, until a core body temperature of less than 39°C (102.2°F) is reached or neurologic symptoms resolve.

2020 (New): For adults and children with exertional hyperthermia or heat stroke, it may be reasonable to initiate other forms of active cooling, including commercial ice packs, cold showers, ice sheets and towels, cooling vests and jackets, fanning, or a combination of techniques when water immersion is not available.

Why: Exertional heat stroke (confusion, seizures, coma) is an emergency condition characterized by a core body temperature greater than 40°C (104°F) and central nervous system dysfunction.

Existing evidence shows that it is important to bring the body's temperature down as quickly as possible to reduce the risk of organ injury or death.

Studies show that for adults, cold-water, whole-body immersion (from the neck down) is the most effective technique for rapidly reducing core temperature.

Other techniques, including commercial ice packs, cold showers, ice sheets and towels, cooling vests and jackets, or fanning, are also effective, but do not lower body temperature as fast as cold-water immersion.

Treatment recommendations were extrapolated to children because no studies of cooling techniques in children were identified.

Dental Avulsion

2020 (Updated): If an avulsed permanent tooth cannot be immediately replanted, it can be beneficial to place the tooth in Hanks' Balanced Salt Solution or in oral rehydration salt solutions or wrap the tooth in cling film to prevent dehydration and improve the likelihood of successful replantation by a dental professional, which should be done as soon as possible. If those items are unavailable, storage of the tooth in cow's milk or saliva may be considered. An avulsed permanent tooth should not be stored in tap water.

Why: Transporting an avulsed tooth in an efficacious storage medium can improve tooth viability and subsequent replantation success. This recommendation was updated to reflect the most scientifically supported mediums to ensure better outcomes for the individual.

Opioid Overdose Training for Lay Rescuers

2020 (New): It is reasonable for lay rescuers to receive training in responding to opioid overdose, including provision of naloxone.

Why: Multiple studies have found that targeted resuscitation training (for opioid users and their families and friends) is associated with higher rates of naloxone administration in witnessed overdoses.