American Heart Association.

HIGHLIGHTS

of the 2020 Focused Updates to the American Heart Association and American Red Cross Guidelines for First Aid

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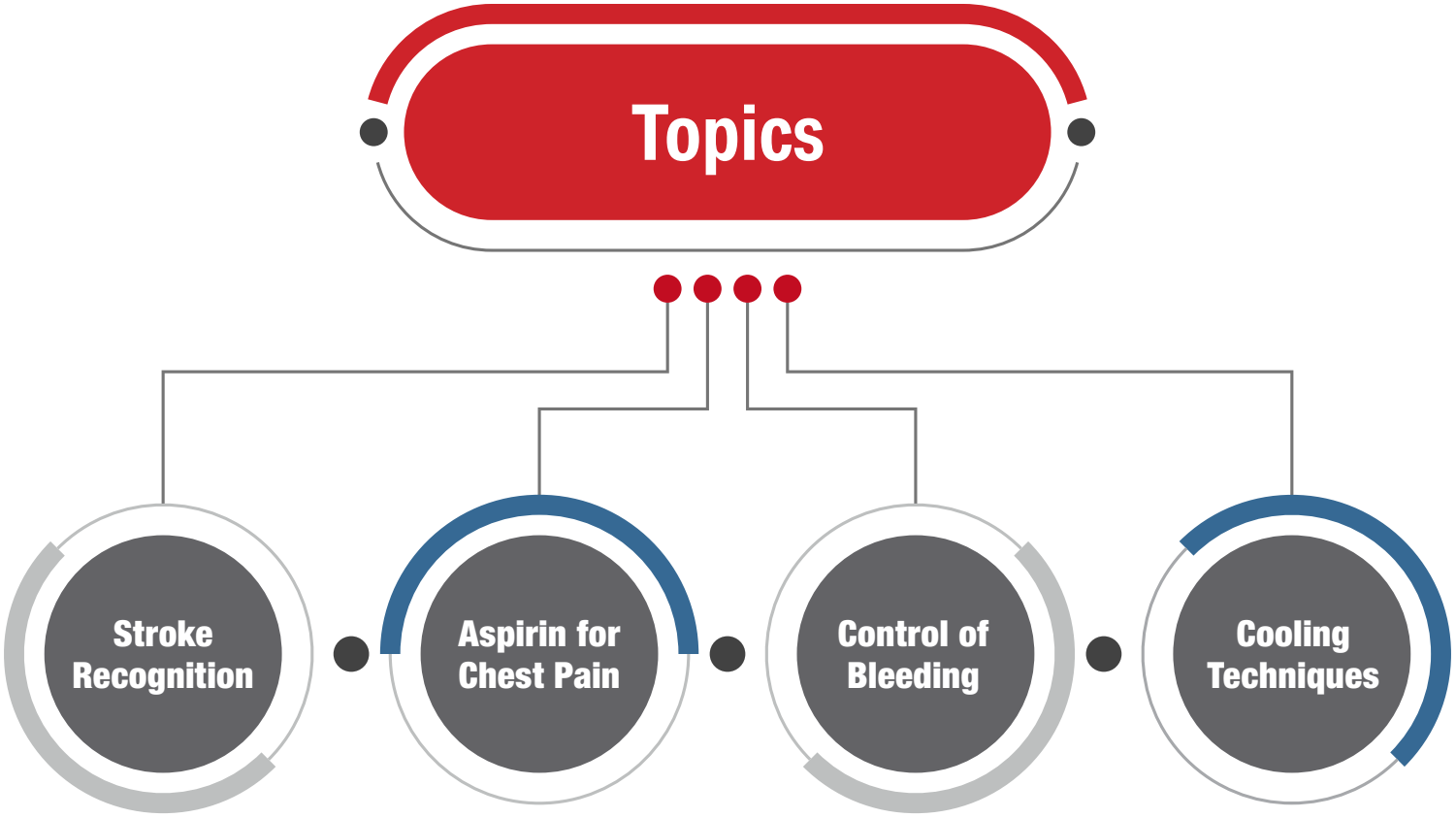

Introduction

These Highlights summarize the key issues and significant new or updated recommendations from the *2020 American Heart Association* (AHA) *and American Red Cross Focused Update for First Aid*. They have been developed for first aid providers and instructors to focus on the science and rationale for the recommendations that will result in changes to first aid training and practice.

Because this publication is a summary, it does not reference the supporting published studies and does not list Classes of Recommendation or Levels of Evidence. For more detailed information and references, please read the 2020 focused update and the detailed summary of first aid science in the *2020 International Consensus on First Aid Science With Treatment Recommendations*.[1]

The *2020 AHA and American Red Cross Focused Update for First Aid* is based on the International Liaison Committee on Resuscitation (ILCOR) continuous evidence evaluation process. In this process, ILCOR task forces prioritize topics for review with input from resuscitation councils, including the AHA and the Red Cross. Once a topic is approved for evaluation, a systematic review is performed, and then the ILCOR task force reviews the evidence and develops a draft Consensus on Science With Treatment Recommendations (CoSTR) and posts it online for public comment.[2] The methods used by the ILCOR to perform evidence evaluations[3] and by the AHA and Red Cross to translate these evidence evaluations into first aid guidelines[4] have been published in detail.

Both the ILCOR evidence evaluation process and the AHA and Red Cross guidelines development process are governed by strict disclosure policies designed to make relationships with industry and other conflicts of interest fully transparent and to protect these processes from undue influence. The AHA and Red Cross staff review conflict of interest disclosures from all first aid guidelines writing group members. The guidelines writing group chair and at least 50% of the guidelines writing group members are required to be free of all conflicts of interest. All relevant relationships are disclosed in the 2020 focused update and in all ILCOR CoSTR publications.

First Aid

First aid, which is the initial care provided for an acute illness or injury, has the goals of preserving life, alleviating suffering, preventing further illness or injury, and promoting recovery. First aid can be initiated by anyone in any situation and includes self-care. General characteristics of the provision of first aid, at any level of training, include recognizing, assessing, and prioritizing the need for first aid; providing care by using appropriate competencies; and recognizing limitations and seeking additional treatment when needed, such as activating emergency medical services or seeking other medical assistance.

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The 2020 focused update has recommendations on recognizing stroke, providing supplemental oxygen for those suspected of stroke, offering aspirin for those with chest pain, providing glucose for those suspected of hypoglycemia, means of stopping life-threatening bleeding, using compression wraps for recovery from closed extremity joint injuries, media for storing avulsed teeth, and cooling techniques for exertional hyperthermia or heatstroke. We highlight new and updated recommendations that we believe will have a significant impact on patient outcomes.

Summary of Key Issues and Major Changes

- First aid providers can use the signs of weakness in the face (eg, face droop), weakness in the arm or grip on one side of the body, or speech disturbance to identify someone with a possible stroke; they should activate emergency services when this occurs.
- After activating emergency services, first aid providers may encourage alert adults experiencing nontraumatic chest pain to chew and swallow 162 to 324 mg of aspirin. This recommendation applies to all adults except those who have an aspirin allergy or have been advised by healthcare providers not to take aspirin.
- Tourniquets should be used as soon as available to treat life-threatening extremity bleeding or extremity bleeding that cannot be controlled with direct pressure.
- Direct manual pressure, with the use of a hemostatic dressing if available, should be used to treat injuries with life-threatening external bleeding not amenable to the use of a tourniquet or for extremity bleeding until a tourniquet is available.
- For people experiencing exertional hyperthermia or heatstroke, cold-water, whole-body immersion is the most effective technique for rapidly reducing core temperature and should be initiated as soon as possible until a temperature of less than 39°C (102.2°F) is reached or resolution of signs and symptoms of heatstroke occurs. If cold-water, whole-body immersion is not available, other forms of cooling such as commercially prepared ice packs, cold showers, and fanning may be reasonable.

Major New and Updated Recommendations

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.

2015 (Old): The use of a stroke assessment system by first aid providers is recommended.

Why: Stroke is a leading cause of disability and death, and stroke outcomes improve with the prompt recognition of stroke signs and early access to time-sensitive interventions. Several stroke recognition tools identify stroke through signs of weakness in the face, arm, or grip on one side of the body or speech disturbance. Observational studies of stroke recognition tools found reductions in the time from symptom onset to treatment among stroke patients, 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.

2015 (Old): While waiting for EMS to arrive, the first aid provider may encourage a person with chest pain to take aspirin if the signs and symptoms suggest that the person is having a heart attack and the person has no allergy or contraindication to aspirin, such as recent bleeding. If a person has chest pain that does not suggest that the cause is cardiac in origin, or if the first aid provider is uncertain or uncomfortable with administration of aspirin, then the first aid provider should not encourage the person 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 people 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 those 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.

This recommendation applies to all adults except for those who have an aspirin allergy or have been advised by a healthcare provider not to take 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.

Why: Prior versions of the guidelines have provided recommendations for the control of bleeding. This 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 than direct pressure alone. Hemostatic dressings can be used by first aid providers as adjunctive therapy to direct manual pressure.

Cooling Techniques for Exertional Hyperthermia and Heatstroke

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

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

2020 (New): For adults with exertional hyperthermia or heatstroke, 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, evaporative, fanning, or a combination of techniques when water immersion is not available.

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

2020 (New): For children with exertional hyperthermia or heatstroke, 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, evaporative, fanning, or a combination when water immersion is not available.

Why: Exertional heatstroke is an emergency condition characterized by a core body temperature greater than 40°C (104°F) (severe hyperthermia) and central nervous system dysfunction (eg, confusion, seizures, coma). Existing evidence shows that for those with heatstroke, it is important to bring the body's temperature down as quickly as possible to reduce the risk of organ injury or death.

First aid providers should move these people from the hot environment, remove excess clothing, limit exertion, and activate emergency services. Studies show that for adults, cold-water, whole-body immersion (from the neck down) is the most effective technique for rapidly reducing core temperature and is reasonable to initiate as soon as possible after the recognition of heatstroke.

Other active cooling techniques, including commercial ice packs, cold showers, ice sheets and towels, cooling vests and jackets, evaporative, or fanning, are also effective at lowering body temperature 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.

References

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