

2015 Science Summary Table

Topic	2010	2015
Systematic Approach: BLS Assessment (name change)	• 1-2-3-4 • Check responsiveness: – Tap and shout – Scan chest for movement • Activate the emergency response system and get an AED • Circulation: Check the carotid pulse. If you cannot detect a pulse within 10 seconds, start CPR, beginning with chest compressions, immediately • Defibrillation: If indicated, deliver a shock with an AED or defibrillator	• Check responsiveness – Tap and shout • Shout for nearby help/activate emergency response system/get AED • Check breathing and pulse (simultaneously) • Defibrillation: If indicated, deliver a shock with an AED or defibrillator
Systematic Approach: Primary Assessment (name change)	• Airway • Breathing • Circulation • Differential diagnosis (H's and T's)	• Airway • Breathing • Circulation • Disability • Exposure
Systematic Approach: Secondary Assessment (new)	• NA	• SAMPLE • H's and T's
BLS: High-Quality CPR	• A rate of at least 100 chest compressions per minute • A compression depth of at least 2 inches in adults • Allowing complete chest recoil after each compression • Minimizing interruptions in compressions (10 seconds or less) • Avoiding excessive ventilation • Switching providers about every 2 minutes to avoid fatigue	• A rate of 100 to 120 chest compressions per minute • A compression depth of at least 2 inches in adults* • Allowing complete chest recoil after each compression • Minimizing interruptions in compressions (10 seconds or less) • Avoiding excessive ventilation • Chest compression fraction of at least 60% but ideally greater than 80% • Switch compressor about every 2 minutes or sooner if fatigued • Use of audio and visual feedback devices to monitor CPR quality *When a feedback device is available, adjust to a maximum depth of 2.4 inches [6 cm]) in adolescents and adults.
ACLS: Immediate Post-Cardiac Arrest Care	• Consider therapeutic hypothermia (32°C to 34°C for 12 to 24 hours) to optimize survival and neurologic recovery in comatose patients	• Consider targeted temperature management to optimize survival and neurologic recovery in comatose patients—cool to 32°C to 36°C for at least 24 hours • Out-of-hospital cooling of patients with rapid infusion of cold IV fluids after ROSC is not recommended

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ACLS: Managing the Airway	For cardiac arrest with an advanced airway in place, ventilate once every 6 to 8 seconds	For cardiac arrest with an advanced airway in place, ventilate once every 6 seconds
ACLS: Bradycardia	Dopamine dosing: 2 to 10 mcg/kg per minute	Dopamine dosing: 2 to 20 mcg/kg per minute
ACLS: ACS	- NSTEMI - Titrate O₂ saturation to ≥94%	- NSTE-ACS - Titrate O₂ saturation to ≥90%
Topic	2015	
ACLS: Cardiac Arrest	- Removed vasopressin from the Cardiac Arrest Algorithm - Administer epinephrine as soon as feasible after the onset of cardiac arrest due to an initial nonshockable rhythm - Added Opioid-Associated Life-Threatening Emergency (Adult) Algorithm - Healthcare providers tailor the sequence of rescue actions based on the presumed etiology of the arrest. Moreover, ACLS providers functioning within a high-performance team can choose the optimal approach for minimizing interruptions in chest compressions (thereby improving chest compression fraction [CCF]). Use of different protocols, such as 3 cycles of 200 continuous compressions with passive oxygen insufflation and airway adjuncts, compression-only CPR in the first few minutes after arrest, and continuous chest compressions with asynchronous ventilation once every 6 seconds with the use of a bag-mask device, are a few examples of optimizing CCF and high-quality CPR. A default compression-to-ventilation ratio of 30:2 should be used by less-trained healthcare providers or if 30:2 is the established protocol. - Consider using ultrasound during arrest to detect underlying causes (eg, PE) - Extracorporeal CPR may be considered among select cardiac arrest patients who have not responded to initial conventional CPR, in settings where it can be rapidly implemented - Consider administering intravenous lipid emulsion, concomitant with standard resuscitative care, to patients who have premonitory neurotoxicity or cardiac arrest due to local anesthetic toxicity or other forms of drug toxicity and who are failing standard resuscitative measures	
ACLS: Stroke	Endovascular therapy (treatment window up to 6 hours)	