

ACLS Helpful Hints 2020 Guidelines – Updated March 11.2021

The ACLS Provider or Renewal course is a comprehensive program that covers the 2020 guidelines for Advanced Cardiac Life Support. Knowledge of basic cardiac dysrhythmias is required. The ACLS exam is 50 questions. Rhythm recognition is required for 11 questions. The exam passing score is 84% or you may miss 8 questions. Remediation allowed. The exam is open resource (book, notes).

Book Required before the class: Purchase at shopcpr.heart.org 2020 Guidelines ACLS Provider Manual

- ACLS Provider Manual eBook Product number 20-3100 SBN: 978-1-61669-797-6 (\$36.50) or
- ACLS Provider Manual (Paper version) Product Number: 20-1106 ISBN: 978-1-61669-772-3 (\$42.00)

ACLS Precourse Self Assessment Required before the class (no charge) 70% to Pass

American Heart Association link is elearning.heart.org/courses. Click Advanced Cardiac Life Support (ACLS) course

ACLS Precourse Self-Assessment (no charge) do not choose ACLS Precourse Self-Assessment and Precourse Work

Complete this assessment prior to taking the course. Dysrhythmia knowledge is required as strip recognition is required.

BLS Overview -CAB Compressions, Airway, Breaths



- Push Hard and Fast-Repeat every 2 minutes
- If person unresponsive +check breathing and pulse. Pulse check no more than +5-10 seconds.
- Anytime no pulse or unsure - COMPRESSIONS
- +Chest compression fraction 80% or greater
+Charge defibrillator 15 sec before rhythm check

Elements of Good CPR

- Compressions started within 10 seconds
 - Rate-at least +100– 120 per minute
 - Compressions push hard and fast depth at least 2 inches, not more than 2.4 inches.
 - Allow complete chest recoil after compression
 - Switch compressors every 2 min or 5 cycles
 - Minimize interruptions (less 10 secs)
 - PETCO₂ reading of at least 10
 - Chest compression fraction (CCF) above 80%
- Ventilation
 - Effective breaths to make the chest rise
 - Avoid excessive ventilation
 - 1 breath every 6 seconds (10/min)
 - 30 compressions to 2 ventilations
- Use AED/defibrillator as soon as possible
- Can compress while defibrillator is charging.
- +Excessive ventilation can decrease cardiac output

+Cardiac Rhythm Strips to Interpret/treat

- ✓ Ventricular Tachycardia
 - Stable, Unstable, Monomorphic VT
- ✓ Supraventricular tachycardia, unstable
- ✓ Heart Blocks
 - Second-degree atrioventricular Type I
 - Second-degree atrioventricular Type II
 - Third degree atrioventricular
- ✓ Ventricular Fibrillation

- ✓ PEA, Pulseless Electrical Activity

Stroke

- 8 D's - Detection, dispatch, delivery, door, data decision, drug/device, disposition
- Perform validated stroke screen, severity tool
 - Facial Droop, Arm Drift, Abnormal Speech
 - Establish time for symptom onset
- +Emergent Non-Contrast CT scan or MRI of Head
 - Best practice bypass ED go straight to imaging
- +Start fibrinolytic therapy as soon as possible
- +Provide prehospital notification

+Acute Coronary Syndromes, STEMI

+STEMI door-to-balloon within 90 min or less of initial contact. Door to needle fibrinolysis 30 min or less. +Give Fibrinolytics as soon as possible, consider endovascular therapy. +Coronary perfusion-capable medical center +12 Lead for CP, epigastric pain, or rhythm change Aspirin +162 – 325 mg, NTG, Morphine Right ventricular MI - caution with NTG

Bradycardia - Heart rate below 50

Need to assess stable versus unstable. If stable, monitor, observe, and obtain expert consultation.

If unstable...

- Atropine 1 mg IV. Can repeat Q 3-5 min to Max 3 mg
- If Atropine ineffective
 - Dopamine infusion (5 - 20/kg/min)
 - Epinephrine infusion (2-10mcg/min)
 - Transcutaneous pacing

Tachycardia with a pulse

- If unstable (wide or narrow)-go straight to +synchronized cardioversion (sedate first)
- If stable narrow complex
 - obtain 12 lead
 - vagal maneuvers
 - +adenosine 6mg RAPID IVP, followed by 12mg

+Team Dynamics

- +Closed Loop – repeat orders, question if wrong
- +Incorrect order? – address immediately
- +Task out of scope? – ask for new task or role
- +Clearly delegate tasks

Pulseless Rhythms Apneic, Pulseless

Oxygen, Monitor Shockable Rhythms, VF, VTach

Push hard and fast 100-120/min 2 minutes

Oxygen, monitor, IV, Fluids, Glucose Check

+Agonal gasps are a likely indicator

+Defibrillation – Biphasic 120-200 J, Monophasic 360 J

- ♥ +Epinephrine 1 mg every 3-5 minutes
- ♥ Amiodarone +300mg 1st dose then 150 mg or
+Lidocaine 1-1.5 mg/kg first dose then 0.5-0.75 mg/kg

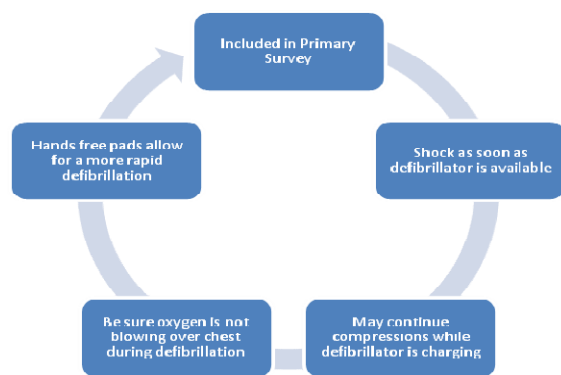
Non Shockable Rhythms - Asystole/PEA

Push hard and fast 100-120/min 2 minutes

- ♥ *Epinephrine 1 mg every 3-5 minutes

+Synchronized Cardioversion

Unstable VT, unstable SVT



Treat reversible causes (H's and T's)

Hypovolemia	Tension pneumothorax
Hypoxia	Tamponade, cardiac
Hydrogen ion (acidosis)	Toxins – poisons, drugs
Hypo/hyperkalemia	Thrombosis, Pulmonary
Hypothermia	Thrombosis, Coronary

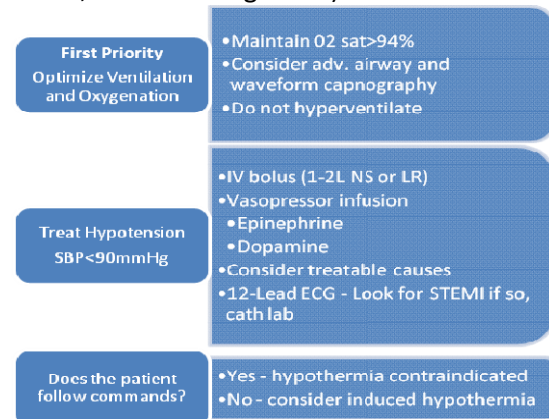


Waveform Capnography in ACLS (PETCO2)

- +Allows for accurate monitoring quality of CPR especially if intubated
- +Most method to confirm and monitor ETT placement

Post Cardiac Arrest Care

- ✓ 12 Lead, airway, capnography
 - ✓ SpO2 92 – 98%, 10 breaths per minute
 - ✓ TTM Targeted Temperature Management
- +Hypothermia if DOES NOT follow verbal commands (TTM **target temperature management, +at least 24 hours**, +32 to 36 degrees C)



Cardiac Arrest in Pregnancy

- CPR, defibrillation, drugs – as with cardiac arrest
- Most experienced person for intubation
- Place IV above diaphragm
- If receiving IV magnesium stop and give calcium chloride or calcium gluconate
- BLS Guidelines -Uterus above umbilicus lateral uterine displacement, manually moving the uterus to the patient's left side to relieve pressure on vessels
- Obstetric interventions – detach fetal monitor
 - Prepare for perimortem Cesarean if no ROSC in minutes

Opioid Poisoning

- Breathing consider Naloxone
- No breathing - CPR, AED, Naloxone 0.04 – 0.4 mg IV

Points to Ponder

- +Medical Emergency Teams (MET)/ Rapid Response Teams (RRT) can improve outcome by identifying and treating early clinical deterioration.
- +OPA, Oropharyngeal airway – measure from corner of mouth to angle of the mandible
- +Minimal systolic blood pressure is 90
- Don't suction for more than 10 seconds
- +Pulse oximeter reading low, give oxygen
- CPR Coach team member to measure chest compressions (can be at the monitor also)
- 6th link is Recovery (early recognition, EMS, High-Quality CPR, defibrillation, Post Cardiac Arrest Care, Recovery)