# AZ ACLS 2025 BLS & ACLS Quick Study Guide

Student-friendly renewal review for BLS and ACLS providers

AZ ACLS | www.azacls.com | 623 451 0221 | info@azacls.com

Purpose: This guide is designed for renewal students who want a practical review before an upcoming BLS and ACLS class. It summarizes high-yield concepts in original AZ ACLS wording and points students to official AHA resources for the complete standards.

**Disclaimer:** This document is for study support only. It does not replace the current AHA Provider Manual, official AHA course materials, instructor direction, medical control, local protocol, or clinical judgment. Always follow the most current AHA guidance and your agency/hospital protocols.

## How to Use This Guide

- Review the BLS sections first. ACLS performance depends on high-quality CPR, early defibrillation, and strong basic skills.
- Use the rhythm section as a pattern-recognition refresher. The rhythm strips are educational examples, not diagnostic ECGs.
- Use the medication table as a quick memory aid only. Verify dosing in the current AHA materials and local protocol.
- Complete the practice test without looking at the answer key, then review the explanations on the final pages.

## BLS Renewal Quick Review

**The priority in BLS is early recognition, activation of the emergency response system, high-quality CPR, and rapid AED/defibrillator use.** For renewal students, the most common performance issues are slow scene assessment, delays in starting compressions, poor compression depth or recoil, long pauses, and delayed AED use. See Resources R1-R4.

| Skill | Adult | Child | Infant |
|---|---|---|---|
| Compression rate | 100-120/min | 100-120/min | 100-120/min |
| Compression depth | At least 2 inches; avoid excessive depth | About 1/3 AP chest depth, about 2 inches | About 1/3 AP chest depth, about 1.5 inches |
| Compression-ventilation ratio | 30:2 if no advanced airway | 30:2 single rescuer; 15:2 with 2 rescuers | 30:2 single rescuer; 15:2 with 2 rescuers |
| Pulse check | No more than 10 seconds | No more than 10 seconds | No more than 10 seconds |
| AED | Use as soon as available | Use pediatric pads/attenuator if available; do not delay shock | Use pediatric pads/attenuator if available; do not delay shock |
| Key reminder | Full recoil; minimize pauses | Use one or two hands as appropriate | Use two thumbs with encircling hands when 2 rescuers are present |

### High-Quality CPR Checklist

- Push hard and fast at 100-120/min with complete chest recoil.
- Minimize interruptions; pre-charge/plan compressor switches before rhythm checks when possible.
- Switch compressors about every 2 minutes or sooner if fatigued.
- Avoid excessive ventilation. If an advanced airway is in place, deliver 1 breath every 6 seconds with continuous compressions.
- Use waveform capnography when available; a low or falling ETCO2 should trigger reassessment of CPR quality and reversible causes.

## ACLS Renewal Quick Review

**ACLS builds on BLS.** A renewal student should be ready to perform high-quality BLS, identify common arrest and peri-arrest rhythms, participate in a high-performance team, use the defibrillator safely, and understand the major medication pathways. The AHA ACLS course emphasizes systematic assessment, airway management, rhythm recognition, defibrillation, information on IV/IO access, team dynamics, and post-arrest care. See Resources R2, R4, and R6.

### Adult Cardiac Arrest: What to Know

- Shockable rhythms: VF and pulseless VT. Priorities are CPR, defibrillation, epinephrine after initial defibrillation attempts fail, and antiarrhythmic consideration for refractory VF/pVT.
- Non-shockable rhythms: asystole and PEA. Priorities are CPR, early epinephrine as soon as feasible, and aggressive search for reversible causes.
- Rhythm checks should be brief. Decide quickly whether to shock or not, then return to compressions.
- Always search for reversible causes: hypovolemia, hypoxia, hydrogen ion/acidosis, hypo-/hyperkalemia, hypothermia, tension pneumothorax, tamponade, toxins, pulmonary thrombosis, and coronary thrombosis.
- ROSC is not the end of the code. Transition to oxygenation/ventilation targets, blood pressure support, 12-lead ECG/PCI consideration, temperature management, glucose management, and ongoing critical care.

## Bradycardia, Tachycardia, ACS, Stroke, and ROSC

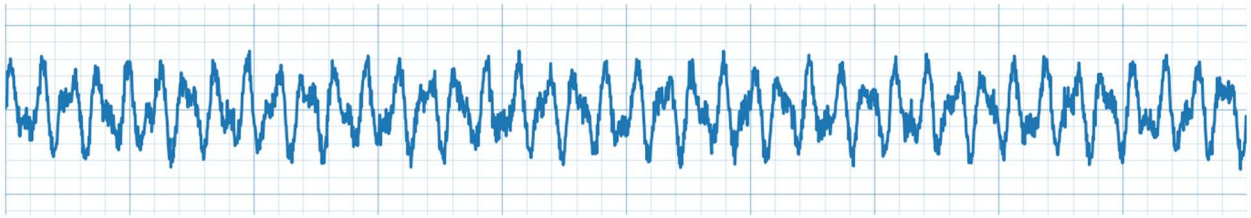
| Topic | Recognition | Renewal-Class Focus |
|---|---|---|
| Bradycardia | Heart rate is typically <50/min with symptoms or cardiopulmonary compromise. | Treat causes, support ABCs, monitor, maintain IV access, obtain a 12-lead ECG if available, administer atropine when appropriate, and prepare for pacing/infusions if unstable. |
| Tachycardia | Heart rate typically >=150/min when tachyarrhythmia is causing instability. | Decide stable vs unstable. Unstable tachycardia usually requires synchronized cardioversion. A regular |

| | | |
|---|---|---|
| | | narrow complex may respond to vagal maneuvers/adenosine. |
| ACS | Chest discomfort, dyspnea, diaphoresis, nausea, syncope, or concerning ECG findings. | Early recognition, 12-lead ECG, aspirin when not contraindicated, oxygen only when indicated, and rapid reperfusion pathway. |
| Stroke | Facial droop, arm weakness, speech difficulty, sudden neurologic deficit, severe headache, visual change, balance problem. | Determine last known well, activate stroke system, glucose check, neurologic screen, and rapid transport/CT pathway. |
| ROSC | Pulse returns, blood pressure/perfusion improves, abrupt sustained rise in ETCO2 may occur. | Post-arrest care: oxygenation, ventilation, BP support, ECG/PCI consideration, temperature control, and ICU-level care. |

## Rhythm Recognition Examples

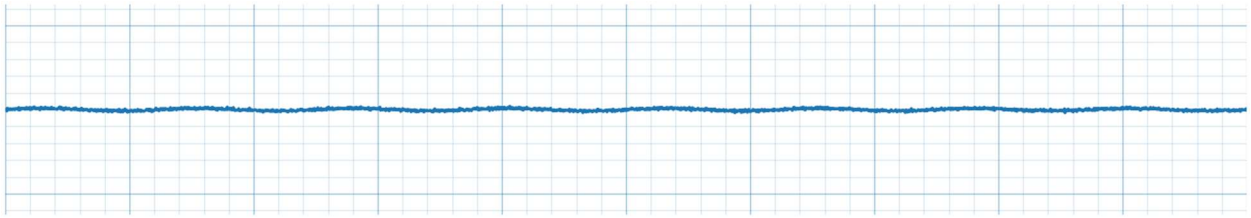
These rhythm strips are original educational schematic examples included for study. They are not diagnostic ECGs and should not replace formal ECG interpretation, monitor review, or instructor feedback. See Resources R2, R6, and R9.

### Ventricular Fibrillation (VF)



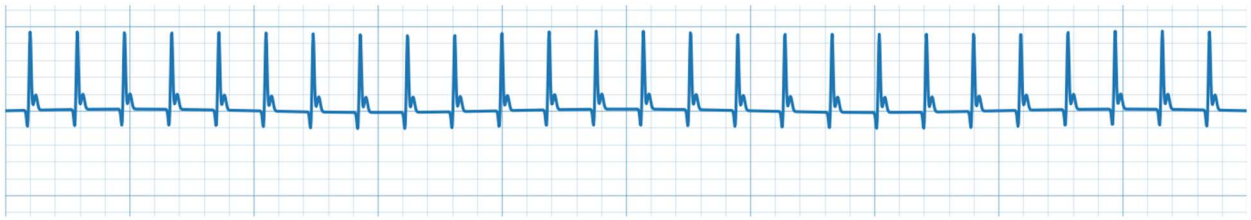
Chaotic, irregular waveform without organized QRS complexes. Treat as shockable cardiac arrest when pulseless.

### Asystole



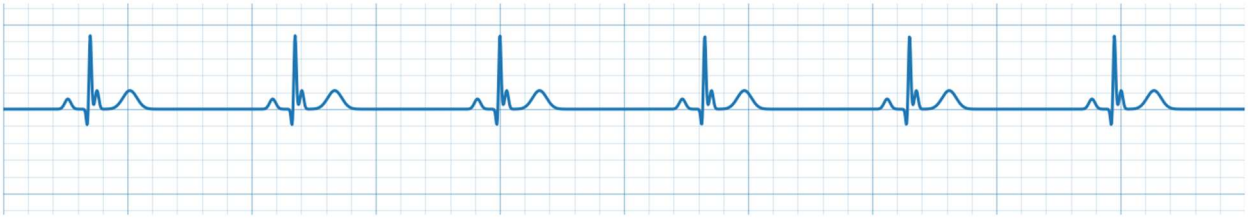
Near-flat rhythm. Confirm leads/gain, continue CPR, give epinephrine, and search for reversible causes. Not shockable.

### Supraventricular Tachycardia (SVT)



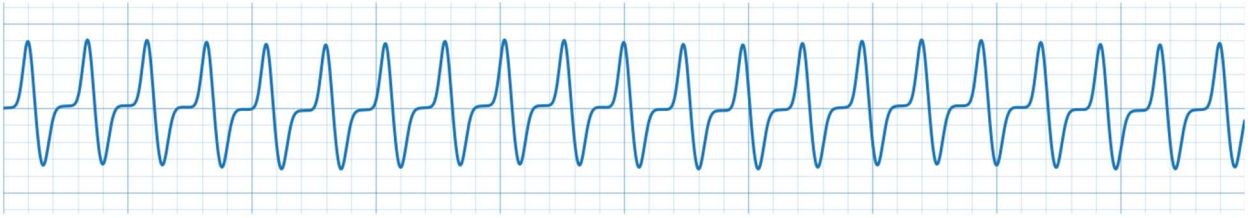
Fast regular narrow-complex tachycardia pattern. Assess stability. Consider vagal maneuvers and adenosine if regular; cardiovert if unstable.

### Symptomatic Bradycardia



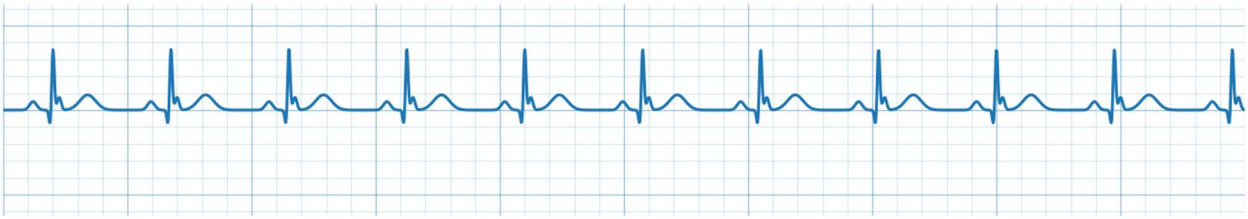
Slow, organized rhythm. Treat only when bradycardia is causing hypotension, altered mental status, shock, ischemic discomfort, or acute heart failure.

### Monomorphic VT with Pulse



Regular wide-complex tachycardia. If pulseless, treat as VF/pVT arrest. If pulse is present, assess stability and consider synchronized cardioversion or antiarrhythmics.

### Pulseless Electrical Activity (PEA) - organized rhythm without pulse



Organized electrical activity without a palpable pulse. Treat as non-shockable cardiac arrest with CPR, early epinephrine, and reversible-cause management.

## ACLS Medication Quick Reference

**Use this table as a memory aid only.** Medication selection, dose, route, and timing must be verified against current AHA materials, local protocol, medical direction, and patient factors. See Resources R2, R4, R6, and R7.

| Medication | Common ACLS Use | Adult Dose/Range | Key Reminder |
|---|---|---|---|
| Epinephrine | Cardiac arrest; bradycardia infusion option | Arrest: 1 mg IV/IO every 3-5 min. Brady infusion: 2-10 mcg/min. | Give early for non-shockable arrest; after initial defibrillation attempts fail for shockable arrest. |
| Amiodarone | Refractory VF/pVT; stable wide-QRS tachycardia | Arrest: 300 mg IV/IO bolus, then 150 mg. Stable wide-QRS: 150 mg over 10 min; infusion 1 mg/min x 6 hr. | For VF/pVT unresponsive to defibrillation, monitor BP/QT in perfusing rhythms. |
| Lidocaine | Alternative for refractory VF/pVT | 1-1.5 mg/kg IV/IO, then 0.5-0.75 mg/kg. | Alternative antiarrhythmic option in refractory VF/pVT. |
| Atropine | Symptomatic bradycardia | 1 mg IV bolus every 3-5 min; max 3 mg. | Do not delay pacing/infusions in severely unstable bradycardia. |
| Adenosine | Regular narrow-complex tachycardia; selected regular monomorphic wide-complex tachycardia | 6 mg rapid IV push, then 12 mg if needed. | Use rapid push and flush; avoid for irregular/polymorphic wide-complex rhythms. |
| Dopamine | Symptomatic bradycardia | 5-20 mcg/kg/min. | Titrate to response; taper |

| | | | |
|---|---|---|---|
| | infusion option | | slowly. |
| Procainamide | Stable wide-QRS tachycardia option | 20-50 mg/min until arrhythmia suppressed, hypotension, QRS widens >50%, or max 17 mg/kg; maintenance 1-4 mg/min. | Avoid in patients with prolonged QT or CHF. |
| Magnesium | Torsades de pointes/polymorphic VT with long QT consideration | Common ACLS teaching: 1-2 g IV/IO diluted per protocol. | Routine magnesium for cardiac arrest is not recommended unless a specific indication exists. |

## Megacode and Team Performance Tips

- Say the rhythm decision out loud: shockable or non-shockable.
- Assign roles early: compressor, airway, monitor/defibrillator, medication/IV, recorder, and team leader.
- Use closed-loop communication: order, repeat-back, confirmation.
- Prepare for the next action during the current CPR cycle. Do not wait until the rhythm check to decide what comes next.
- Keep defibrillation safe and efficient: announce charging, clear visibly, shock, and immediately resume CPR.
- Do not let airway procedures create long compression pauses.

## Practice Test: 5 BLS Questions + 10 ACLS Questions

**1. (BLS) A healthcare provider finds an adult patient unresponsive and not breathing normally. What is the best immediate action after confirming the scene is safe?**

A. Wait for another provider before beginning care.

B. Activate the emergency response system, check pulse/breathing quickly, and start CPR if no pulse is found.

C. Give 2 minutes of ventilations before checking a pulse.

D. Look for a medication list before starting compressions.

**2. (BLS) During adult CPR, which performance target best supports high-quality compressions?**

A. Rate 60-80/min with shallow compressions.

B. Rate 100-120/min with complete chest recoil.

C. Pause every 30 seconds to reassess.

D. Ventilate as fast as possible to improve oxygenation.

**3. (BLS) Two rescuers are performing CPR on an infant with no advanced airway. What compression-to-ventilation ratio should they use?**

A. 30:2

B. 15:2

C. 5:1

D. Continuous compressions with 1 breath every 6 seconds

**4. (BLS) An AED arrives during CPR. What should the team do?**

A. Finish 5 full cycles before applying pads.

B. Apply pads and use the AED as soon as possible while minimizing interruptions.

C. Use the AED only if the arrest was witnessed.

D. Delay AED use until ALS arrives.

**5. (BLS) What is the maximum recommended time for a pulse check during BLS?**

A. 5 seconds

B. 10 seconds

C. 20 seconds

D. 30 seconds

**6. (ACLS) A patient is pulseless with coarse VF on the monitor. What is the priority action?**

A. Atropine

B. Synchronized cardioversion

C. Defibrillation with immediate CPR resumption

D. Observe for rhythm conversion

**7. (ACLS) A patient in cardiac arrest has asystole. Which action is appropriate?**

A. Defibrillate immediately.

B. Continue CPR, give epinephrine, and search for reversible causes.

C. Give adenosine.

D. Perform synchronized cardioversion.

**8. (ACLS) During VF/pVT arrest, epinephrine is generally considered after what?**

A. Before attaching the defibrillator

B. After initial defibrillation attempts have failed

C. Only after ROSC

D. Only if the patient has a pulse

**9. (ACLS) A patient has symptomatic bradycardia with hypotension. The rhythm persists despite initial support. Which medication is typically first-line when appropriate?**

A. Atropine

B. Adenosine

C. Amiodarone

D. Magnesium

**10. (ACLS) A patient has regular narrow-complex tachycardia and is stable. Which intervention may be considered after vagal maneuvers?**

A. Adenosine

B. Defibrillation

C. Epinephrine 1 mg

D. Atropine

**11. (ACLS) A patient has unstable tachycardia with hypotension and altered mental status. What is the expected priority treatment?**

A. Observation only

B. Synchronized cardioversion, with sedation whenever feasible if it does not delay care

C. Atropine every 3-5 minutes

D. Oral beta blocker only

**12. (ACLS) Which rhythm is considered shockable in cardiac arrest?**

A. Asystole

B. PEA

C. Pulseless ventricular tachycardia

D. Sinus bradycardia with a pulse

**13. (ACLS) During CPR with an advanced airway in place, how should ventilations generally be delivered?**

A. 30:2 ratio

B. 1 breath every 6 seconds with continuous compressions

C. 1 breath every 2 seconds

D. No ventilations until ROSC

**14. (ACLS) A sudden, sustained rise in waveform capnography during cardiac arrest may suggest what?**

A. Worsening acidosis only

B. ROSC

C. Need to stop compressions for 60 seconds

D. That defibrillation is contraindicated

**15. (ACLS) In a megacode, what is the best example of closed-loop communication?**

A. The leader silently points to the defibrillator.

B. A team member repeats the order and confirms once completed.

C. Everyone performs tasks without speaking.

D. The recorder makes all treatment decisions.

## Answer Key with Brief Explanations

1. B - Early recognition, activation, rapid pulse/breathing check, and CPR are core BLS actions.

2. B - AHA high-quality CPR emphasizes 100-120/min, adequate depth, full recoil, and minimal pauses.

3. B - Two-rescuer infant CPR uses 15:2 when no advanced airway is in place.

4. B - AED/defibrillator use should occur as soon as available with minimal compression interruption.

5. B - Pulse checks should be brief and should not exceed 10 seconds.

6. C - VF/pVT cardiac arrest requires defibrillation, then immediate CPR resumption.

7. B - Asystole is non-shockable; treat with CPR, epinephrine, and reversible-cause management.

8. B - For shockable arrest, epinephrine is reasonable after initial defibrillation attempts fail.

9. A - Atropine is the typical first medication for symptomatic bradycardia when appropriate.

10. A - Adenosine may be used for regular narrow-complex tachycardia after vagal maneuvers.

11. B - Unstable tachycardia generally requires synchronized cardioversion; sedate when feasible without delaying care.

12. C - Pulseless VT and VF are shockable arrest rhythms.

13. B - With an advanced airway, compressions continue, and ventilations are typically 1 breath every 6 seconds.

14. B - Abrupt sustained ETCO2 rise may indicate ROSC; confirm pulse and perfusion.

15. B - Closed-loop communication improves team reliability and reduces missed tasks.

## Resource Page

Students should use these official resources for the full standards, algorithms, and course expectations. This guide intentionally summarizes concepts in original wording and does not reproduce copyrighted AHA algorithms.

**R1. American Heart Association: 2025 Guidelines for CPR and ECC:** https://cpr.heart.org/en/resuscitation-science/cpr-and-ecc-guidelines

**R2. AHA 2025 Algorithms page:** https://cpr.heart.org/en/resuscitation-science/cpr-and-ecc-guidelines/algorithms

**R3. Highlights of the 2025 AHA Guidelines for CPR and ECC:** https://cpr.heart.org/-/media/CPR-Files/2025-documents-for-cpr-heart-edits-posting/Resuscitation-Science/252500_Hghlghts_2025ECCGuidelines.pdf?sc_lang=en

**R4. Part 7: Adult Basic Life Support, 2025 AHA Guidelines:** https://cpr.heart.org/en/resuscitation-science/cpr-and-ecc-guidelines/adult-basic-and-advanced-life-support

**R5. Part 4: Systems of Care, 2025 AHA Guidelines:** https://cpr.heart.org/en/resuscitation-science/cpr-and-ecc-guidelines/systems-of-care

**R6. Part 9: Adult Advanced Life Support, 2025 AHA Guidelines:** https://cpr.heart.org/en/resuscitation-science/cpr-and-ecc-guidelines/adult-advanced-life-support

**R7. AHA 2025 Adult Cardiac Arrest Circular Algorithm PDF:** https://cpr.heart.org/-/media/CPR-Files/CPR-Guidelines-Files/2025-Algorithms/Algorithm-ACLS-CA-Circular-250620.pdf

**R8. AHA 2025 Adult Bradycardia With a Pulse Algorithm PDF:** https://cpr.heart.org/-/media/CPR-Files/CPR-Guidelines-Files/2025-Algorithms/Algorithm-ACLS-Bradycardia-250514.pdf?sc_lang=en

**R9. AHA 2025 Adult Tachyarrhythmia With a Pulse Algorithm PDF:** https://cpr.heart.org/-/media/CPR-Files/CPR-Guidelines-Files/2025-Algorithms/Algorithm-ACLS-Tachycardia-250514.pdf

**R10. AHA Atlas:** https://atlas.heart.org/