



ACLS QUICK REFERENCE

PULSE RHYTHMS

2025 AHA
CPR & ECC Guidelines

SYMPTOMATIC BRADYCARDIA	TACHYARRHYTHMIA WITH A PULSE
- Heart rate typically <50/min when clinically significant. - Look for compromise: hypotension, acute altered mental status, signs of shock, ischemic chest discomfort, or acute heart failure. - Support airway/breathing; oxygen as needed; monitor; establish vascular access; obtain 12-lead ECG when feasible. - Atropine: 1 mg IV bolus; repeat every 3-5 min; max 3 mg. - If atropine ineffective: transcutaneous pacing and/or dopamine infusion or epinephrine infusion. - Dopamine: 5-20 mcg/kg/min; titrate to response. - Epinephrine infusion: 2-10 mcg/min; titrate to response. - Consider expert consultation and transvenous pacing.	- Heart rate typically ≥150/min when tachyarrhythmia is the cause. - Initial support: airway, breathing, oxygen if hypoxemic, monitor, IV access, 12-lead ECG if available. - UNSTABLE? Hypotension, altered mental status, shock, ischemic chest discomfort, or acute heart failure → synchronized cardioversion; sedate when feasible. - Stable narrow regular: vagal maneuvers; adenosine may be used. - Adenosine: 6 mg rapid IV push + flush; then 12 mg if needed. - Stable wide QRS (≥0.12 sec): adenosine only if regular and monomorphic; consider antiarrhythmic infusion + expert consultation. - Amiodarone: 150 mg IV over 10 min; repeat if VT recurs, then 1 mg/min for first 6 h. - Procainamide: 20-50 mg/min until arrhythmia suppressed, hypotension, QRS widens >50%, or 17 mg/kg max; maintenance 1-4 mg/min.



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ADULT CARDIAC ARREST

2025 AHA
CPR & ECC Guidelines

1. START HIGH-QUALITY CPR	2. RHYTHM / SHOCK / DRUGS	3. SHOCK & MEDICATION DOSES
Push hard: at least 2 in (5 cm). Push fast: 100-120/min; allow full recoil. Minimize interruptions; change compressor about every 2 min. Without advanced airway: 30:2. With advanced airway: continuous compressions + 1 breath every 6 sec (10/min). Use waveform capnography when available; falling/low ETCO₂ → reassess CPR quality.	VF/pVT: shock → CPR 2 min → rhythm check. Give epinephrine after initial defibrillation attempts; repeat every 3-5 min. For refractory VF/pVT, consider amiodarone or lidocaine. Asystole/PEA: CPR + epinephrine as soon as feasible; do NOT shock. Always search for reversible causes (Hs & Ts).	Biphasic defibrillation: use manufacturer recommendation (often 120-200 J); if unknown, use maximum available. Monophasic: 360 J. Epinephrine: 1 mg IV/IO every 3-5 min. Amiodarone: 300 mg IV/IO bolus, then 150 mg. Lidocaine: 1-1.5 mg/kg IV/IO, then 0.5-0.75 mg/kg.

REVERSIBLE CAUSES - Hs & Ts	ROSC + TEAM PRIORITIES				
<table> <tr> <th>Hs</th><th>Ts</th></tr> <tr> <td> - Hypovolemia - Hypoxia - Hydrogen ion (acidosis) - Hypo-/hyperkalemia - Hypothermia </td><td> - Tension pneumothorax - Tamponade, cardiac - Toxins - Thrombosis, pulmonary - Thrombosis, coronary </td></tr> </table>	Hs	Ts	- Hypovolemia - Hypoxia - Hydrogen ion (acidosis) - Hypo-/hyperkalemia - Hypothermia	- Tension pneumothorax - Tamponade, cardiac - Toxins - Thrombosis, pulmonary - Thrombosis, coronary	Signs of ROSC Pulse and measurable blood pressure. Abrupt sustained rise in ETCO₂ (often ≥40 mm Hg). Spontaneous arterial pressure waves with intra-arterial monitoring. High-performance team reminders Assign clear roles and a team leader. Use closed-loop communication. Announce compressor changes and shock delivery. Minimize hands-off time; resume CPR immediately after shock.
Hs	Ts				
- Hypovolemia - Hypoxia - Hydrogen ion (acidosis) - Hypo-/hyperkalemia - Hypothermia	- Tension pneumothorax - Tamponade, cardiac - Toxins - Thrombosis, pulmonary - Thrombosis, coronary				



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POST CARDIAC ARREST

POST-CARDIAC ARREST CARE - AFTER ROSC

Oxygenation / ventilation / circulation

- Use 100% oxygen until reliable SpO2 or PaO2 measurement is available.
- Once reliable: titrate to SpO2 90%-98%; avoid hypoxemia and hyperoxemia.
- Avoid hypotension; target MAP at least 65 mm Hg.
- Obtain 12-lead ECG and treat the cause of arrest; consider emergent coronary evaluation when indicated.

Neurologic / temperature priorities

POST-ROSC TEMPERATURE GOAL

32 C - 37.5 C

Start as soon as possible; maintain temperature control for at least 36 h.

- If patient remains unresponsive to verbal commands, use a deliberate, protocolized temperature-control strategy.
- Avoid premature neurologic prognostication; use a multimodal approach and allow adequate time.
- Continue glucose, seizure, ventilation, and hemodynamic management per current post-arrest protocols.

STUDENT REMINDER

This 2-page handout is a class study aid summarizing selected adult ACLS concepts. It does not replace the 2025 AHA ACLS Provider Manual, official algorithms/reference cards, instructor direction, medication verification, or local clinical protocols.

Source basis: 2025 American Heart Association Guidelines for CPR and ECC - Adult Advanced Life Support and Post-Cardiac Arrest Care. Includes current AHA change-notice updates available in 2026.