



PALS QUICK REFERENCE

RESPIRATORY • BRADYCARDIA • TACHYCARDIA

2025 AHA/AAP
CPR & ECC Guidelines

RESPIRATORY / SHOCK STUDENT CUES

- Respiratory distress can progress to failure and arrest; early oxygenation/ventilation is priority.
- Use look-listen-feel: airway sounds, work of breathing, skin color, mental status, pulses, perfusion.
- Shock signs: tachycardia, weak pulses, delayed cap refill, cool/mottled skin, altered mental status, hypotension late.
- Use weight-based dosing; verify estimated weight and concentration before giving medications.
- Consider early expert help, family-centered communication, and debrief after the event.

BRADYCARDIA WITH A PULSE

- Compromise? altered mental status, shock, or hypotension.
- Maintain airway; give oxygen; assist breathing with positive-pressure ventilation as needed.
- Attach monitor; monitor pulse; obtain IV/IO access.
- If HR <60/min with poor perfusion despite oxygenation/ventilation: start CPR.
- Epinephrine IV/IO: 0.01 mg/kg of 0.1 mg/mL concentration; max 1 mg.
- Atropine IV/IO: 0.02 mg/kg for increased vagal tone or primary AV block; may repeat once; min 0.1 mg, max single 0.5 mg.
- Consider pacing; treat causes: hypoxia, hypothermia, toxins, increased ICP, vagal tone, heart block.

TACHYARRHYTHMIA WITH A PULSE

- Initial support: airway, oxygen/PPV as needed, monitor, IV/IO, 12-lead ECG if available.
- Probable sinus tachycardia: P waves present, variable RR; infant usually <220/min, child usually <180/min; treat cause.
- Probable SVT: absent/abnormal P waves, RR not variable; infant >=220/min or child >=180/min; abrupt rate change.
- Unstable with compromise: synchronized cardioversion; start 0.5-1 J/kg, then 2 J/kg; sedate if feasible but do not delay.
- Stable narrow regular SVT: vagal maneuvers then adenosine.
- Adenosine IV/IO: 0.1 mg/kg rapid push + flush, max 6 mg; repeat 0.2 mg/kg, max 12 mg.
- Wide QRS >0.09 sec: possible VT/SVT with aberrancy; expert consultation; consider adenosine only if regular and monomorphic.

Advantage Medical Training | Editable student study aid | Use current AHA course materials, instructor guidance, and local protocols



PALS QUICK REFERENCE

PEDIATRIC CARDIAC ARREST + POST-ARREST

2025 AHA/AAP
CPR & ECC Guidelines

1. START / CPR QUALITY	2. RHYTHM PATHWAY	3. SHOCKS + DRUGS
• Begin CPR with bag-mask ventilation and oxygen; attach monitor/defibrillator. • Push hard: at least 1/3 chest depth; push fast: 100-120/min. • Allow full recoil; minimize interruptions; change compressor every 2 min or sooner if fatigued. • No advanced airway: 30:2 for 1 rescuer; 15:2 for 2 rescuers before puberty; 30:2 after puberty onset. • Advanced airway: continuous compressions + 1 breath every 2-3 sec.	• VF/pVT: shock ASAP -> CPR 2 min -> rhythm check. • Continue shockable pathway: shock, CPR, epinephrine every 3-5 min, consider airway/capnography. • Refractory VF/pVT: amiodarone or lidocaine; treat reversible causes. • Asystole/PEA: epinephrine ASAP + CPR; do NOT shock. • If ROSC: move to post-cardiac arrest care checklist.	• Defib energy: 1st shock 2 J/kg; 2nd shock 4 J/kg; subsequent shocks ≥ 4 J/kg, max 10 J/kg or adult dose. • Epinephrine IV/IO: 0.01 mg/kg of 0.1 mg/mL concentration; max 1 mg; repeat every 3-5 min. • Amiodarone IV/IO: 5 mg/kg bolus; max 300 mg; may repeat up to 3 doses; subsequent max 150 mg. • Lidocaine IV/IO: 1 mg/kg. • Advanced airway: ET tube or supraglottic airway; use ETCO₂ to confirm and monitor placement.

REVERSIBLE CAUSES - Hs & Ts	ROSC + TEAM PRIORITIES
Hs • Hypovolemia • Hypoxia • Hydrogen ion (acidosis) • Hypoglycemia • Hypo-/hyperkalemia • Hypothermia Ts • Tension pneumothorax • Tamponade, cardiac • Toxins • Thrombosis, pulmonary • Thrombosis, coronary	• Signs of ROSC: pulse, measurable blood pressure, abrupt sustained ETCO₂ rise, spontaneous arterial waves. • Use closed-loop communication; assign leader, compressor, airway, monitor/defib, meds, recorder. • Announce shock delivery and compressor changes before they happen. • Use cognitive aids and verify weight-based medication dosing. • Resume CPR immediately after shock; keep hands-off time short.

EPI	AMIODARONE	LIDOCAINE	DEFIB
0.01 mg/kg IV/IO max 1 mg every 3-5 min	5 mg/kg IV/IO bolus max 300 mg repeat up to 3 total	1 mg/kg IV/IO for VF/pVT option	2 J/kg, then 4 J/kg then ≥ 4 J/kg max 10 J/kg/adult dose

POST-CARDIAC ARREST CARE
• Target SpO₂ 94%-98% or child's normal/appropriate oxygen saturation. • Target PaCO₂ appropriate to condition; avoid severe hypercapnia or hypocapnia. • Maintain SBP and MAP greater than the 10th percentile for age and sex; use fluids and vasoactive meds as needed. • Monitor telemetry, arterial BP when available, lactate, urine output, glucose, electrolytes, and seizures. • Temperature: continuous core monitoring; prevent/treat fever; if comatose, TTM 32-34 C then 36-37.5 C or 36-37.5 C only for up to 5 days. • Delay prognostication until at least 72 hours and use multiple modalities.

STUDENT REMINDER

This 2-page handout summarizes selected PALS concepts for class review. It does not replace the 2025 AHA PALS Provider Manual, official algorithms/reference cards, instructor direction, medication verification, Broselow/weight-based tools, or local clinical protocols.

Source basis: 2025 American Heart Association and American Academy of Pediatrics Guidelines for CPR and ECC - Pediatric Advanced Life Support, 2025 PALS algorithms, and post-cardiac arrest care checklist.