Cardiac Arrest Medications — 2025 AHA Quick Reference

Adult cardiac arrest · paramedic / ALS · 2025 AHA Guidelines for CPR & ECC, Part 9 · ACLS Adult Cardiac Arrest Algorithm

The three drugs in the algorithm

Drug	Dose	Indication	Class	Why / what it buys you
Epinephrine	1 mg IV/IO every 3–5 min (flat dose, not mg/kg)	All arrest rhythms	1 / 2a	α_1 vasoconstriction → ↑ systemic vascular resistance → ↑ aortic diastolic and coronary perfusion pressure. ↑ ROSC and survival to admission; weaker evidence for survival to discharge or good neurologic outcome.
Amiodarone	300 mg IV/IO push, 2nd dose 150 mg	VF / pVT refractory to defibrillation	2b	Multi-channel blocker; reduces recurrence after a shock. Can drop BP and slow rate — matters after ROSC.
Lidocaine	1–1.5 mg/kg IV/IO, 2nd 0.5–0.75 mg/kg (max cumulative 3 mg/kg)	VF / pVT refractory to defibrillation	2b	Sodium-channel blocker with less haemodynamic effect. Alternative to amiodarone; neither is preferred.

Timing — it changes by rhythm

- **Asystole / PEA:** epinephrine **as soon as feasible** (2a, B-NR).
- **VF / pVT:** epinephrine **after initial defibrillation attempts fail** (2a, B-NR) — shock first, drug second.
- Rhythm checks every 2 min, so 3–5 min lands about every other cycle. Chart each dose time.

Restraint — the no-benefit list

Intervention	Class	Where it still belongs
High-dose epinephrine	**3: No benefit**	Nowhere routine.
Vasopressin (± epi)	**3: No benefit**	Not in the 2025 algorithm.
Routine sodium bicarbonate	**3: No benefit**	Special circumstances: hyperkalaemia, sodium-channel-blocker poisoning.
Routine calcium	**3: No benefit**	Special circumstances: suspected hyperkalaemia, calcium-channel-blocker poisoning.
Routine magnesium	**3: No benefit**	Recurrent polymorphic VT with long QT (torsades) — may be considered (2b).
Steroids	2b (uncertain)	Not part of the routine algorithm.
β-blockers, bretylium, procainamide, sotalol	2b (uncertain)	Not for VF/pVT unresponsive to defibrillation in current practice.

On the call

- Compressions → early shock if shockable → drugs. Never stop compressions to start a line.
- IV or IO both acceptable; IO when access is slow. **Flush** after every push.
- Chart: drug, dose, route, exact time, rhythm at administration, shock count.
- Capnography: $ETCO_2$ ≤10 mm Hg after 20 min of ALS is *part* of a multimodal stop decision — never a sole criterion.
- Post-ROSC: arrest dosing stops. Transition to post-arrest haemodynamic support per local protocol.

Kill these errors: 1 mg epinephrine, not 1 mg/kg · no amiodarone or lidocaine in asystole/PEA · no vasopressin, no high-dose epi · epinephrine every 3–5 min, not every 2 · never delay a shock to push a drug.

Sources: 2025 American Heart Association Guidelines for CPR and Emergency Cardiovascular Care, Part 9 (Adult Advanced Life Support) and Part 10 (Adult and Pediatric Special Circumstances of Resuscitation); 2025 ACLS Adult Cardiac Arrest Algorithm. Education, not medical direction — follow local protocols. · Forrest Munden / EMT Tutor Podcast · emsnotes.com