ALS Cardiac Arrest — Quick Reference 2025

American Heart Association 2025 Guidelines · Adult Cardiac Arrest Algorithm, Parts 6 & 7

Rate, depth, technique

PATIENT	RATE	DEPTH	TECHNIQUE
Adult	**100–120/min**	**≥5 cm, ≤6 cm**	2 hands, lower half of sternum
Child	**100–120/min**	**≥⅓ AP — ~5 cm**	1 or 2 hands
Infant	**100–120/min**	**≥⅓ AP — ~4 cm**	1 hand heel or **2-thumb encircling**

Quality targets

- Full recoil every compression — **do not lean** (leaning cuts venous return).
- Interruptions **<10 sec**; chest compression fraction **≥60%**.
- Pre-charge the defibrillator **before** the pause.
- **Switch compressor every 2 min**, or sooner if fatigued — hands on before hands off.
- Pulse check **5–10 sec** at recognition; **never after a shock**.
- **Rhythm every 2 min.** Loop: 2 min CPR → rhythm check → shock or drugs → 2 min CPR.

Defibrillation

ITEM	VALUE
Shockable rhythms	**VF / pulseless VT — shock immediately**
Biphasic energy	**Manufacturer rec. (e.g. 120–200 J); max available if unknown**
Second & later doses	**Equivalent; higher may be considered**
Monophasic	**360 J**
Pediatric	**2 J/kg → 4 J/kg → ≥4 J/kg (max 10 J/kg or adult dose)**
After the shock	**Resume compressions immediately — no pulse check**

Drugs

DRUG	DOSE
Epinephrine	**1 mg IV/IO every 3–5 min**
Amiodarone	**300 mg bolus → 150 mg**
Lidocaine (alt)	**1–1.5 mg/kg → 0.5–0.75 mg/kg**

Advanced airway & ventilation

PATIENT	VENTILATION WITH ADVANCED AIRWAY
Adult / Child	**Continuous compressions · 1 breath / 6 sec (10/min)**
Infant / Child	**Continuous compressions · 1 breath / 2–3 sec (20–30/min)**

Capnography is the feedback loop. $ETCO_2$ low or falling → reassess **CPR quality first**, then tube position, then the patient.

Reversible causes (Hs & Ts): Hypovolemia · Hypoxia · Hydrogen ion (acidosis) · Hypo/hyperkalemia · Hypothermia · Tension pneumothorax · Tamponade · Toxins · Pulmonary thrombosis · Coronary thrombosis. Search during the cycles, not after.