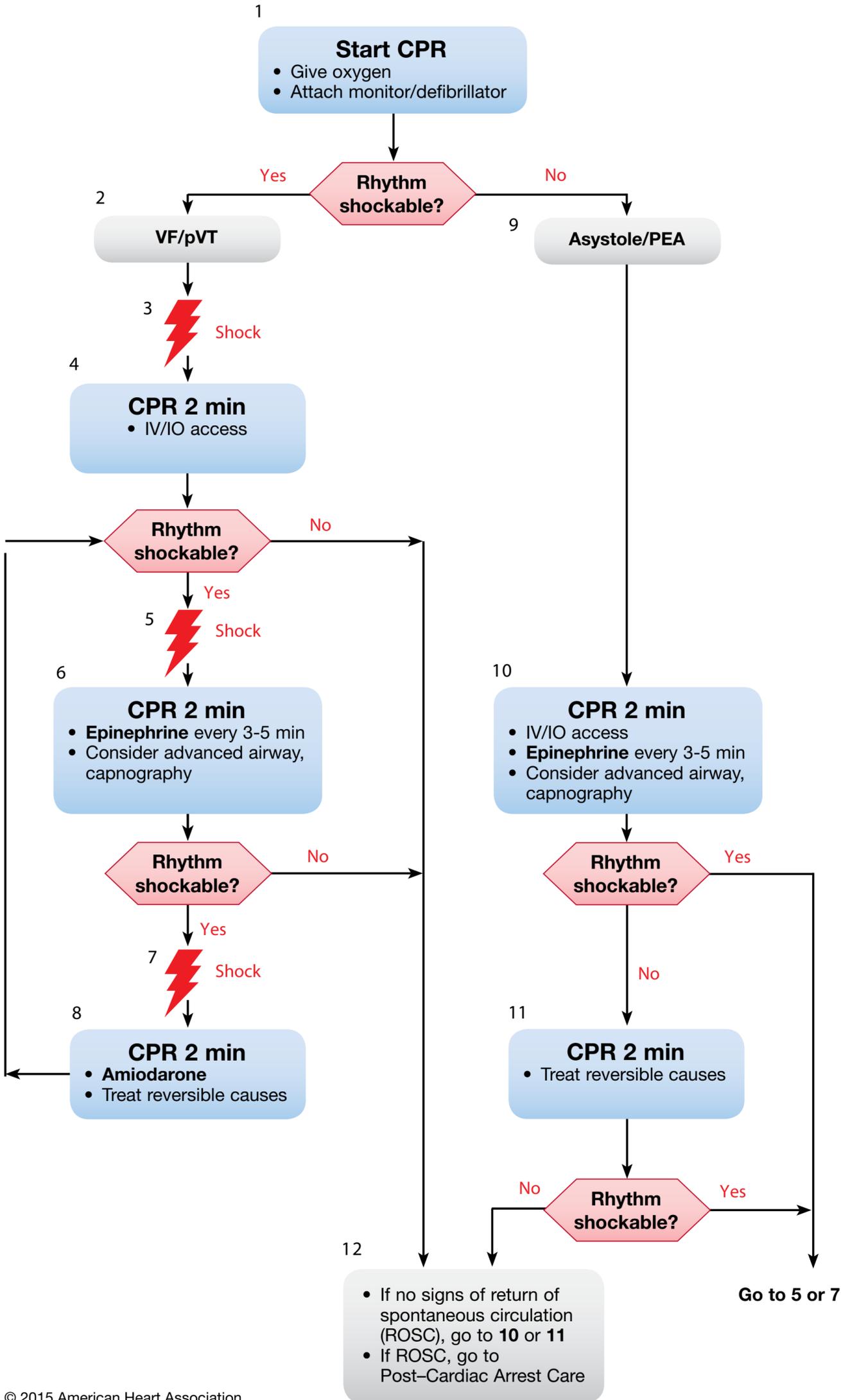


# Adult Cardiac Arrest Algorithm AHA 2015 Update



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## CPR QUALITY

- Push hard (at least 2 inches [5 cm]) and fast (100-120/min) and allow complete chest recoil.
- Minimize interruptions in compressions.
- Avoid excessive ventilation.
- Rotate compressor every 2 minutes, or sooner if fatigued.
- If no advanced airway, 30:2 compression-ventilation ratio.
- Quantitative waveform capnography
  - If Petco2 <10 mm Hg, attempt to improve CPR quality.
- Intra-arterial pressure
  - If relaxation phase (diastolic) pressure <20 mm Hg, attempt to improve CPR quality.

## SHOCK ENERGY FOR DEFIBRILLATION

- **Biphasic:** Manufacturer recommendation (eg, initial dose of 120-200 J); if unknown, use maximum available. Second and subsequent doses should be equivalent, and higher doses may be considered.
- **Monophasic:** 360 J

## DRUG THERAPY

- **Epinephrine IV/IO dose:**
  - 1 mg every 3-5 minutes
- **Amiodarone IV/IO dose:**
  - First dose: 300 mg bolus.
  - Second dose: 150 mg.

## ADVANCED AIRWAY

- Endotracheal intubation or supra-glottic advanced airway
- Waveform capnography or capnometry to confirm and monitor ET tube placement
- Once advanced airway in place, give 1 breath every 6 seconds (10 breaths/min) with continuous chest compressions

## RETURN OF SPONTANEOUS CIRCULATION (ROSC)

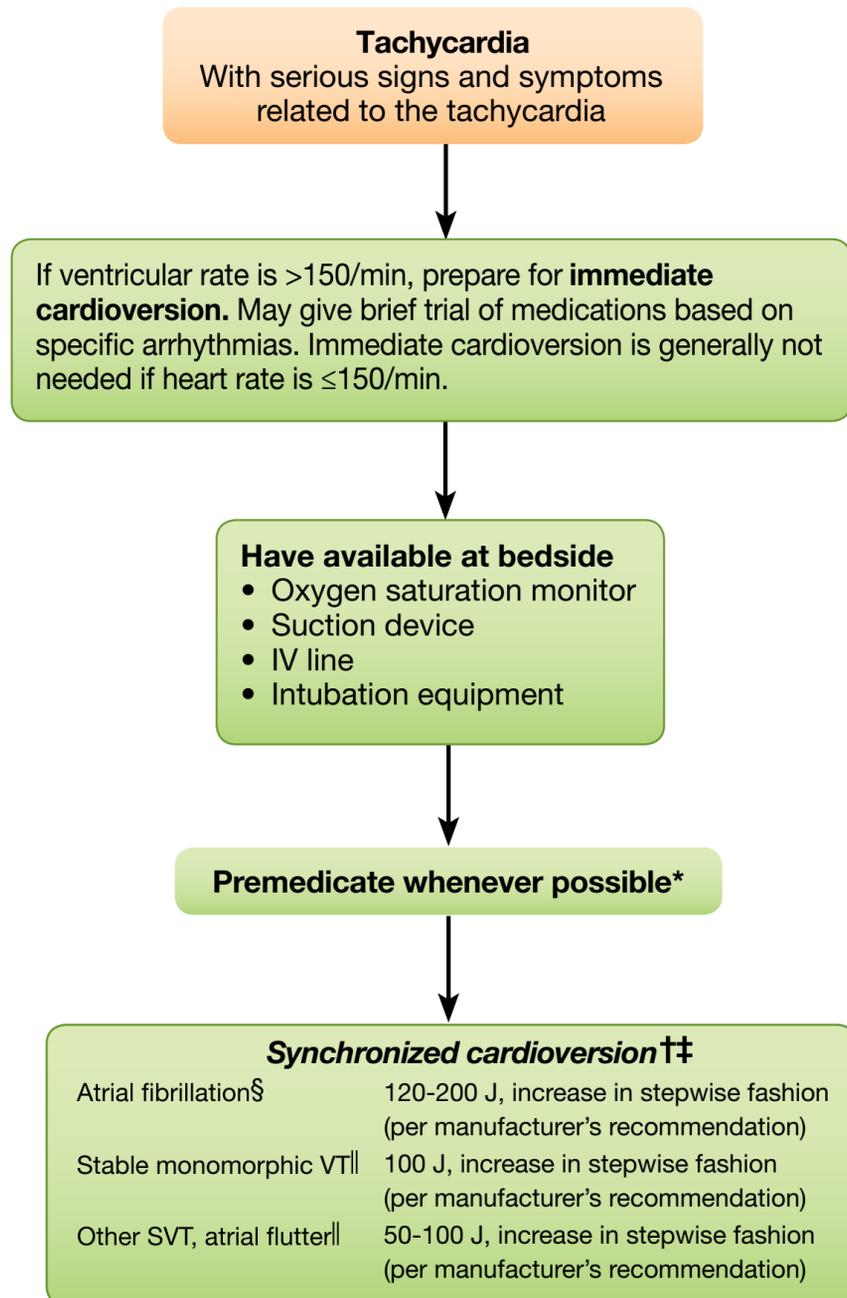
- Pulse and blood pressure
- Abrupt sustained increase in Petco2 (typically  $\geq 40$  mm Hg)
- Spontaneous arterial pressure waves with intra-arterial monitoring

## REVERSIBLE CAUSES

- Hypovolemia
- Hypoxia
- Hydrogen ion (acidosis)
- Hypo-/hyperkalemia
- Hypothermia
- Tension pneumothorax
- Tamponade, cardiac
- Toxins
- Thrombosis, pulmonary
- Thrombosis, coronary

# Electrical Cardioversion Algorithm

## AHA 2015 Update



### Notes

\*Effective regimens have included a sedative (eg, diazepam, midazolam, etomidate, methohexital, propofol) with or without an analgesic agent (eg, fentanyl, morphine). Many experts recommend anesthesia if service is readily available.

†Note possible need to resynchronize after each cardioversion.

‡If delays in synchronization occur and clinical condition is critical, go immediately to unsynchronized shocks.

§These doses are for biphasic waveforms. For monophasic waveforms, initial dose is 200 J for atrial fibrillation.

||Recommended biphasic and monophasic doses are equivalent.