

AT ANY TIME

Return of

Spontaneous

Circulation

Go to

Post Resuscitation

Protocol AC 9

Ventricular Fibrillation Pulseless Ventricular Tachycardia



Begin Continuous CPR Compressions

Push Hard (≥ 2 inches) Push Fast (100 - 120 / min)

Change Compressors every 2 minutes

(sooner if fatigued)

(Limit changes / pulse checks ≤ 10 seconds)

At the end of each 2 minute cycle
Check AED / ECG Monitor
If shockable rhythm, deliver shock and immediately
continue chest compressions

Search for Reversible Causes

IV / IO Procedure

Epinephrine (1:10,000) 1 mg IV / IO Repeat every 3 to 5 minutes

Continue CPR Compressions

Push Hard (≥ 2 inches) Push Fast (100 - 120 / min)

Change Compressors every 2 minutes

(sooner if fatigued)

(Limit changes / pulse checks ≤ 10 seconds)

If Rhythm Refractory
Continue CPR and give Agency specific Antiarrhythmics and Epinephrine
Continue CPR up to point where you are ready to
defibrillate with device charged.
Repeat pattern during resuscitation.

Reversible Causes

Hypovolemia Hypoxia Hydrogen ion (acidosis) Hypothermia Hypo / Hyperkalemia

Tension pneumothorax Tamponade; cardiac Toxins Thrombosis; pulmonary (PE)

Thrombosis; coronary (MI)

A

Refractory after 5 Defibrillations Attempts
Consider Dual Sequential Defibrillation Procedure

if available

Notify Destination or Contact Medical Control







Ventricular Fibrillation Pulseless Ventricular Tachycardia

- Pearls
- Recommended Exam: Mental Status, neuro, heart, and lung
- Team Focused Approach / Pit-Crew Approach recommended; assigning responders to predetermined tasks.
- Refer to optional protocol or development of local agency protocol.
- Efforts should be directed at high quality and continuous compressions with limited interruptions and early defibrillation when indicated.
- Consider early IO placement if available and / or difficult IV access anticipated.
- DO NOT HYPERVENTILATE: If no advanced airway (BIAD, ETT) compression to ventilation ratio is 30:2. If advanced airway in place, ventilate 10 breaths per minute with continuous, uninterrupted compressions.
- Do not interrupt compressions to place endotracheal tube. Consider BIAD first to limit interruptions.
- Passive oxygenation optional in agencies practicing Team Focused Approach / Pit-Crew Approach.
- Reassess and document BIAD and / or endotracheal tube placement and EtCO2 frequently, after every move, and at transfer of care.
- IV / IO access and drug delivery is secondary to high-quality chest compressions and early defibrillation.
- **Defibrillation:** Follow manufacture's recommendations concerning defibrillation / cardioversion energy when specified.
- End Tidal CO2 (EtCO2)
 - If EtCO2 is < 10 mmHg, improve chest compressions.
 - If EtCO2 spikes, typically > 40 mmHg, consider Return of Spontaneous Circulation (ROSC)
- Avoid Procainamide in CHF or prolonged QT.
- Magnesium Sulfate is not routinely recommended during cardiac arrest, but may help with Torsades de points, Low Magnesium States (Malnourished / alcoholic), and Suspected Digitalis Toxicity
- If no IV / IO, with drugs that can be given down ET tube, double dose and then flushed with 5 ml of Normal Saline followed by 5 quick ventilations. IV / IO is the preferred route when available.
- Return of spontaneous circulation: Heart rate should be > 60 when initiating anti-arrhythmic infusions.