



Ventricular Fibrillation Pulseless Ventricular Tachycardia

Cardiac Arrest Protocol AC 3

	<p>Begin Continuous CPR Compressions Push Hard (≥ 2 inches) Push Fast (100 - 120 / min) Change Compressors every 2 minutes <i>(sooner if fatigued)</i> (Limit changes / pulse checks ≤ 10 seconds)</p> <p>At the end of each 2 minute cycle Check AED / ECG Monitor If shockable rhythm, deliver shock and immediately continue chest compressions</p> <p>Search for Reversible Causes</p>
A	<p>IV / IO Procedure</p> <p>Epinephrine (1:10,000) 1 mg IV / IO Repeat every 3 to 5 minutes</p>

<p>Reversible Causes</p> <p>Hypovolemia Hypoxia Hydrogen ion (acidosis) Hypothermia Hypo / Hyperkalemia</p> <p>Tension pneumothorax Tamponade; cardiac Toxins Thrombosis; pulmonary (PE) Thrombosis; coronary (MI)</p>

<p>AT ANY TIME</p> <p>Return of Spontaneous Circulation</p> <p></p> <p>Go to Post Resuscitation Protocol AC 9</p>
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	<p>Continue CPR Compressions Push Hard (≥ 2 inches) Push Fast (100 - 120 / min) Change Compressors every 2 minutes <i>(sooner if fatigued)</i> (Limit changes / pulse checks ≤ 10 seconds)</p> <p>If Rhythm Refractory Continue CPR and give Agency specific Anti-arrhythmics and Epinephrine Continue CPR up to point where you are ready to defibrillate with device charged. Repeat pattern during resuscitation.</p>
P	Empty space for protocol P
	<p>Refractory after 5 Defibrillations Attempts Consider Dual Sequential Defibrillation Procedure if available</p>

	Notify Destination or Contact Medical Control	
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Adult Cardiac Protocol Section



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- **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.**