San Mateo County Emergency Medical Services

# V-Fib/Pulseless V-Tach

For non-traumatic cardiac arrest in which any resuscitation is initiated, NOT dead on arrival

**History**
- Events leading to arrest
- Estimated downtime
- Prior resuscitation attempts
- Past medical history
- Medications
- Known terminal illness

**Signs and Symptoms**
- Pulseless
- Apneic

**Differential**
- Medical vs. trauma
- VF vs. pulseless VT
- Asystole
- PEA
- Primary cardiac event vs. respiratory arrest or drug overdose

**Enter from Cardiac Arrest** →

P:
- Defibrillation 200J
- Resume high quality chest compressions
  Change compressors every 2 minutes
  (*Limit changes/pulses checks < 5 seconds*)
- Establish IV; if unable, establish IO

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P:
- Defibrillation 300J
- Resume high quality chest compressions
  Change compressors every 2 minutes
  (*Limit changes/pulses checks < 5 seconds*)
- If V-Fib/ Pulseless V-Tach is refractory after 2 shocks
  Place second set of defib pads (A/L → A/P or A/P → A/L) for future defibrillations; may alternate between pads. Continue high performance CPR and give medications during compressions
- **Lidocaine**

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P:
- Defibrillation 360J
- Resume high quality chest compressions
  Change compressors every 2 minutes
  (*Limit changes/pulses checks < 5 seconds*)
- **Epinephrine (1:10,000)**

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Persistent V-Fib/V-Tach
- Yes → Lidocaine
- Yes → Consider early Base Hospital contact for transport decision for witnessed arrest with strong suspicion of pulmonary embolism or witnessed V. Fib arrest resistant to three (3) shocks
- No ↓

Return of spontaneous circulation?
- No → **Cardiac Arrest**
- Yes → **Post Resuscitation**

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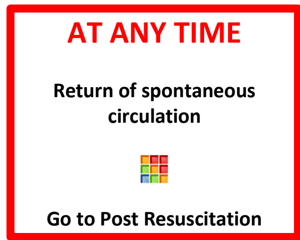
**Notify receiving facility. Consider Base Hospital for medical direction**




Adult Cardiac Arrest – Non-traumatic Treatment Protocols

# Cardiac Arrest - V-Fib/Pulseless V-Tach

For non-traumatic cardiac arrest in which any resuscitation is initiated, NOT dead on arrival



**Pearls**

- For defibrillation or cardioversion, follow manufacturers recommendations.
- Efforts should be directed at high quality and continuous chest compressions with minimal interruptions.
- IV access, including EJ, must be attempted. If unsuccessful, then attempt IO.
- Assemble BVM with $EtCO_2$ and deliver ventilation with every $6^{th}$ compression on the upstroke.
- Placement of an advanced airway should be deferred unless a provider is unable to ventilate the patient with a BLS airway and BVM.
- Use a metronome during chest compression to ensure proper rate.
- Provide resuscitative efforts on scene for 30 minutes to maximize chance of ROSC.
- Epinephrine in doses of greater than 3 mg has been shown to be detrimental to patient outcome.
- If resuscitative efforts do not attain ROSC, consider cessation of efforts per Operations 10 – Determination of Death.
- Do not interrupt chest compressions to place ETT.
- Consider breathing and airway management after second shock or two (2) rounds of chest compression (2 minutes each round).
- Effective chest compressions and prompt defibrillation are the keys to successful resuscitation.
- Reassess and document ETT placement and $EtCO_2$ frequently, after every move, and at transfer of care.
- Do not stop chest compressions to check for placement of ETT or to give medications.
- If the use of a BVM is ventilating the patient successfully, intubation should be deferred.
- In the setting of renal failure, dialysis, suspected DKA or hyperkalemia, calcium chloride followed by sodium bicarbonate shall be administered.