

## CARDIAC ARREST: PULSELESS ELECTRICAL ACTIVITY (PEA) and ASYSTOLE

APPROVED: Gregory Gilbert, MD EMS Medical Director  
Sam Barnett EMS Administrator

DATE: January 2012

### Information Needed:

- See Cardiac Arrest overview protocol

### Objective Findings:

- Pulseless (check carotid and femoral pulses)
- Apneic
- Electrical activity on the monitor exclusive of ventricular fibrillation or ventricular tachycardia

### Treatment:

- Assess patient and confirm pulselessness
- Start CPR and assure adequacy of compressions and ventilations. An emphasis on high quality CPR with minimal interruptions in chest compressions.
- Determine cardiac rhythm
- BLS should use Automatic External Defibrillator if available and shock as appropriate
- For Asystole or PEA, confirm in two ECG leads
- Establish large bore IV or IO of normal saline
- Give **epinephrine** (1:10,000) 1 mg IV/IO, repeat q 3 to 5 minutes until rhythm change or termination of resuscitation efforts
- Assess for possible causes of PEA and administer corresponding treatments (See Precautions and Comments)
- Consider advanced airway. Confirm ventilation with capnography
- Fluid challenge 250-1000 cc NS for suspected hypovolemia
- In the setting of renal failure, dialysis, DKA, or potassium ingestion (possible hyperkalemia), give **calcium chloride** 1 gm IV/IO over one minute **then flush** and then administer **sodium bicarbonate** 1 mEq/kg IV/IO

### Precautions and Comments:

- Consider termination of efforts if patient is unresponsive to initial treatments (see Guideline for Determining Death in the Field Policy)
- External pacing has not been shown to be effective in PEA
- See Guidelines for Determining Death in the Field
- Consider possible causes of PEA and possible treatments

<u>Cause</u>	<u>Specific Field Treatment</u>
Myocardial Infarction	None

San Mateo County EMS Agency  
Adult Treatment Protocols

**CARDIAC ARREST: PEA/ASYSTOLE**

Page 1 of 2

Acidosis	Secure airway and hyperventilate patient
Tension Pneumothorax	Perform pleural decompression if indicated
Cardiac Tamponade	None
Hypoxia	Secure airway and ventilate patient
Hypovolemia	Give fluid challenge, for any suspicion
Hypothermia	Limit aggressive handling of the patient
Hyperkalemia	Consider bicarbonate and calcium chloride
Hypokalemia	None
Hypoglycemia	Give glucose
Pulmonary Embolus	None
Drug Overdose (Toxins)	Obtain history- treat accordingly
Organophosphate Poisoning/ Nerve Gas	Consider Atropine 2mg IVP