

# Asystole/PEA

**History**

- Events leading to arrest
- Estimated downtime
- Past medical history
- Medications
- End stage renal disease
- Suspected hypothermia
- Suspected overdose
  - Tricyclic
  - Digitalis
  - Beta blockers
  - Calcium channel blockers
- DNR, POLST or living will

**Signs and Symptoms**

- Pulseless
- Apneic or agonal respirations

**Differential**

- Hypovolemia (e.g. trauma, AAA or other)
- Cardiac tamponade
- Hypothermia
- Drug overdose (e.g. tricyclic, digitalis, beta blockers, or calcium channel blockers)
- Massive myocardial infarction
- Hypoxia
- Tension pneumothorax
- Pulmonary embolus
- Acidosis
- Hyperkalemia

Decomposition  
Rigor mortis  
Dependent lividity

Injury incompatible with life  
or unwitnessed traumatic  
arrest with asystole

Do not begin resuscitation  
  
Follow Policy 1004 –  
Determination of Death

 Cardiac Arrest TG

Criteria for death / no resuscitation  
Review DNR / POLST form

No

**AT ANY TIME**

Return of spontaneous  
circulation

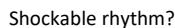


Go to Post Resuscitation TG

Follow rhythm  
appropriate TG

 Follow FP09 - Cardiac Arrest Management

**P** Resume chest compressions  
Push hard (> 2 inches) and fast (100-120/min)  
Change compressors every 2 minutes  
(Limit changes/pulse checks to < 5 seconds)

 Shockable rhythm?

No

**P** Search for reversible causes and treat  
appropriately

Establish IV/IO

**P** Normal Saline bolus 1000ml IV/IO

**P** Epinephrine (1:10,000) 1mg IV/IO

Consider Chest Decompression Procedure

**R** Early transport to a SRC is indicated  
for witnessed arrest with suspicion  
of pulmonary embolism or  
V. Fib arrest resistant to four (4)  
shocks (refractory V-Fib)

 Criteria for discontinuation?

Yes

Discontinue  
Resuscitation

Follow Policy 1004 –  
Determination of Death

No

**Notify receiving facility.  
Contact Base Hospital for  
medical direction, as needed.**

**Reversible Causes**

- Hypovolemia
- Hypoxia
- Hydrogen ion (acidosis)
- Hypothermia
- Hypo/Hyperkalemia
- Hypoglycemia
- Tension pneumothorax
- Tamponade (cardiac)
- Toxins
- Thrombosis (pulmonary)(PE)
- Thrombosis (coronary)(MI)



## Treatment Guideline AC02

# Asystole/PEA

## Pearls

- Efforts should be directed at high quality and continuous chest compressions with limited interruptions and early defibrillation when indicated. Consider early IO placement if available or direct IV access if anticipated.
- Passive ventilation for the first three cycles (6 minutes) of CPR. After that time, the patient should be ventilated using a BLS airway and BVM at a rate of 6 ventilation/minute (1:10 seconds) with continuous CPR.
- 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.
- If a non-shockable rhythm persists for 30 minutes despite aggressive resuscitative efforts, consider cessation of efforts as outlined in the Determination of Death policy.
- The AutoPulse device is limited to 80 compressions/minute, which is acceptable when using this device during cardiac arrest.
- SURVIVAL FROM PEA OR ASYSTOLE is based on identifying and correcting the CAUSE: consider a broad differential diagnosis with early and aggressive treatment of possible causes.
- Potential association of PEA with hypoxia may exist, so placing an effective BLS airway with oxygenation early may provide benefit.
- PEA caused by sepsis or severe volume loss may benefit from higher volume of normal saline administration.
- Return of spontaneous circulation after Asystole/PEA requires continued search for underlying cause of cardiac arrest.
- Treatment of hypoxia and hypotension are important after resuscitation from Asystole/PEA.
- Asystole is commonly an end stage rhythm following prolonged VF or PEA with a poor prognosis.
- Discussion with the Base Hospital can be a valuable tool in developing a differential diagnosis and identifying possible treatment options.



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