# Pediatric Pulseless Arrest Algorithm

**Pediatric Advanced Life Support**

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

**1**

**PULSELESS ARREST**
- BLS Algorithm: Continue CPR
- Give **oxygen** when available
- Attach monitor/defibrillator when available

**2**

Check rhythm
**Shockable rhythm?**

**Shockable** → **3**

**VF/VT**

**4**

**Give 1 shock**
- **Manual: 2 J/kg**
- **AED: >1 year of age**
  Use pediatric system if available for 1 to 8 years of age

**Resume CPR immediately**

**Give 5 cycles of CPR***

**5**

Check rhythm
**Shockable rhythm?**

**No** → **12**

**Shockable** → **6**

Continue CPR while defibrillator is charging
**Give 1 shock**
- Manual: 4 J/kg
- AED: >1 year of age

**Resume CPR immediately**
**Give *epinephrine***
- IV/IO: 0.01 mg/kg (1:10 000: 0.1 mL/kg)
- Endotracheal tube: 0.1 mg/kg (1:1000: 0.1 mL/kg)

**Repeat every 3 to 5 minutes**

**Give 5 cycles of CPR***

**7**

Check rhythm
**Shockable rhythm?**

**No** → **12**

**Shockable** → **8**

Continue CPR while defibrillator is charging
**Give 1 shock**
- Manual: 4 J/kg
- AED: >1 year of age

**Resume CPR immediately**
Consider **antiarrhythmics**
(eg, **amiodarone** 5 mg/kg IV/IO or **lidocaine** 1 mg/kg IV/IO)
Consider **magnesium** 25 to 50 mg/kg IV/IO, max 2 g for torsades de pointes
**After 5 cycles of CPR* go to Box 5 above**

**Not Shockable** → **9**

**Asystole/PEA**

**10**

**Resume CPR immediately**
**Give *epinephrine***
- IV/IO: 0.01 mg/kg (1:10 000: 0.1 mL/kg)
- Endotracheal tube: 0.1 mg/kg (1:1000: 0.1 mL/kg)

**Repeat every 3 to 5 min**

**Give 5 cycles of CPR***

**11**

Check rhythm
**Shockable rhythm?**

**Not Shockable** → **12**

**Shockable** → **13**

**Go to Box 4**

**12**

- **If asystole, go to Box 10**
- **If electrical activity, check pulse. If no pulse, go to Box 10**
- **If pulse present, begin postresuscitation care**

***During CPR***

- **Push hard and fast (100/min)**
- **Ensure full chest recoil**
- **Minimize interruptions in chest compressions**
- One cycle of CPR: 15 compressions then 2 breaths; 5 cycles ≈1 to 2 min
- Avoid hyperventilation
- Secure airway and confirm placement.
- Rotate compressors every 2 minutes with rhythm checks
- Search for and treat possible contributing factors:
  - **H**ypovolemia
  - **H**ypoxia
  - **H**ydrogen ion (acidosis)
  - **H**ypo-/hyperkalemia
  - **H**ypoglycemia
  - **H**ypothermia
  - **T**oxins
  - **T**amponade, cardiac
  - **T**ension pneumothorax
  - **T**hrombosis (coronary or pulmonary)
  - **T**rauma

* After an advanced airway is placed, rescuers no longer deliver "cycles" of CPR. Give continuous chest compressions without pauses for breaths. Give 8 to 10 breaths/minute. Check rhythm every 2 minutes.

 © 2006 American Heart Association