

# PEDIATRIC BRADYCARDIA

HPI	Signs & Symptoms	Possible Causes	
<ul style="list-style-type: none"> <li>Foreign body obstruction</li> <li>Respiratory distress</li> <li>Toxic exposure</li> <li>Congenital disease</li> <li>PMH</li> </ul>	<ul style="list-style-type: none"> <li>Heart rate &lt; 60 bpm</li> <li>Cyanosis, mottling</li> <li>Delayed capillary refill &gt; 2 sec.</li> <li>Hypotension</li> <li>AMS</li> </ul>	<ul style="list-style-type: none"> <li>Hypovolemia</li> <li>Hypoxia</li> <li>Acidosis</li> <li>Hyper/o-kalemia</li> <li>Hypothermia</li> <li>Hypoglycemia</li> </ul>	<ul style="list-style-type: none"> <li>Toxins/OD</li> <li>Cardiac tamponade</li> <li>Acute coronary syndrome</li> <li>Pulmonary embolism</li> <li>Trauma</li> <li>Tension Pneumo</li> </ul>

	EMR	EMT	PM
1. Provide <a href="#">Pediatric Routine Medical Care</a> - treat life threatening problems with airway, breathing, circulation, and disability.	•	•	•
2. Obtain ECG, monitor Capnography.		•	•
3. Ventilate with BVM on 100% <b>OXYGEN</b> with airway adjuncts, 1 breath every 2-3 sec.	•	•	•

**UNSTABLE:** Weak/absent pulses, hypotension, pallor/cyanosis, altered mental status

4. Begin 2-rescuer CPR 15:2 compressions to ventilations for a 2 min. cycle	•	•	•
5. Obtain vascular access IV/IO			•
6. <b>EPINEPHRINE</b> 1 mg/10mL: 0.01 mg/kg IVP/IO, max. single dose 1 mg, repeat 3-5min., no max.			•
7. <b>NORMAL SALINE</b> in 20 mL/kg, then TKO			•
8. Contact OLMC to consider <b>ATROPINE:</b> 0.02 mg/kg IVP/IO, max. single dose 0.5 mg, may repeat 3 min., max. total dose 1 mg			•
9. Contact OLMC to consider <a href="#">transcutaneous pacing</a>			•

**STABLE:** GCS 15, MAP >65, skin warm/dry

4. Observe for deterioration, need to continue bagging or UNSTABLE protocol	•	•	•
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## PEARLS:

- Although noninvasive pacing may be attempted with OLMC, typically bradycardias of hypoxic etiology do not respond. First line therapy is prompt airway support, ventilation and oxygenation.
- Consider potential accidental/intentional overdose on [beta-blockers](#) and [calcium channel blockers](#). Refer to specific protocols.