


Return of Spontaneous Circulation (ROSC)

This protocol should be followed for all cardiac arrests with ROSC. If an arrest is of a known traumatic origin, refer to the **Traumatic Arrest Protocol** and **MCA Transport Protocol**. If it is unknown whether the arrest is traumatic or medical, consider other treatable causes.

Initiate ALS response if available.

1. If ventilation assistance is required, ventilate at 10-12 breaths per minute. Do not hyperventilate.
2. Reassess patient, if patient becomes pulseless
 - a. Begin CPR
 - b. Follow **Adult** or **Pediatric Cardiac Arrest General Protocol**.
3. Monitor vital signs.
4. Check blood glucose (MFR, if MCA approved).
5. Start an IV/IO NS KVO.
6. Treat hypotension (SBP less than 90 mm/Hg) with an IV/IO fluid bolus consistent with **Shock Protocol**.
7. Perform 12-lead ECG (Per MCA selection, may be BLS skill per **12 Lead ECG Procedure**)
8. If ventilation assistance is required, target ETCO₂ of 35-40 mm Hg.
9. Consider Transport to a facility capable of Percutaneous Coronary Intervention (PCI) per MCA protocol.
10. If hypotension persists after IV/IO fluid bolus, administer Epinephrine by push dose (dilute boluses).
 - a. Prepare (10 mcg/mL) by adding 1mL of 1mg/10mL Epinephrine in 9mL NS, then
 - b. Adults
 - i. Administer 10-20 mcg (1-2 mL Epinephrine 10 mcg/mL)
 - ii. Repeat every 3 to 5 minutes
 - iii. Titrate to SBP greater than 90 mm/Hg
 - c. Pediatrics 
 - i. Administer 1 mcg/kg (0.1 mL/kg Epinephrine 10 mcg/mL)
 - ii. Maximum dose 10 mcg (1 mL)
 - iii. Repeat every 3-5 minutes
11. If patient is agitated with advanced airway in place, refer to **Patient Sedation Protocol**.

Notes:

1. If a mechanical ventilator is available or there are spontaneous respirations in the non-intubated patient, titrate inspired oxygen on the basis of monitored oxyhemoglobin saturation to maintain a saturation of $\geq 94\%$ but $< 100\%$. Titrate ETCO₂ between 34-45 mmHg.
2. Consider extubation only if wide awake, following commands, and unable to tolerate endotracheal tube.

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