

RETURN OF SPONTANEOUS CIRCULATION (ROSC)

This protocol should be followed for all **adult** cardiac arrests with ROSC. If it is unknown whether the arrest is traumatic or medical, continue with this protocol.


- Follow **Initial Treatment / Universal Patient Care Protocol**
- If ventilation assistance is required, ventilate at 10 - 12 breaths per minute. Do not hyperventilate.
 1. Avoid excessive ventilation. Start at 10 - 12 breaths/minute. *If capnography available:* Titrate to target ETCO₂ of 35 - 40 mm/Hg.
 - a. Titrate oxygen to minimum necessary to achieve SpO₂ at 94 - 99%.
 - b. Start with 100% oxygen during the CPR phase.
- Consider Advance Airway: ET or Supraglottic
- Reassess patient. If patient becomes pulseless, begin CPR and follow **Cardiac Arrest Protocol 4205**.
- Continue to monitor ABC's.
- Follow Initial Treatment / Universal Patient Care Protocol
- Start an IV / IO NS KVO if not already performed.
- Treat hypotension (SBP < 90 mm/Hg) with an IV/IO fluid bolus consistent with **Hypoperfusion / Shock Protocol 4108**.
- Perform 12 lead ECG. If STEMI, follow STEMI guidelines.
- Consider treatable causes. (H's and T's)

Assess for Reversible Causes	
Hypoxia Hydrogen Ion Hypothermia Hypovolemia Hypo/Hyperkalemia Hypoglycemia	Toxins Tension Pneumothorax Cardiac Tamponade Thrombus (cardiac) Thrombus (pulmonary) Trauma
(OPTIONAL) Sodium Bicarbonate 50 mEq may be administered per MCP order	

- If ventilation assistance is required with an advanced airway in place and quantitative


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waveform capnography (*if available*); target ETCO₂ is 35 - 40 mm/Hg.

- Transport to a facility capable of Percutaneous Coronary Intervention (PCI) and/or therapeutic hypothermia in consultation with **Medical Command**. 
- If patient remains unresponsive after ROSC, consider cooling the patient with 250 ml Normal Saline 4 degrees Centigrade (*optional equipment if available*); cold packs to axilla, groin, neck, etc.
- Consider the administration of **Amiodarone** Infusion or **Lidocaine** infusion if the patient was resuscitated following an episode of VF/VT and is without profound bradycardia or high-grade heart block (2nd degree Type II or 3rd degree or idioventricular rhythm).

Note: *Continue using the anti-arrhythmic medication that was administered during resuscitation.*

- Amiodarone administration is 150 mg in 250 ml NS infused at 100 gtts/min. utilizing a 60 drop set.
- Lidocaine administration is administered 1 g in 250 ml NS titrated at 1 – 4 mg/min.

- O. If hypotension persists after 250 ml IV / IO fluid bolus, administer Dopamine 5 – 20 micrograms/kg/min **per MCP Order**. 

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