Adult Immediate Post-Cardiac Arrest Care Algorithm

ACLS certification association

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1 Return of spontaneous circulation (ROSC)

Initial assessment/stabilization

2 **Assess/maintain airway**
- Insert endotracheal tube
- Consider waveform capnography

Assess/maintain oxygenation/ventilation
- Ventilation rate at 10 breaths per minute (avoid hyperventilation)
- Target oxygen saturation between 92-98%
- Target $PaCO_2$ between 34–45 mm Hg

Assess/maintain hemodynamics
- Target SBP > 90 mm Hg
- Target MAP > 65 mm Hg
- Crystalloid bolus, vasopressors, or inotropes for hypotension

3 Obtain 12-lead ECG

4 For STEMI, unstable cardiogenic shock, high suspicion of AMI, or need for circulatory support, consider emergency cardiac intervention

5 Does patient follow commands?

No

Yes

Ongoing assessment/treatment

6 **Comatose**
- Initiate targeted temperature management
- Order CT of brain
- Monitor EEG
- Other ongoing management

7 **Awake and alert**
- Other ongoing management

8 Assess and treat reversible causes
Obtain expert consultation

Initial assessment/stabilization

- **Ventilation/oxygenation:** Avoid excessive ventilation. Start at 10 breaths/min and titrate to target $PaCO_2$ of 35-45 mm Hg. When feasible, titrate FIO_2 to minimum necessary to achieve SPO_2 ≥ 92-98%.
- Frequent assessment of lung sounds.
- Manage hemodynamic parameters: Administer crystalloid and/or vasopressor or inotrope for target SBP > 90 mm Hg or MAP > 65 mm Hg

Ongoing assessment/treatment

- Perform interventions concurrently as able
- Evaluate ECG early to determine need for emergency cardiac intervention
- In the comatose patient, begin TTM as early as possible using temperature of 32°C–36°C for 24 hours
- Monitor core temperature
- Treat hypercapnia, hypoxia, and hypoglycemia
- If possible, continuously monitor EEG

Reversible Causes (Hs and Ts)

- **H**ypoxia
- **H**ypovolemia
- **H**ydrogen ion (acidosis)
- **H**ypo-/**H**yperkalemia
- **H**ypothermia
- **T**ension pneumothorax
- **T**amponade, cardiac
- **T**oxins
- **T**hrombosis, pulmonary
- **T**hrombosis, coronary