

Adult Post–Cardiac Arrest Care Algorithm

INITIAL
STABILIZATION

Return of spontaneous circulation (ROSC)

STABILIZE AFTER ROSC

Airway

- Assess the airway
- Insert or replace an advanced airway device if needed
- Verify correct airway device placement

Oxygenation and ventilation

- Give 100% oxygen (FiO₂ 100%) and continue until reliable SpO₂ or PaO₂ readings are available
- Then adjust oxygen delivery to maintain SpO₂ 90–98% (PaO₂ 60–105 mm Hg)
- Adjust ventilation to maintain PaCO₂ 35–45 mm Hg

Hemodynamics

- Maintain mean arterial pressure (MAP) ≥65 mm Hg

EARLY DIAGNOSTIC TESTING

- Record a 12-lead ECG
- Consider CT and/or ultrasound to investigate the cause of arrest

CONSIDER URGENT CARDIAC INTERVENTION IF:

- ST-segment elevation persists
- Cardiogenic shock is present
- Ventricular arrhythmias recur or do not respond to treatment
- Severe myocardial ischemia is present

If indicated, consider emergency coronary angiography and/or mechanical circulatory support

If possible, assess the patient off sedation and neuromuscular blockade

No / unsure

Does the patient follow commands?

Yes

NOT FOLLOWING COMMANDS

- Continue ongoing critical care
- Start deliberate temperature control
- EEG monitoring
- Coronary angiography if indicated
- Multimodal prognostication at the right time (≥72 hours)

FOLLOWS COMMANDS

- Continue ongoing critical care
- Coronary angiography if indicated

ONGOING
MANAGEMENT

INITIAL STABILIZATION

Resuscitation continues after ROSC. Perform assessments and interventions in parallel whenever possible.

- **Airway:**
Assess the airway and place or exchange an advanced airway (usually an endotracheal tube or a supraglottic device) if needed. Confirm correct placement, ideally with waveform capnography or capnometry.
- **Oxygenation and ventilation:**
 - Adjust FiO₂ to keep SpO₂ at 90–98% (PaO₂ 60–105 mm Hg)
 - Adjust ventilation to maintain PaCO₂ at 35–45 mm Hg, unless severe acidemia is present
- **Hemodynamics:**
Start or adjust vasopressors and/or IV fluids as needed to keep MAP ≥65 mm Hg.
- **Diagnostic testing:**
 - Record a 12-lead ECG and evaluate it for ischemia or rhythm abnormalities
 - Consider CT of the head, chest, abdomen and/or pelvis to investigate the cause of arrest or identify injuries related to resuscitation
 - Bedside ultrasound or echocardiography may help detect clinically important conditions that require treatment

ONGOING MANAGEMENT

Identify and treat the cause of the arrest and any complications.

- **Temperature control:**
If the patient does not follow commands after sedation and neuromuscular blockade are stopped, or if neurologic status cannot be reliably assessed, start a deliberate temperature-control strategy as soon as possible. Target: 32–37.5 °C.
- **Seizures:**
Watch for clinical seizures. Obtain an EEG in patients who do not follow commands.
- **Prognostication:**
Use several assessment methods together (multimodal). Wait at least 72 hours after ROSC or after normal temperature is reached.
- **Ongoing critical care:**
 - Oxygen: SpO₂ 90–98% (PaO₂ 60–105 mm Hg)
 - Ventilation: PaCO₂ 35–45 mm Hg, unless severe acidemia is present
 - Blood pressure: MAP ≥65 mm Hg
 - Keep glucose 70–180 mg/dL; avoid both low and high blood sugar
 - Assess the need for antibiotics