

## Checklist for determination of brain death

### Prerequisites (all must be checked)

- Coma, irreversible and cause known
- Neuroimaging explains coma (or is consistent with the cause of coma)
- CNS depressant drug effect absent (if indicated toxicology screen; if barbiturates given, serum level 0 mg/mL)
- No evidence of residual paralytics (electrical stimulation if paralytics used)
- Absence of severe acid-base, electrolyte, endocrine abnormality
- Normothermia or mild hypothermia (core temperature 36°C)
- Systolic blood pressure 100 mm Hg
- No spontaneous respirations

### Examination (all must be checked)

- Pupils nonreactive to bright light
- Corneal reflex absent
- Oculocephalic reflex absent (tested only if C-spine integrity ensured)
- Oculovestibular reflex absent
- No facial movement to noxious stimuli at supraorbital nerve, temporomandibular joint
- Gag reflex absent
- Cough reflex absent to tracheal suctioning
- Absence of motor response to noxious stimuli in all 4 limbs (spinally mediated reflexes are permissible)

### Apnea testing (all must be checked)

- Patient is hemodynamically stable
- Ventilator adjusted to provide normocarbica (PaCO<sub>2</sub> 34–45 mm Hg)
- Patient preoxygenated with 100% FiO<sub>2</sub> for 10 minutes to PaO<sub>2</sub> 200 mm Hg
- Patient well-oxygenated with a PEEP of 5 cm of water
- Provide oxygen via a suction catheter to the level of the carina at 6 L/min or attach T piece with CPAP at 10 cm H<sub>2</sub>O
- Disconnect ventilator
- Spontaneous respirations absent
- Arterial blood gas drawn at 8–10 minutes, patient reconnected to ventilator
- PCO<sub>2</sub> 60 mm Hg, or 20 mm Hg rise from normal baseline value

#### OR:

- Apnea test aborted

### Ancillary testing

Only 1 needs to be performed. Order only if clinical examination cannot be fully performed due to patient factors, or if apnea testing is inconclusive or aborted.

- Cerebral angiogram
- HMPAO SPECT
- EEG
- TCD