



Brain Death Examination Form for Adults Age 18 and Older *				
(*Trauma patients age ≥ 15 and < 18 may use either adult or pediatric guidelines.)				
<b>Part 1. Notify WRTC prior to brain death examination or testing.</b> WRTC notified? <input type="checkbox"/> Yes				
<b>Part 2. Prerequisites (ALL prerequisites must be met)</b> Irreversible and identifiable cause of coma: <input type="checkbox"/> Traumatic Brain Injury (TBI) <input type="checkbox"/> Stroke <input type="checkbox"/> Other:				
	Examination One		Examination Two	
	Date:	Time:	Date:	Time:
Each choice either "meets" or "does not meet" the standard prerequisites for declaration of death by neurologic criteria →	Prerequisite Met	Prerequisite NOT Met	Prerequisite Met	Prerequisite NOT Met
Systolic Blood Pressure ≥ 90 mmHg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Body Temperature >35°C (95°F)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No significant sedative/analgesic or drug effect	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No significant metabolic/electrolyte abnormalities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No neuromuscular blockade effect	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Part 3. Physical Examination	Consistent with Brain Death	NOT Consistent with Brain Death	Consistent with Brain Death	NOT Consistent with Brain Death
Responsiveness/movement (excluding spinal reflexes)				
No responsiveness (deeply comatose)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Absent movement (no spontaneous movement, no response to painful stimuli, no posturing)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Evidence of absent brainstem function				
Absent pupillary light reflex	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Absent corneal, gag, cough reflexes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Absent oculovestibular reflex	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Absent oculocephalic reflex (NA = not applicable)	<input type="checkbox"/>	<input type="checkbox"/> NA	<input type="checkbox"/>	<input type="checkbox"/> NA
Part 4. Apnea Test				
High spinal cord injury present? <input type="checkbox"/> Yes <input type="checkbox"/> No (If yes, do not perform apnea test. Ancillary test required.)				
Pretest PaCO <sub>2</sub> : _____ mmHg Posttest PaCO <sub>2</sub> : _____ mmHg Duration of test: _____ minutes				
Respiratory effort? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Apnea test confirms apnea? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Part 5. Ancillary Testing (if necessary)				
Ancillary tests (Cerebral Angiography or Radionuclide Imaging) - Required when minimum clinical criteria not met and full clinical examination unable to be performed (with exception for oculocephalic reflex).				
Ancillary testing performed? <input type="checkbox"/> Yes <input type="checkbox"/> No				
Absence of intracerebral blood flow demonstrated by:				
<input type="checkbox"/> Cerebral angiography <input type="checkbox"/> Radionuclide (nuclear) angiography				
Part 6. Signatures				
<b>Examiner One:</b> I certify that my examination is consistent with brain death. Second exam pending.				
Printed name: _____ Signature: _____ Date: _____ Time: _____				
<b>Examiner Two:</b> I certify that my examination confirms brain death at the date and time listed below.				
Printed name: _____ Signature: _____ Date: _____ Time: _____				

PATIENT IDENTIFICATION

If label is not available, please complete:

Patient Name: \_\_\_\_\_

Date of Birth: \_\_\_\_\_ Medical Record # \_\_\_\_\_

Gender:  Male  Female

**Inova**  
**Brain Death Examination Form -**  
**Adult**



## Information for Completing the Determination of Brain Death Assessment

Clinical Criteria	Details
Notify WRTC (703-641-0100)	The clinical team should notify WRTC of any patient on whom brain function testing is being considered.
Date	Date of examination.
Time	<p><u>For children less than 18 years of age and 31 days of age or older (at least 36 week gestation):</u> Two separate clinical exams must be performed at least 12 hours apart.</p> <p><u>For infants age 30 days or less and older than seven days of age (at least 36 week gestation):</u> Two separate clinical exams must be performed at least 24 hours apart.</p> <p><u>For adults age 18 and older and trauma patients age 15 and older:</u> Two separate exams must be performed by two physicians independently, with no specified time interval. For non-trauma patients less than 18 years of age, please use the Pediatric brain death examination form.</p>
Systolic blood pressure	SBP should be equal to or greater than 90 mmHg in adults & greater than the age appropriate minimum in newborns, infants, and children.
Body temperature	Body temperature should be greater than or equal to 35 degrees C (95 F) prior to physician exam for adults and children.
Neuroactive drugs worn off	e.g. narcotics, sedatives, barbiturates, atropine, etc.
Absence of confounding factors	There should be absence of severe electrolyte, metabolic or endocrine abnormalities. The acceptable range for serum sodium is between 130 and 155 mEq/L.
<b>Physical examination requirements</b>	
No responsiveness	Patient should be deeply comatose with no responsiveness to noxious stimuli (e.g. supraorbital, sternal pressure).
Absent movement	Patient should not demonstrate any movement (spontaneously or to painful stimuli), including seizures, shivering, or posturing. Neuromuscular blocking agents and sedatives must be worn off. Spinal reflexes, including Babinski, are not indicative of brainstem function and hence may coexist with a diagnosis of brain death.
<b>Evidence of absent brainstem function</b>	
Absent pupillary light reflex	Bilateral absent pupil reflexes. (Note: pupil reflexes may be absent after eye injury, neuromuscular blockers, atropine, mydriatics, scopolamine, opiates.)
Absent corneal, gag, cough reflexes	Cough response best assessed by deep bronchial suction.
Absent oculoccephalic reflex (Doll's eyes)	Elicited by rotating the head briskly. A normal response (present reflex) is conjugate deviation of the eyes to the side opposite of the direction in which the head is turned. May omit this test with known or suspected cervical spine injury ("NA" choice).
Absent oculovestibular reflex	With head of bed at 30 degrees, instill 50mL of iced water into ear canal. Normal response (i.e. present oculovestibular reflex) is tonic deviation of the eyes toward the irrigated ear. Nystagmus in either direction should be absent in brain death.

### Perform an apnea test per operating unit's Respiratory Care policy manual.

#### Guidelines for clinicians:

- Confirm prerequisites are met: 1) normotension, 2) normothermia ( $\geq 35^{\circ}\text{C}$ ), 3) euvolemia, 4) eucapnia ( $\text{PaCO}_2$  35-45 mmHg), 5) absence of hypoxia, and 6) no prior evidence of  $\text{CO}_2$  retention (i.e. as seen in COPD, severe obesity)
- Preoxygenate
- Obtain baseline ABG
- Disconnect ventilator while preserving oxygenation
- Observe for respiratory movements for 8 – 10 minutes (may be shorter in pediatrics)
- Criteria to abort test: presence of respiratory movements, systolic blood pressure  $<90$  mmHg or age appropriate minimum in pediatrics,  $\text{SpO}_2$   $<85\%$  for  $>30$  seconds, or new cardiac arrhythmias. Send an ABG before reconnecting ventilator
- If there is no respiratory effort, check  $\text{PaCO}_2$  by ABG, one or more times as necessary, after a minimum of 8 minutes (may be shorter in pediatrics)
- Reconnect ventilator if  $\text{PaCO}_2$  meets apnea criteria or for criteria in #6
- Positive test = patient is apneic and  $\text{PaCO}_2$  is greater than or equal to 60 mmHg or 20 mmHg increase in  $\text{PaCO}_2$  over a baseline normal  $\text{PaCO}_2$ , regardless of the time duration of testing
- Negative test = respiratory movements are observed
- Inconclusive test =  $\text{PaCO}_2$  does not meet apnea criteria or test aborted without checking  $\text{PaCO}_2$ . Consider repeating test for a longer period of time or obtaining an additional ancillary test

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