



APNEA TEST FOR DETERMINATION OF CLINICAL BRAIN DEATH

It is recommended that the apnea test be performed as follows:

1. Prerequisites:
 - Core Temperature 36.5°C or 97°F
 - Systolic blood pressure 90 mm Hg
 - Corrected diabetes insipidus (Positive fluid balance)
 - Normal PCO₂ (Arterial PCO₂ of 35-45 mm Hg)
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2. Preoxygenate with 100% O₂ for 30 minutes
3. Connect a pulse oximeter and disconnect the ventilator
4. Place a nasal cannula at the level of the carina and deliver 100% O₂, 8 L per minute
5. Look closely for respiratory movements (abdominal or chest excursions that produce adequate tidal volumes)
6. Measure PO₂, PCO₂, and pH after 10 minutes and reconnect the ventilator
7. If respiratory movements are absent and arterial PCO₂ is 60 mm Hg (option: 20 mm Hg increase in PCO₂ over a baseline normal PCO₂), the apnea test result is positive (supports the diagnosis of brain death)

Connect the ventilator if during testing the systolic blood pressure becomes < 90 mm Hg or the pulse oximeter indicates significant desaturation and cardiac arrhythmias are present: immediately draw an arterial blood sample and analyze ABG!

8. If PCO₂ is 60 mm Hg or PCO₂ increase is > 20 mm Hg over baseline normal PCO₂, the apnea test is positive [supports the clinical diagnosis of brain death]
9. If the PCO₂ is < 60 mm Hg or PCO₂ increase is < 20 mm Hg over baseline normal PCO₂, the result is indeterminate and an additional confirmatory test can be considered.