# Brain death

- The role of neuroimaging in brain death diagnosis: a review of radiological protocols and the need for standardization
- A High-Fidelity Porcine Model of Orthotopic Heart Transplantation Following Donation after Circulatory Death
- Pediatric Heart Transplant in Donation After Circulatory Death using Normothermic Regional Perfusion
- Interprofessional ethics education through a simulation focused on collective moral distress
- Contextualizing India's Medicolegal Controversies Related to Brain Death/Death by Neurologic Criteria: Regulation, Religion, and Resource Allocation
- Special aspects of patients with va-ECMO on the way to organ donation
- Legal Liability in Neurology: Navigating Malpractice and Regulatory Compliance
- Ischemia-free liver transplantation improves long-term outcomes in a 5-year follow-up study

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## Definition

https://n.neurology.org/content/74/23/1911

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The cause of the cessation of brain activity (CBA) can usually be determined by a combination of medical history, physical examination, laboratory tests and imaging studies.

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The declaration of “death by neurological criteria” (DNC) also referred to as brain death (BD), understood in the sense of whole BD, and not in the sense of brain stem death or higher BD—is an established medicolegal practice throughout the United States and in many countries worldwide

Brain death diagnosis

## The World Brain Death Project

The World Brain Death Project

### Computed tomography angiography for brain death

see Computed tomography angiography for brain death.

### S100B

Changes in S100B protein, especially the levels of this dimer 48 hours after trauma can be used as marker to predict brain death. Alongside other known prognostic factors such as age, GCS and diameters of the pupils, however, this factor individually can not conclusive predict the patient's clinical course and incidence of brain death. However, it is suitable to use GCS, CT scan, clinical symptoms and biomarkers together for a perfect prediction of brain death [1].

# Near-Infrared Spectroscopy

Near-Infrared Spectroscopy for Brain death

### Gadolinium-enhanced magnetic resonance angiography

The practicability of Gadolinium-enhanced magnetic resonance angiography to confirm cerebral circulatory arrest was assessed after the diagnosis of brain death in 15 patients using a 1.5 Tesla MRI scanner. In all 15 patients extracranial blood flow distal to the external carotid arteries was undisturbed. In 14 patients no contrast medium was noted within intracerebral vessels above the proximal level of the intracerebral arteries. In one patient more distal segments of the anterior and middle cerebral arteries (A3 and M3) were filled with contrast medium. Gadolinium-enhanced MRA may be considered conclusive evidence of cerebral circulatory arrest, when major intracranial vessels fail to fill with contrast medium while extracranial vessels show normal blood flow [2].

The level of knowledge of medical students at Centro Universitário Lusíada - UNILUS- Santos (SP), Brazil, regarding brain death and transplantation is limited, which could be the result of inadequate education during medical school [3].

# Criteria

Brain death criteria.

# Case reports

A 41-year-old man was admitted to hospital due to sudden loss of consciousness. A regional brain perfusion SPECT/low-dose CT showed abnormal 99mTc-HMPAO uptake in the right hemisphere frontotemporally without any other supratentorial or infratentorial radiotracer uptake. A neuropathological examination disclosed a middle cerebral artery aneurysm. Presumably, vessel wall fibrosis prevented collapse. Multiple transmural dissections of the fibrotic aneurysmal wall were the source of the subarachnoid hemorrhage. This interesting image shows that radiotracer accumulation in cerebral artery aneurysms can be a diagnostic pitfall in brain death scintigraphy assessment [4]

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Decompressive craniectomy as a potentially reversible condition in brain death-brain stunning or skin and pericranium stretching? [5].

In a editorial, Hibi et al., aimed to provide an outline of the world history of liver transplantation (LT), with a special focus on the innovation, development, and current controversies of living donor (LD) LT from East Asian and Western perspectives. In 1963, Starzl et al. (University of Colorado, U.S.) performed the world's first human LT for a 3-year-old child with biliary atresia. The donor was a 3-year-old patient who had suffered from brain death following neurosurgery. [6].

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2)
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6)
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