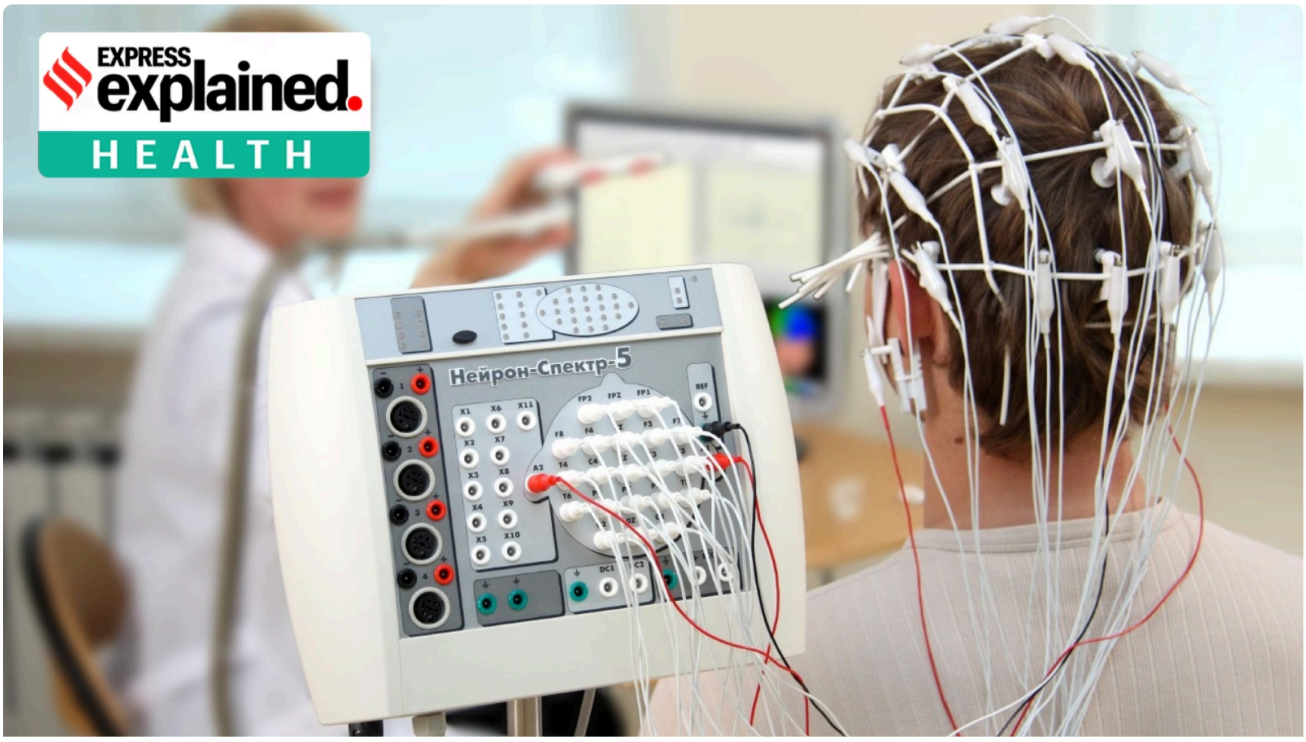
The Indian EXPRESS
JOURNALISM OF COURAGE

What is brain death and why is Supreme Court reviewing the way it's certified?

The Supreme Court is hearing a plea alleging malpractices in brain death certification to facilitate 'organ harvesting'. Here's a look at how doctors declare a person brain dead and why the certification process faces a challenge in India

Written by: Anonna Dutt 7 min read New Delhi Updated: Apr 30, 2026 09:18 AM IST



Brain death, also referred to as brain stem death, is an irreversible condition where all activities of the brain, including automatic functions such as breathing controlled by the brain stem, cease.

The Supreme Court on Tuesday said that it will seek expert opinion from AIIMS doctors on whether there is a need to conduct tests such as electroencephalogram

(EEG) and angiogram to declare someone brain dead.

The two-judge bench, hearing a **case on alleged malpractices in brain death certification** by Kerala-based medic and activist S Ganapathy, said that it will ask the head of AIIMS's neurology department to constitute a committee to provide its views on the safety and viability of these tests.

Ganapathy alleged that patients who may not be brain dead are declared so to facilitate organ donation. He added that the current apnea test done to certify brain death can be subjective and the legal mandate requiring that the test be videographed is not followed often.

What is brain death, and the protocol as well as challenges in certifying someone as brain dead? We explain.

What is brain death?

Brain death, also referred to as brain stem death, is an irreversible condition where all activities of the brain, including automatic functions such as breathing controlled by the brain stem, cease. The patient continues to survive — and breathe — with the help of life support systems such as ventilators. These patients, most of whom have suffered severe injuries in road accidents and falls that cut off oxygen supply to the brain, are for all intents dead and cannot be revived.

Even as they die while being on life support systems — their blood is kept pumping with the help of these machines — they make for good candidates for organ

donation. They can even donate organs such as heart and lungs, which living donors cannot donate.

Express Exclusive | **AIIMS study: 6 in 10 top Indian doctors not trained to certify brain death, hurting organ donation**

Although donation of organs and tissue is now promoted even in patients who have circulatory death — where the heart-beat and breathing stop completely — it is less common than donation from brain dead patients.

Why do we need to declare people brain dead?

Declaration and certification of brain death is essential for deceased organ donation, where organs and tissues such as kidney, liver, heart, and eyes are donated to undisclosed, unrelated recipients. While India is a global leader when it comes to the absolute number of transplant surgeries, most of these are conducted using organs donated by living relatives.

While these procedures are getting safer by the day, it still holds some risks for a healthy donor, which can be done away with when using deceased donor organs.

Despite the fact that nearly 1.5 lakh people die due to traumatic brain injuries and another 50,000 due to stroke every year — both categories of patients who qualify as brain dead donors — only 1,100 persons actually donate their organs. India's rate of deceased donation, while on the rise, continues to be very low at 0.77 per million population. This is below the rates reported by neighbouring countries such as Thailand (6.21), China (4.5), Sri Lanka (3.38), and Japan (1.18). There are 48 deceased donations per million population in Spain, which has one of the highest deceased donations.

What is the protocol followed for declaring brain death?

The current guidelines by the apex regulator National Organ and Tissue Transplant Organisation (NOTTO) requires a four-member board — including the hospital in-charge, a neurologist or neurosurgeon, and the treating physician — to declare that a patient's brain function has irreversibly ceased at least twice with an interval of 12 hours.

Also Read | **In death by euthanasia, Harish Rana donates heart valve, cornea: How are these harvested and used?**

This board has to determine and note in writing what was the illness or accident that led to the condition, and whether there could possibly be any reversible causes such as alcohol consumption, drug use, hypothermia, and metabolic imbalances, among others. They also have to note whether spontaneous breathing has ceased, whether the patient's pupils react to light, whether their eye moves to the opposite side when their head is turned (just like a doll's eyes would), whether they have any response to pain, and whether they have a gag reflex, among others.

"A strict protocol, which is guided by the current laws, is followed for the declaration of brain death. In fact, we follow stricter norms. While the guidelines require the team of doctors to meet and declare brain death at least twice, we end up doing it sometimes three times for the patients. The current guidelines require various bed-side tests for the declaration of brain death. It does not specify the need for tests such as EEG or angiogram," said Dr Manjari Tripathi, head of the department of neurology at AIIMS-New Delhi.

What is EEG and angiogram? What does it tell us?

An EEG test essentially looks for the electrical signals in the brain using several small electrodes attached to the head. For a brain dead patient, this test would show that there is no electrical activity in the brain. An angiogram, on the other hand, uses contrast dyes and X-rays to check the blood flow in the brain. For a brain dead patient, this test would show that the blood flow to the brain has stopped.

While the bed-side tests required as per current guidelines can indicate that a person is brain dead, these tests can conclusively show that they indeed are.

There are, however, challenges to utilising these tests for determining every brain death. Two experts, on condition of anonymity, said that using these tests would mean that smaller hospitals would never be able to declare a person brain dead; therefore, the already low number of deceased donations would go down further. They said these tests are only available at the tertiary and super-speciality hospitals, while there are several transplant or organ harvesting centres at smaller hospitals across the country.

What are the challenges in brain death certification?

One of the challenges is the lack of knowledge even among physicians, which leads to several patients never being officially declared and asked to be organ donors.

A study by AIIMS doctors, published in the journal *Neurology India* last year, found that more than half the doctors — including neurosurgeons, neurologists, and critical care specialists who are most commonly included in the certification process — did not receive any training on brain death certification at the time of their graduation.

Importantly, the training of postgraduate students who work as resident doctors in hospitals was also found to be inconsistent. While nearly three-fourth of the doctors surveyed worked at teaching hospitals, only 10% said that they regularly trained their residents in brain death certification. More than a third of the doctors, in fact said, their institutions did not have a fixed curriculum for brain death certification.