



CEREBO: Indigenous Brain Diagnostic Tool

[Source: TH](#)

India has developed **CEREBO**, an indigenous, hand-held **diagnostic device to detect [traumatic brain injuries \(TBIs\)](#)**, aiming to improve early detection and patient outcomes, particularly in rural and emergency settings.

Key Features of CEREBO:

- **Technology:** Developed by [Indian Council of Medical Research](#), It uses **advanced near-infrared spectroscopy** combined with **machine learning** to detect **intracranial bleeding and edema**.
- **Speed:** Provides results **within a minute**, enabling rapid diagnosis in emergency situations.
- **Safety:** It is **non-invasive and radiation-free**, making it safe for **infants, pregnant women, and repeated use**.
- **User-Friendly:** Offers **color-coded outputs** for easy interpretation by healthcare personnel.
 - It is portable and designed for **ambulances, trauma centers, rural clinics, and disaster response units** where access to CT (Computed Tomography) or MRI (Magnetic Resonance Imaging) scans is limited.
- **Cost-Effective:** Provides an affordable alternative to **CT scans** in resource-limited settings.
 - CEREBO complements but does not replace CT scans for deep tissue assessment.
- **Traumatic Brain Injury (TBI):** It is brain damage caused by an **external force**. Mild TBIs affect thinking, movement, or behavior temporarily, while severe TBIs can cause **permanent disability or death**.

Read more: [Brainware](#)

PDF Refernece URL: <https://www.drishtiias.com/printpdf/cerebo-indigenous-brain-diagnostic-tool>