

# Doctors find patient brain activity continued for 10 minutes after death

March 10 2017, by Bob Yirka

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Credit: Wikimedia Commons

A team of doctors affiliated with the University of Western Ontario in Canada has documented a case in which a terminal patient removed from life support continued to experience brain wave activity for approximately 10 minutes after they had been pronounced clinically

dead. In their paper published in *The Canadian Journal of Neurological Sciences*, the team describes the circumstances of the unusual event and acknowledge that they have no explanation for what they observed.

For many years, doctors have used a handful of tools to determine if someone has died—a lack of pupil dilation, heart stoppage, lack of breathing, etc. But one test has stood above all others—an EEG reading. Even if the heart is beating and a person is breathing, if the [brain](#) stops processing [electrical signals](#), that person is considered clinically dead—though in some cases they may be labeled as brain dead. But what if a person's heart stops beating, meaning there is no blood flow to the brain, and the brain continues to show delta wave bursts for up to ten minutes? Prior to this event occurring in Canada, it was thought to be an impossibility.

The unusual circumstance came about as the team in Canada was conducting routine research regarding the process of death in humans. As four terminal patients were removed from life support, their vital signs were monitored for a length of time. Three of the patients ceased emitting brain signals almost immediately after their hearts stopped, but the fourth instead began emitting signals that are normally seen in a person that is in a very deep sleep—delta waves—and continued to do so for 10 minutes and 38 seconds. The team conducted a series of tests to make sure it was not an equipment malfunction, and after finding no problems, reported that they had no explanation for what they had observed. But they also suggest further study, because their findings indicate it is likely that others have experienced brain activity after death as well, but no one has bothered to look for it.

They also noted that the prolonged brain activity did not resemble the "death waves" reported by another team recording [brain wave activity](#) in decapitated mice six years ago.

**More information:** Loretta Norton et al. Electroencephalographic Recordings During Withdrawal of Life-Sustaining Therapy Until 30 Minutes After Declaration of Death, *Canadian Journal of Neurological Sciences / Journal Canadien des Sciences Neurologiques* (2016). [DOI: 10.1017/cjn.2016.309](https://doi.org/10.1017/cjn.2016.309)

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