

Cryonics

By: Christian Perez

Department of Biomedical Engineering

Cryonics is the low-temperature preservation of humans and animals that can no longer be sustained by contemporary medicine until resuscitation may be possible in the future. Currently, human cryopreservation is not reversible. The reasoning behind cryonics is that people who are considered dead by the current legal or medical definitions will not necessarily be dead by future standards. The word cryonics is derived from the Greek word “kryos”, meaning cold.

Benjamin Franklin suggested in a 1773 letter that it might be possible to preserve human life in a suspended state for centuries. Since the early 20th century, various writers wrote books proposing that freezing recently deceased people may be a way to save lives. Evan Cooper founded the Life Extension Society in 1964 which helped develop cryonics societies around the country.

The first person frozen with intent of future resuscitation was Dr. James Bedford, a 73-year-old psychology professor frozen under crude conditions by the Cryonics Society of California on January 12, 1967. In 1979, nine bodies stored by Robert Nelson, head of the CSC, were discovered to have thawed out due to the depletion of funds by relatives. Nelson was sued, and negative publicity slowed cryonics growth for years afterward. Of 17 documented cryonics cases between 1967 and 1973, only James Bedford remains cryopreserved today.

Cryonics procedures cannot be performed until the patient is pronounced legally dead. As soon after legal death is declared the patient is placed in an ice water bath. Blood circulation and breathing are artificially restored. Then protective medications are intravenously administered followed by hooking the patient up to a heart-lung machine. The patient's temperature is then reduced to a few degrees above freezing. Blood is replaced with an organ preservation solution while the patient is relocated to the Cryonics Facility of their choice.



There, all major blood vessels are connected to a perfusion circuit. All along the brain is being monitored by two small holes drilled into the skull. After cryoprotective perfusion, patients are cooled under computer control by fans circulating nitrogen gas at a temperature near -125°C as quickly as possible to avoid any ice formation. The patient is then further cooled to -196°C over approximately two weeks.

The central premise of cryonics is that identity, personality and memory are in cellular structures and chemistry of the brain. It is not generally accepted that current methods preserve the brain well enough to permit revival in the future. Cryonics advocates point to studies showing that high concentrations of cryoprotectant circulated through the brain before cooling can prevent structural damage from ice, preserving the fine cell structures of the brain in which memory and identity presumably reside.

Works Cited

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