

Definition of Death in Judaism

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Introduction

The modern era of human heart transplantation which began late in 1976 initiated intense debate about the moral, religious and legal issues relating to life and death and especially the definition of death. The traditional definition of death as reflected in *Black's Law Dictionary* is the "total stoppage of the circulation of the blood, and the cessation of the animal and vital functions consequent thereon, such as respiration, pulsation..." With the advent of heart transplantation, this definition of death became inadequate and a new definition of death, so-called brain death, evolved. Brain death is now socially acceptable and legislatively sanctioned throughout most of the civilized world.

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In a classic 1968 article on brain death,¹ an Ad Hoc Committee of the Harvard Medical School recommended four criteria: unreceptivity and unresponsivity, no movements, no reflexes, and a flat electroencephalogram. This paper was reprinted as a "Landmark Article" in 1984² with an accompanying perspective editorial³ which states:

The Harvard Committee report likely spawned more medicolegal discussion and action than any other publication. Almost every legal entity has had to deal with this new concept of death, and most medical standards for death of the brain originated, with some modifications, from the criteria set forth in this article. The prescience of this committee has become even more obvious as hundreds of clinical observations have borne out the diagnostic value of their clearly stated clinical rules.

In 1981, the President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research published its report that defined death.⁴ This definition was approved by the American Bar Association and many other organizations and prominent individuals. The recommended proposal was the following:

An individual who has sustained either (a) irreversible cessation of circulatory and respiratory functions, or (b) irreversible cessation of all functions of the entire brain, including the brain stem, is dead. A determination of death must be made in accordance with accepted medical standards.

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1. "A Definition of Irreversible Coma." Report of the Ad Hoc Committee of the Harvard Medical School to Examine the Definition of Brain Death. *J.A.M.A.* 1968; 205: 337-350.
 2. *Ibid.* *J.A.M.A.* 1984; 252: 677-679.
 3. Joynt RJ, A new look at death. *J.A.M.A.* 1984; 252: 680-682.
 4. President's Commission for the study of Ethical Problems in Medicine and Biomedical and Behavioral Research: *Defining Death: Medical, Legal and Ethical Issues in the Determination of Death.* Washington, D.C., Government Printing Office, 1981.

The duration of time for observation has not been settled. The Harvard Ad Hoc Committee stated "all of the above tests shall be repeated at least 24 hours later with no change." The President's Commission recommended an observation period of six hours if confirmatory tests are available and twelve hours if they are not. For anoxic brain damage, the Commission stated that twenty-four hours of observation is generally desirable for ascertainment of brain death but that this period may be reduced if a test shows cessation of cerebral blood flow or if an electroencephalogram shows electrocerebral silence (i.e., a flat tracing) in an adult patient without drug intoxication, hypothermia or shock.

At present, most statutes and judicial opinions accept the extension of the definition of death first introduced by the Harvard Ad Hoc Committee and recognize that death can be accurately demonstrated either on the traditional grounds of irreversible cessation of heart and lung functions or on the basis of irreversible loss of all functions of the entire brain. This recognition is codified in the Uniform Determination of Death "Standard" which does not specify diagnostic tests or medical procedures required to determine death but leaves the medical profession free to make use of new medical knowledge and diagnostic advances as they become available. The determination of death must thus be made in accordance with accepted medical standards.

In New York State, the Governor in 1984 appointed a Task Force on Life and the Law which published its recommendations on the Determination of Death in July 1986. (However, Rabbi J. David Bleich, a member of the Task Force, issued the lone dissent from the group's decision). The Task Force suggested that the New York State Department of Health promulgate a regulation which establishes that an individual is dead when the individual has suffered either (a) irreversible cessation of respiratory and circulatory function or (b) irreversible cessation of all functions of the entire brain, including the brain stem. On June 18, 1987, the State Hospital Review and Planning Council adopted a regulation recognizing the total and irreversible cessation of brain function as a basis for determining death in New York State. Shortly thereafter, the Department of Health amended its regulations to include this

standard so that either the brain death standard or the circulatory or respiratory standard may be relied on to determine that death has occurred.

The brain death standard applies to hospital and nursing home patients who have lost *all* brain function and whose breathing and circulation are artificially maintained. Under the standard, patients like Karen Ann Quinlan, who had brain stem capacity and the ability to regulate basic functions such as heartbeat and respiration, are considered alive.

It is of paramount importance not to confuse brain death with other forms of irreversible brain damage, particularly the permanent vegetative state, for a patient in such a state is alive according to all legal, moral, medical, and religious definitions. Such a patient is certainly not dead in the medical or legal sense and his organs may not be removed for transplantation until death has been established by either classic irreversible cardiorespiratory criteria or by irreversible brain stem death criteria.

Does Judaism Recognize Brain Death?

There is at present an intense debate among rabbinic authorities as to whether or not Jewish law (halacha) recognizes brain death as a definition of death. It is our thesis that the answer is affirmative. The classic definition of death in Judaism as found in the Talmud and Codes of Jewish Law is the absence of spontaneous respiration in a person who appears dead (i.e., shows no movements and is unresponsive to all stimuli). The absence of hypothermia or drug overdose must be ascertained because these conditions can result in depression of the respiratory center with absence of spontaneous respiration and even heartbeat. If resuscitation is deemed possible, no matter how remote the chance, it must be attempted.

Jewish writings provide considerable evidence for the thesis that the brain and the brain stem control all bodily functions, including respiration and cardiac activity. It, therefore, follows that if there is irreversible total cessation of all brain function including that of the brain stem, the person is dead, even though there may still be some transient spontaneous cardiac activity. Brain function

is divided into higher cerebral activities and the vegetative functions of the vital centers of the brain stem. A criterion of death based on higher cerebral death alone is ethically and morally unacceptable. If a person is decapitated, his heart and lungs may still function for a brief period of time, but that person is obviously dead at the moment the brain and brain stem are severed from the remainder of the body. We contend that if one can medically establish that there is total cessation of all brain function including the brain stem, the patient is as if "physiologically decapitated."

There are a number of objective tests that can evaluate the viability of the brain stem. Brain stem death may be the preferable definition of death in Judaism since it is irreversible. Brain stem death confirms bodily death in a patient with absence of spontaneous respiration who may still have a heartbeat. We will provide support for our position from ancient and recent Jewish sources.

Classic Definition of Death in Jewish Law

The definition of death in Jewish law is first mentioned in the Babylonian Talmud which enumerates circumstances under which one may desecrate the Sabbath.⁵

...every danger to human life suspends the [laws of the] Sabbath. If debris [of a collapsing building] falls on someone and it is doubtful whether he is there or whether he is not there, or if it is doubtful whether he is an Israelite or a heathen, one must probe the heap of the debris for his sake [even on the Sabbath]. If one finds him alive, one should remove the debris, but if he is dead, one leaves him there [until after the Sabbath].

The Talmud then comments as follows:⁶

How far does one search [to ascertain whether he is

5. *Yoma* 8: 6-7.

6. *Ibid* 85a.

dead or alive]? Until [one reaches] his nose. Some say: Up to his heart. ...life manifests itself primarily through the nose, as it is written: "In whose nostrils was the breath of the spirit of life."⁷

The renowned biblical and talmudic commentator Rashi explains that if no air emanates from his nostrils, he is certainly dead. Rashi further explains that some people suggest the heart be examined for signs of life, but the respiration test is considered of greatest import.

The rule is codified by Maimonides (Rambam) as follows:⁸

If, upon examination, no sign of breathing can be detected at the nose, the victim must be left where he is [until after the Sabbath] because he is already dead.

The universally accepted code of Jewish law by Rav Yosef Karo, the *Shulchan Aruch*, states:⁹

Even if the victim was found so severely injured that he cannot live for more than a short while, one must probe [the debris] until one reaches his nose. If one cannot detect signs of respiration at the nose, then he is certainly dead whether the head was uncovered first or whether the feet were uncovered first.

Neither Rambam nor Rav Karo require examination of the heart. Cessation of respiration seems to be the determining physical sign for the ascertainment of death.

Another pertinent passage found in the *Shulchan Aruch* states:¹⁰

If a woman is sitting on the birthstool [i.e., about to give birth] and she dies, one brings a knife on the

7. *Genesis* 7:22.

8. *Mishneh Torah* (Code of Maimonides), *Hilchot Shabbat*, (Laws of the Sabbath) 2:19.

9. *Shulchan Aruch* (Code of Jewish Law), *Orach Chayim* 329:4.

10. *Ibid* 330:5.

Sabbath, even through a public domain, and one incises her womb and removes the fetus, since one might find it alive.

Rabbi Moses Isserles, known as Ramo, adds to this statement:¹¹

However, today we do not conduct ourselves according to this [rule] even during the week [i.e., even *not* on the Sabbath] because we are not competent to recognize precisely the moment of maternal death.

Several commentators explain that Ramo is concerned that perhaps the mother only fainted, and incising her abdomen might kill her. Maimonides, five centuries earlier, had already raised the problem of fainting complicating the recognition of death, when he wrote: "Whosoever closes the eyes of the dying while the soul is about to depart is shedding blood. One should wait a while: perhaps he is only in a swoon."¹²

Both Rambam and Ramo, however, agree that the talmudic description of death, for all practical purposes, is the absence or cessation of respiration.

Recent Rabbinic Writings on the Definition of Death

The classic Jewish legal definition is that death is established when spontaneous respiration ceases. Rabbi Moses Schreiber (*Chatam Sofer*) asserts that if a person is motionless "like an inanimate stone" and has no palpable pulse either in the neck or at the wrist, and also has no spontaneous respiration, his soul has certainly departed, but one should wait a short while to fulfill the requirement of Maimonides, who was concerned that the patient may only be in a swoon.¹³ Rabbi Sholom Mordechai Schwadron states that if any sign of life is observed in limbs other than the

11. Ramo, Glossary on *Shulchan Aruch, Orach Chayim* 330:5.

12. *Mishneh Torah, Hilchot Avel* (Laws of Mourning) 4:5.

13. *Responsa Chatam Sofer, Section Yoreh Deah*, No. 338.

heart and lungs, the apparent absence of spontaneous respiration is not conclusive in establishing death.¹⁴

On the other hand, Rabbi Isaac Yehuda Unterman, addressing the Eleventh Congress on Jewish Law in Jerusalem in August 1968, stated that one is dead when one has stopped breathing. Thus, many talmudic and post-talmudic sages agree that the absence of spontaneous respiration is the only sign needed to ascertain death. But some would also require cessation of heart action. Thus, a patient who has stopped breathing, says Rav Unterman, and whose heart is not beating is considered dead in Jewish Law.¹⁵ [We should point out that in 1968 the Harvard Criteria were new and unclear, and there was yet great confusion about the definition of brain death itself.]

Rabbi Eliezer Yehuda Waldenberg also defines death as the cessation of both respiration and cardiac activity.¹⁶ One must use all available medical means to ascertain with certainty that respiratory and cardiac functions have indeed ceased. A flat electroencephalogram in the face of a continued heartbeat is not an acceptable finding by itself to pronounce a patient dead. Even after death has been established one should wait a while before moving the deceased.

Rabbi Immanuel Jakobovits states, in part, that "the classic definition of death as given in the Talmud and Codes is acceptable today and correct. However, this would be set aside in cases where competent medical opinion deems any prospects of resuscitation, however remote, at all feasible".¹⁷

Rabbi J. David Bleich traces the Jewish legal attitude concerning the definition of death from talmudic through recent rabbinic times.¹⁸ In his opinion, brain death and irreversible coma are not acceptable definitions of death insofar as Jewish law is

14. Schwadron, SM, *Responsa Maharsham*. Vol. 4, Sect. 6, No. 124.

15. Unterman IY, "Points of Halacha in Heart Transplantation." *Noam* 1970; 13:19

16. *Responsa Tzitz Eliezer*. Vol. 9, no. 46 and Vol. 10, No. 25:4.

17. Jakobovits I. Personal communication, August 1, 1968.

18. Bleich JD, *Contemporary Halakhic Problems*, New York, Ktav, 1977, pp. 372-393.

concerned, since the sole criterion of death accepted by Jewish law is total cessation of *both* cardiac and respiratory activity long enough to make resuscitation impossible. Rabbi Bleich also discusses the various time-of-death statutes already enacted into law in many states in this country and statutes being contemplated by other states,¹⁹ and expresses the hope that provisions allowing for exemption from legislated definitions of death for reasons of conscience will be written into such statutes in order to preserve civil and religious liberties.

Total Brain Death in Judaism

The position that complete and permanent absence of any brain-related vital bodily function is recognized as death in Jewish law seems to be supported by Rabbi Moshe Feinstein²⁰ whose responsum on heart transplantation begins with a discussion of decapitation. Rav Moshe Feinstein quotes Maimonides,²¹ who states that a person who is decapitated imparts ritual defilement to others because he is considered dead even though one or more limbs of the body may yet move spastically, temporarily. The situation is comparable to the tail severed from a lizard which may still quiver temporarily but is certainly not alive.²² Rav Feinstein asserts that "someone whose head has been severed — even if the head and the body shake spastically — that person is legally dead." The requirement of Maimonides cited earlier in this essay to wait a while when death is thought to have occurred (i.e., when the patient has no spontaneous respiratory activity), according to Rav Feinstein, is to differentiate between true death and the situation "where the illness is so severe that the patient has no strength to breathe." Since only a few minutes of absent breathing is compatible with life, if the patient is observed for fifteen minutes with no spontaneous respirations, he is legally dead (unless a potentially

19. Bleich JD, "Time of Death Legislation." *Tradition* 1977; 16; 130-139

20. Responsa *Iggerot Moshe*, Section *Yoreh Deah*, Part 2, No. 174.

21. *Mishneh Torah*, *Hilchot Tumat Met* (Laws Concerning Ritual Defilement by the Dead) 1:15.

22. *Oholot* 1:6.

reversible cause of respiratory absence is present, such as hypothermia or drug overdose).

In the same responsum Rav Feinstein prohibits heart transplantation if the donor's heart is removed before total brain death has occurred. The presence of any spontaneous respiratory activity, however, indicates that a person is still alive and no matter what the clinical neurological picture, the patient may not be considered dead for any purpose including organ transplantation.

The above responsum is dated 1968 (5728 in the Hebrew calendar). Another responsum of Rav Feinstein dated two years later²³ amplifies the Jewish legal definition of death. He reiterates the error of physicians who diagnose death when the patient has no cerebral function but is still breathing spontaneously. This responsum also prohibits heart transplantation as murder of the recipient because his life is thereby shortened since (at that time) the success of cardiac transplantation in prolonging life had not been demonstrated.

On May 24, 1976, Rabbi Feinstein sent a letter to the Honorable Herbert J. Miller, who was Chairman of the New York State Assembly's Committee on Health, relevant to Assembly Bill 4140/A concerning the determination of death. In his letter he said:

The sole criterion of death is the total cessation of spontaneous respiration.

In a patient presenting the clinical picture of death, i.e., no signs of life such as movements or response to stimuli, the total cessation of independent respiration is an absolute proof that death has occurred. This interruption of spontaneous breathing must be for a sufficient length of time for resuscitation to be impossible [approximately 15 min.]

If such a "clinically dead" patient is on a respirator, it is forbidden to interrupt the respirator. However, when the respirator requires servicing, the services may be withheld while the patient is carefully and continuously monitored to detect any signs of

23. *Iggerot Moshe*, Section *Yoreh Deah*, Part 2, No. 146.

independent breathing no matter how feeble. If such breathing motions do not occur, it is a certainty that he is dead. If they do occur the respirator shall be immediately restarted.

A more recent responsum of Rabbi Feinstein, dated 1976,²⁴ supports the acceptability of "physiologic decapitation" as an absolute definition of death. Rabbi Feinstein again reiterates the classic definition of death as being the total irreversible cessation of respiration but then states that if by injecting a substance into the vein of a patient, physicians can ascertain that there is no circulation to the brain — meaning no connection between the brain and the rest of the body — that patient is legally dead in Judaism because he is equivalent to a decapitated person. Where the test is available, continues Rav Feinstein, it should be used.

We interpret Rabbi Feinstein's written responsa to indicate that Jewish law clearly recognizes that death occurs before all organs cease functioning. This is our interpretation, not necessarily accepted by others. Cellular death follows organismal death. Jewish law defines death as an organismal phenomenon involving dissociation of the correlative or coordinating activities of the body and not as individual organ death.

It is our opinion that the continued beating of the heart is not *halachically* critical. In the case of the Talmud where the patient is buried under debris, the interest focuses on any sign of residual life to warrant desecrating the Sabbath to dig him out. It has no relevance to a patient lying in an intensive care unit whose every function is monitored and whose status is open to full evaluation. In such a case, the issue is truly one of definition, not confirmation.

Based on the position of Rav Moshe Feinstein cited above, Rabbi M. Tendler, one of the authors of the present essay, has introduced the concept of physiologic decapitation as an acceptable definition of death in Judaism even if cardiac function has not ceased.²⁵

24. *Ibid.* Part 3, No. 132.

25. Tendler MD, "Cessation of brain function. Ethical implications in terminal care and organ transplants." *Annals NY Acad. Sci.* 1978; 315:394-497.

The thesis is²⁶

that absent heartbeat or pulse was not considered a significant factor in ascertaining death in any early religious source. Furthermore, the scientific fact that cellular death does not occur at the same time as the death of the human being is well recognized in the earliest biblical sources. The twitching of a lizard's amputated tail or the death throes of a decapitated man were never considered residual life but simply manifestations of cellular life that continued after death of the entire organism had occurred. In the situation of decapitation state, death can be defined or determined by the decapitated state itself as recognized in the Talmud and the Code of Laws. Complete destruction of the brain, which includes loss of all integrative, regulatory, and other functions of the brain, can be considered physiological decapitation and thus a determinant per se of death of the person.

Loss of the ability to breathe spontaneously is a crucial criterion for determining whether complete destruction of the brain has occurred. Earliest biblical sources recognized the ability to breathe independently as a prime index of life... destruction of the entire brain or brain death, and only that, is consonant with biblical pronouncements on what constitutes an acceptable definition of death, i.e., a patient who has all the appearances of lifelessness and who is no longer breathing spontaneously. Patients with irreversible total destruction of the brain fulfill this definition even if heart action and circulation are artificially maintained.

Thus, if it can be definitely demonstrated that all brain functions including brain stem function have ceased, the patient is legally dead in Jewish law because he is equated with a decapitated individuals whose heart may still be beating. Brain stem function

26. Veith FJ, Fein JM, Tendler MD, et al, "Brain death. I. A status report of medical and ethical considerations." *J.A.M.A.* 1977; 238:1651-1655.

can be accurately evaluated by radionuclide cerebral angiography at the patient's bedside.²⁷⁻³⁰ This test is a stress-free, simple, safe, highly specific and highly reliable indicator of absence of blood flow to the entire brain, thus confirming total irreversible brain death. "The absence of cerebral blood flow is presently considered the most reliable ancillary test in diagnosing brain death."³¹ There are also other tests used to confirm brain death.³²

Extensive recent medical reviews confirm that cessation of brain flow as measured by radioisotope techniques is invariably accompanied by signs of brain cell lysis. This evidence of cellular decay, although confirmable only at post-mortem examination, is an absolute criterion of death despite the beating heart. The heart is not dependent for its stimulation on brain function. A heart completely removed from the body continues to beat as long as its

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27. Korein J, Braunstein P, George A, et al, "Brain death. I. Angiographic correlation with the radioisotopic bolus technique for evaluation of critical deficit of cerebral blood flow." *Ann. Neurol.* 1977; 2:195-205.
28. Tsai SH, Cranford RE, Rockswold G., Koehler S, "Cerebral radionuclide angiography." *J.A.M.A.* 1982; 248:591-592.
29. Schwartz JA, Baxter J, Brill D, "Diagnosis of brain death in children by radionuclide cerebral imaging." *Pediatrics* 1982; 73:14-18.
30. Goodman JM, Heck LL, Moore BD, "Confirmation of brain death with portable isotope angiography. A review of 204 consecutive cases." *Neurosurgery* 1985; 16:492-497.
31. Alvarez LA, Lipton RB, Hirschfeld A, et al, "Brain death determination by angiography in the setting of a skull defect." *Arch. Neurol.* 1988; 45:225-227.
32. Ropper AH, Kennedy SK, Russell L, "Apnea testing in the diagnosis of brain death: clinical and physiological observations." *J. Neurosurg.* 1981; 55:942-946.
- Rowland TW, Donnelly JH, Jackson AH, "Apnea documentation for determination of brain death in children." *Pediatrics* 1984; 74:505-508.
- Trojborg W, Jorgensen EO, "Evoked cortical potentials in patients with "isoelectric EEG." *Electroencephalogr. Clin. Neurophysiol.* 1973; 35:301-309.
- Ropper AH, Kehne SM, Wechsler L, "Transcranial Doppler in brain death." *Neurology* 1987; 37:1733-1735.
- Darby J, Yonas H, Brenner RP, "Brainstem death with persistent EEG activity. Evaluation by xenon-enhanced tomography." *Critical Care Med.* 1987; 15:519-521.
- Tan WS, Wilbur AC, Jafar JJ, et al, Brain death. "Use of dynamic CT and intravenous digital subtraction angiography." *Amer. J. Neurorad.* 1987; 8:123-125.

nutrition is maintained. Rabbi Feinstein is of the opinion that the criterion of death in a patient who gives the clinical impression of death is cessation of spontaneous respiration. "Clinical impression of death" means "if he resembles a dead person, that is to say he does not move any of his limbs."³³ [Yet, Rav Feinstein never specifically excluded the heart as a criterion as well. *editor*]

When a patient is on a respirator and gives all the evidence of having died, i.e., meets the Harvard criteria, he is not "brain dead" — a confusing term — but is dead as evidenced, first and foremost, by cessation of independent respiration. In addition, a careful check must be made that he meets the reservation that he appear clinically dead. This requirement is met in the fullest and most absolute measure by total unreceptivity, unresponsiveness, absence of all movements, absent cephalic reflexes, fixed dilated pupils and persistence of all these findings for at least a twenty-four hour period in the absence of intoxicants or hypothermia. These are the Harvard criteria.

Thus, we maintain that valid definition of death is brain death. The classic "respiratory and circulatory death" is in reality brain death. Irreversible respiratory arrest is indicative of brain death. A brain dead person is like a physiologically decapitated individual. The requirement of Maimonides to "wait awhile" to confirm that the patient is dead is that amount of time it takes after the heart and lung stop until the brain dies, i.e., a few minutes.

Until the brain dies, one must attempt to restart the heart and the respiration of a non-breathing patient. If the heart and lung function are rapidly restored the patient may suffer no neurological deficits. There are a number of objective tests now available that can evaluate the viability of the brain stem. A simple, non-stressful test is the radionuclide blood flow study described above. This test does not violate the prohibition against unnecessarily stressing the patient in any way and has been shown to be "nearly 100%" accurate. The question whether "nearly 100%" is accurate enough

33. Rashi's commentary on Yoma 85a (s.v. *ad hechan*).

when we are dealing with the soul is an open question.

Another strong proof for our thesis that brain death is the Jewish legal definition of death is found in the *Shulchan Aruch*.³⁴ The author describes individuals "who are considered dead even though they are still alive" to include those whose neck has been broken and those whose bodies "are torn on the back like a fish." These people are considered dead in that they impart ritual defilement and render their wives widows even though they may still have spastic or convulsive movements and even have heartbeats. The reason is that the connection between the brain and the body has been severed by the severance of the spinal cord or by the severance of the blood supply to the brain. It thus seems clear that death of the brain is the legal definition of death in halacha.

The fifteenth century commentator, Rabbi Yehuda Aryeh of Modinah, who was Rabbi in Venice and known by the pen name of *Omar Haboneh*, states:³⁵

...All [Rabbis] agree that the fundamental source of life is in the brain. Therefore, if one examines the nose first, which is an organ of servitude of the brain, and there is no [spontaneous] respiration, none of them [i.e., the Rabbis] doubt that life has departed from the brain.

Further support for our position can be deduced from the talmudic precedent³⁶ which is codified in Jewish law,³⁷ about the woman who dies in labor whose unborn fetus is still alive. As cited earlier, since the woman may only be in coma and not dead "because we are not competent to recognize precisely the moment of maternal death,"³⁸ we do not perform an immediate cesarean section to try to save the unborn child because the comatose but alive mother might be killed thereby. However, where death is

34. *Shulchan Aruch, Yoreh Deah* 370.

35. Commentary *Omar Haboneh* in Jacob Habib's *Eyn Yaakov, Yoma* 85a.

36. *Arachin* 7:1.

37. *Shulchan Aruch, Orach Chayim* 330:5.

38. Ramo, *Shulchan Aruch, Orach Chayim* 330:5.

certain, as for example if the mother was accidentally decapitated, an immediate cesarean section is required³⁹ although individual limbs or organs of the mother may still exhibit muscular spasms.

Rabbi Nachum Rabinowitz⁴⁰ quotes Rambam⁴¹ who explains that the organism is no longer considered to be alive "when the power of locomotion that is spread throughout the limbs does not originate in one center, but is independently spread throughout the body." Obviously, continues Rabbi Rabinowitz, "the definition of death depends upon the availability of more sophisticated techniques of resuscitation." Again citing Rambam⁴², he concludes that the applicability of such methods and the consequent decision as to the onset of death is determined according to the judgment of the physicians.

We believe that the sophisticated medical techniques described above including radionuclide angiography can definitively establish the absence of any possibility of resuscitation, equating such a physiologically decapitated patient with the hypothetical case of the decapitated woman whose death is confirmed by her decapitated status even though she may still exhibit muscular spasms.

In a later publication,⁴³ Rabbi Rabinowitz quotes again from Maimonides as follows: "If a person's neck is broken... or if his back is torn like a fish or if he is decapitated or if he is hemisected at the abdomen, he imparts ritual defilement [because he is dead] even if one of his organs is still shaking." From here it can be concluded, he continues, that if the controlling center which unifies all the activities of the organs is nullified (i.e., dead), the movement of a single organ is meaningless and does not indicate that the person (i.e., the organism) is alive.

39. Responsa *Shevut Yaakov*, Vol 1 No. 13.

40. Rabinowitz N, "What is the *halakhah* for organ transplants?" *Tradition* (New York) 1968; 9:20-27.

41. Rambam *Mishnah Commentary, Oholot* 1:6.

42. *Mishneh Torah, Hilchot Rotze'ach* (Laws of a Murderer) 2:8.

43. Rabinowitz NE, "Sign of life: a single organism." *Techumin, Zomet Alon Shevut, Gush Etzion, Israel*, Vol 8, 1987 (5747), PP 442-443.

We are aware of opposition to our point of view. Rabbi Aaron Soloveichik considers our position to be a serious misinterpretation of Jewish law.⁴⁵ We maintain our position, however, that total and irreversible cessation of all brain function as determined by the Harvard criteria is equivalent to total destruction of the brain and, hence, tantamount to functional or physiological decapitation which in Judaism is equated with death.

Conclusion

Judaism is guided by the concepts of the supreme sanctity of human life, and of the dignity of man created in the image of G-d. The preservation of human life in Judaism is a divine commandment. Jewish law requires the physician to do everything in his power to prolong life, but prohibits the use of measures that prolong the act of dying. To save a life, all Jewish religious laws are automatically suspended, the only exceptions being idolatry, murder, and forbidden sexual relations such as incest. In Jewish law and moral teaching, the value of human life is infinite and beyond measure, so that any part of life — even if only an hour or a second — is of precisely the same worth as seventy years of it.

When life ends is an issue which is presently being actively discussed. All rabbis agree that the classic definition of death in Judaism is the absence of spontaneous respiration in a patient with no bodily motion. A brief waiting period of a few minutes to a half hour after breathing has ceased is also required. If hypothermia or drug overdose which can result in depression of the respiratory center with absence of spontaneous respiration and even heartbeat are present, this classic definition of death is insufficient. Hence, wherever resuscitation is deemed possible, no matter how remote the chance, it must be attempted unless there are ethical and moral considerations for cessation of all therapy. Brain death is a criterion

44. *Mishneh Torah, Hilchot Tumat Met* 1:15.

45. Soloveichik A, "Jewish law and time of death." *J.A.M.A.* 1978; 240:109. See Tendler MD, "Jewish law and time of death." *J.A.M.A.* 1978; 240:109 which offers a response to the objections of Rav Soloveichik.

for confirming death in a patient who already has irreversible absence of spontaneous respiration. The situation of decapitation, where immediate death is assumed even if the heart may still be briefly beating, is certainly equated with organismal death. Whether or not total, irreversible brain stem death, as evidenced by sophisticated medical testing, is the Jewish legal equivalent of decapitation is presently a matter of debate in rabbinic circles. We are of the opinion that it is.