

BIOETHICS
Prof. Mayo

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Beyond Science: When Death Begins
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There was a time when no one worried much about pinpointing the exact moment of death. After all, it was pretty clear when a dying person took a final breath and lay still. You could put your ear to the chest and discern no heartbeat. Hold a mirror under the nose and see no sign of moist breath.

But now, as more and more transplant specialists seek organ donations from people as soon as they die, it has become urgently important to decide just when the moment of death is.

Only last week, the Cleveland Clinic, a nationally renowned hospital, was accused of wanting to hurry the deaths of its patients, because it had drafted a policy that would allow doctors to take out organs for transplants only minutes after their patients' hearts had stopped beating, rather than waiting until their brains too had stopped. This practice is becoming more and more common.

The problem, however, is that it has turned out to be as impossible to find a definitive scientific answer to the question of when human life ends as it is to find a scientific answer to the question of when human life begins.

"It's a continuum over which you die," said Dr. Norman Fost, an ethicist who is a visiting professor at Princeton University. First the heart stops, then the lungs, then the brain. Finally, the body starts decomposing. But there is no one point at which scientists would agree that death actually occurs, he said.

"Beethoven is clearly dead. You and I are alive. But between us and Beethoven, there is no medical or scientific way of saying what is the point in the process by which you are actually dead," Fost said.

Is a person dead when his heart stops beating? That depends, experts say. Do you mean the heart stops and cannot be started again? If so, how long do you wait before you know it cannot be restarted?

Doctors tend to wait 2 minutes, 3 minutes, 5 minutes, 10 minutes, but there is no set, standard time to wait after a dying person's heart has stopped, or, to put it in medical jargon, after a person's heart has been "asystolic," before pronouncing the person dead.

"The question then becomes, How many minutes of asystole do you need?" said Dr. Baruch Brody, the director of the center for medical ethics at the Baylor University in Houston. "There is no correct answer," he replied. "It is a policy choice."

Of course, the only way to know for sure that the heart has stopped forever is to try restarting it. Drowning victims have gone as long as half an hour without a heartbeat and then been revived. But, Fost noted, "nobody wants to wait half an hour with a corpse in bed and then try to get a heartbeat back."

What about brain death, that moment when there is no electrical activity in the brain? Those bodies whose hearts have stopped, Fost noted, actually have flickers of electrical activity in their brains that can be seen for hours after the heart stops. That does not mean, of course, that the body can think or feel but it does mean that, by a strict definition of brain death, these corpses, grown cold and stiff, are not dead.

The notion of brain death, Fost said, was concocted about 20 years ago by medical specialists who wanted to increase the supply of organs for transplants. "They said, 'Let's have a statute saying a person is dead when the brain is gone so we can take the heart out and not be accused of killing anybody,'" he said. Now, though, some find the concept of brain death too confining.

And the opposite argument can be made: that those who are brain dead are not truly dead. People who are brain dead do, in fact, have some brain functions. Their brains signal their pituitary glands to make hormones that allow their kidneys to make urine.

Of course, Fost said, it doesn't really seem to matter if there is a smidgen of brain activity. "No one thinks that is any moral problem," he said. "The fact that you can concentrate urine is not reason not to take out your kidneys."

If the idea is to say a person is dead when he is no longer capable of thinking or feeling or perceiving the world, why not broaden the definition a bit, Fost asked, to include patients who have lost all of their brain but the brain stem, that small section that controls the heart rate, breathing, blood pressure and eye movements?

"That's morally and philosophically the same thing" as what we now call brain death, he said, but those patients are not currently defined as dead. "There's no medical reason -- it's a matter of convention," Fost said.

Some people say that defining death should not even be attempted. "Death is never what matters," said Roger Dworkin, a professor at Indiana University School of Law in Bloomington. "What matters is the consequences of death. Can we take the organs? Can we turn off the respirator? Can the spouse remarry? We have very, very different social policies for determining whether we want a spouse to remarry than whether we want to yank out a kidney."

Every state has a definition of death that, Dworkin said, has no "regard to biology or medicine or anything." After a husband or wife disappears for a period of years, a law allows a person to be declared legally dead so the spouse can remarry.

"What is difficult is in deciding whether it is acceptable to remove organs," Dworkin said.

"How likely is it that this person ever, under any circumstances, would return to a cognizant, sapient state? If you make a mistake, do you make it in the direction of protecting the dying or in the direction of maximizing the availability of organs?" These, he said, "are very serious questions that need to be resolved."

"What's critical, from my point of view, is not to figure out when you want to call someone dead," he said, "but to figure out how you want to err."