

Mayo Clinic reports its first lung transplantation by donation after cardiac death

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Lung transplantation is a well-known therapy for patients with end-stage lung disease, but, as with other patients waiting for organs for transplantation, there are more recipients waiting than donors available. A potential solution for patients with end-stage lung disease is donation after cardiac death (DCD). Mayo Clinic reports its - and Minnesota's - first lung transplantation from DCD in the February issue of *Mayo Clinic Proceedings*.

While brain death has become the most widely used criteria for organ donation over the past few decades, the earliest organ donations were from deceased donors following cardiac death, says Stephen Cassivi, M.D., Mayo Clinic thoracic surgeon and lead study author. "Today, our critical shortage of organs has brought about renewed interest in DCD organ procurement," he says. Few centers across the country perform DCD organ procurement for lung transplantation, and until recently only about 60 procedures have been done in the United States.

Mayo's first DCD [lung transplantation](#) was performed a year ago in a 59-year-old Illinois man who had alpha-1 antitrypsin deficiency - an inherited condition associated with emphysema. Emphysema is a type of [chronic obstructive pulmonary disease](#), which includes a group of conditions that block airflow and make breathing difficult. He also was a former tobacco user.

Almost one year after his transplant, the recipient says he is doing well, walking about three or four miles a day. "I would not have made it through 2009 without the transplant, and today I am feeling better than I have in years and am able to be with my family," he says. "I feel very lucky and am grateful to my donor and his family."

Before his transplant, the patient's forced expiratory volume in the first second (FEV1) - a measure of lung function and the ability to breathe - was at 20 percent of normal, but at his appointment in January 2010, his FEV1 was at 103 percent, beyond normal, according to Dr. Cassivi. "He has made the absolute most of this gift," Dr. Cassivi says. "He's no longer confined to just sitting around. He is working his lungs and getting back to enjoying his life and the ability to breathe normally."

Transplantation made possible by DCD donors - individuals who are declared dead according to criteria recommended in the Uniform Declaration of Death Act in the early 1980s - expands the number of potential organs available to patients who desperately need organ transplants to live, Dr. Cassivi says. "As with our first patient in this report, we see this form of transplantation as a further needed opportunity to turn the inevitable tragedy for the donor and his or her loved ones into hope and life for transplant recipients," he says.

Provided by Mayo Clinic

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