

Experimental lung device kept wounded British soldier alive

By [Mark Abramson](#), Stars and Stripes

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LANDSTUHL, Germany — A team of doctors and nurses from Landstuhl Regional Medical Center used a revolutionary device during a recent medevac mission to save the life of a British soldier wounded in Afghanistan.

The 19-year-old soldier, whose name was not released, lost his right lung and suffered a damaged liver when he was shot July 25 near Camp Bastion, a British base in Helmand province. Within hours of getting the call, the LPMC Lung Rescue Team was bound for Afghanistan.

It took more than 200 pints of blood — and the use of a German-made device called the Novalung — to keep the soldier alive.

The Novalung works like a temporary lung by filtering out carbon dioxide from a patient's blood and oxygenating it. To use the device, a physician reroutes blood flow from a patient's major vessels through the box by tapping the femoral artery and vein in the upper thighs. As blood flows from one leg into the box, it passes through a filter that leeches off the carbon dioxide and infuses the cells with oxygen, mimicking the trade-off that should take place in the lungs. The blood then goes back into the system through the other leg, refreshed.

Last month's flight was the first time the Novalung was used while transporting a patient.

"Up until now, it's never been used to move a patient," said Air Force Dr. (Lt. Col.) Raymond Fang, LPMC's trauma director.

"He probably would have died [without the Novalung]," said Army Dr. (Maj.) Erik Osborn, the pulmonary critical team leader for the 38-hour mission.



Photo courtesy of Landstuhl Regional Medical Center

The Novalung works by filtering carbon dioxide out of a patient's blood and infusing oxygen into the blood.



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Army Maj. (Dr.) Eric Osborn, the pulmonary critical team leader, recalls a recent mission to treat a British soldier wounded in Afghanistan as team member Air Force Maj. Shannon Womble, assistant head nurse of ICU, looks on Monday at Landstuhl Regional Medical Center.

The Novalung is unlike other equipment or treatment used by the Lung Rescue Team because it has not yet been approved by the U.S. Food and Drug Administration. Each time the team uses the device, it has to report it to the FDA.

Novalung is in the process of getting FDA approval.

"We are preparing for clinical trials to get it approved in the United States," said Nicholas Strout, Novalung's global vice president of sales and marketing. "It will confirm that this is safe and effective. The trials will probably start early next year and could take six to 12 months."

Strout said he was on his way to the U.S. on Wednesday to meet with a company that conducts clinical trials. Novalungs have been used more than 5,000 times safely, he said.

Doctors at the university hospital in Regensburg developed the Novalung, and the wounded British soldier was flown there after arriving at Ramstein Air Base. He remained hospitalized there on Wednesday, where his condition was listed as seriously injured, LRMC spokeswoman Marie Shaw said.

No plans have been made to move him to Landstuhl or to a British hospital, she said.

Landstuhl officials said the British Ministry of Defence wouldn't authorize them to release the soldier's name and details of how he got shot.

Situations such as the treatment of the British soldier are why the team was started in November 2005 by Dr. (Col.) Warren Dorlac, the hospital's intensive care unit director at the time, and his wife, Dr. (Col.) Gina Dorlac, a former medical director for the critical care air transport team at Landstuhl, Fang said. It's also the reason the team got the Novalung. No one else in the Department of Defense has it, Fang said.

"This patient sounded like he needed the lung," he said. "It's a pretty remarkable device."

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