

# There's no ebola cure, but early intensive treatment boosts survival

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Ebola virus

Virus launches assault on multiple organs, keeping patients hydrated is often key, experts say.

(HealthDay)—The Ebola virus currently raging in West Africa has a well-earned reputation as one of the world's most deadly illnesses. But experts stress that early and intense medical care can greatly improve a person's chances of survival.

There's no cure or vaccine for Ebola, which wreaks life-threatening havoc within the body by attacking multiple organ systems at the same time.

Instead, doctors must fall back on the basics of "good meticulous intensive care," supporting the patient and targeting treatment toward the

organs that are under attack by the virus, explained Dr. Lee Norman, chief medical officer for the University of Kansas Hospital and an expert on the disease.

"You treat the things that are failing," Norman said. "If a person is dehydrated, you treat them with IV fluid support. If a person has respiratory failure, you put them on a ventilator."

Such medical care has so far helped two American aid workers currently fighting for their lives in Liberia. Each became infected with Ebola while helping stricken patients in the West African nation.

The condition of the two American patients changes day to day. Earlier this week both Dr. Kent Brantly and Nancy Writebol were reported by the *Associated Press* to have improved "slightly." But an update Thursday from Samaritan's Purse said that Brantly's condition has "taken a slight turn for the worse overnight," *ABC News* reported.

Brantly, 33, is a family physician from Texas who serves as medical director of the Samaritan's Purse treatment center in Liberia's capital city, Monrovia. Writebol is a hygienist who works for a group allied with Samaritan's Purse.

Ebola currently is raging through the West African nations of Guinea, Liberia and Sierra Leone. As of July 29, the virus had killed 729 people and infected a total 1,323, according to the World Health Organization.

The virus is particularly tough to combat because "once it gets into the human body, it attacks so many different tissues," explained Dr. Bruce Hirsch, an infectious diseases specialist at North Shore University Hospital in Manhasset, N.Y.

In contrast, most viruses tend to target one specific organ, Hirsch and

Norman said. For example, influenza goes after the respiratory system.

But Ebola attacks every organ system, including the heart, lungs, brain, liver and kidneys, Norman said. The virus even attacks a person's blood, thinning it and causing Ebola's trademark bleeding from multiple orifices.

And the impact in terms of overall illness is "additive," Norman said. "Every time you add another organ system that's failing, a person's chance of survival goes down exponentially."

The human body responds to this multiple-pronged attack by initiating a massive and intense inflammatory response—which actually adds to the damage being done, Hirsch noted.

"It's a combination of the viral destruction and the inflammation that takes place in response that's so life threatening to us," he said.

Ebola's ravages are such that even young, healthy patients, who usually can fight off most serious illnesses, have a high death rate, Hirsch said.

Pumping fluids into patients remains the best front-line treatment for Ebola, to limit the damage caused by inflammation, Hirsch explained.

Beyond that, doctors must pay close attention to the patient and be ready to treat whatever organs are on the verge of failure, Hirsch and Norman said.

It doesn't sound like much, but this basic care can dramatically enhance chances of survival.

"If you look at the overall statistics, the mortality rate is around 50 to 60 percent, but if you get out into remote areas the mortality rate increases

to around 90 percent," Norman said. "I think that reflects the fact that if more care is given and care is given early, the more survival improves."

Indeed, there was a rare moment of good news from aid agency Doctors Without Borders, *NBC News* reported Wednesday. In its latest update on the West African outbreak, the group said it was closing its Ebola treatment center in the Guinea town of Telimele because no new cases have been reported for the past three weeks.

"During seven weeks, 21 people with the disease were admitted to the center, with an astonishing 75 percent of patients making a recovery," Doctors Without Borders said. "Without [medical care](#), as few as 10 percent of patients could be expected to survive."

**More information:** For more information on the Ebola virus, visit the [U.S. Centers for Disease Control and Prevention](#).

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