In a medical first, a trauma patient was put into a state of suspended animation

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New Scientist reports that a team of doctors working at the University of Maryland School of Medicine has, for the first time, put a trauma patient into a state of suspended animation to save the patient's life. During a

recent symposium in New York, Dr. Samuel Tisherman described the trial that is currently underway at the hospital and how the procedure works, .

When someone is injured in a way that results in a loss of a lot of blood, trauma surgeons have very little time to take actions to save them—sometimes as little as five minutes. This is particularly true if the heart stops beating. But reparative surgery typically takes much longer than that—the result is often the death of the patient. In the new procedure, called emergency preservation and resuscitation (EPR), doctors drain the remaining blood and replace it very quickly with a chilled liquid—the chilled blood then reduces the patient's temperature to 10 to 15 degrees Celsius, dramatically slowing the metabolism. In the trial, patients can be cooled for as long as two hours.

The purpose of the trial is two-fold—to save lives that would otherwise be lost, and to learn more about EPR and whether it is a procedure that should be used in all trauma centers.

Normally, the reason patients die from loss of blood is oxygen deprivation in the brain. When the brain is chilled, it does not need as much oxygen to remain viable over a period of time. Once surgical repair is complete, the doctors pump warm blood back into the patient, restart the heart, and hope that the patient will recover without brain damage.

Prior research has shown that EPR is not without its drawbacks—chilling the body and brain does result in some cell damage, referred to as "reperfusion" injuries. At this time, it is not clear how much damage occurs during an EPR event, or whether such damage can be prevented using drugs or other therapies. Finding the answers to such questions will be part of the trial. The doctors at the hospital will perform the procedure on 20 patients and report on their findings

sometime next year.

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