

## ThermoSuit System

University of Rhode Island – Biomedical Engineering BME 482

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The ThermoSuit System was developed by Life Recovery Systems; which is cofounded by our own Dr. Ohley. This system induces rapid therapeutic hypothermia which was found to be a key component of post-resuscitation care. This device effectively shortens the time it takes to cool the body's core temperature.

The ThermoSuit System is critical for patients who are suffering from a stroke, heart attack, or cardiac arrest. During one of these traumatic events the heart stops beating and causes the body to be deprived of oxygen, which can lead to brain damage. Before the ThermoSuit there was not an effective or rapid way to cool the body, which meant that patients often suffered neurological issues. Dr. Ohley and his associates found that if the body's core temperature was cooled rapidly to 89.6- 93.2 degrees Fahrenheit the body's organs would slow down production causing them to require less oxygen. This will increase the likelihood of a patient returning to normal life.

The ThermoSuit System is ideal because it cools the body in a fast (in a matter of minutes) and noninvasive manor. It is composed of a single use disposable body suit and pumping system. The pump, which is compact and mobile, is attached to the disposable suit via a hose. The pump is filled with ice and water, which then runs

through the hose. The hose leads to the suit, and the icy water is circulated over the patient's body until the required temperature is met. The water then returns to the pump, the suit deflates and the patient is removed. This is all operated by a simple touch screen computer (attached to pump), which can be operated by a nurse.

As one can tell the ThermoSuit System is a breakthrough in the medical field. It will revolutionize the recovery process.



### Works Cited

Ohley, William. *Evidence for Benefits of Rapid Induction of Hypothermia*. Rep. Print.

Howes, Daniel, William Ohley, Paul Dorian, Kathy Klock, Robert Freedman, Robert Schock, Danica Krizanac, and Micheal Holzer. "Rapid Induction of Therapeutic Hypothermia Using Convective-immersion Surface Cooling: Safety, Efficacy and Outcomes." *Resuscitation* 81.4 (2010): 388-92. Web.