

## **Serum Sodium Level Is A Major Predictor Of A Poor Prognosis For Heart Failure Patients**

ScienceDaily (Mar. 20, 2005) — March 7, 2005 -- Research presented today at the American College of Cardiology's Scientific Sessions in Orlando pinpoints a major marker of a poor prognosis for heart failure, hyponatremia, or a lower than normal concentration of serum or blood sodium. Researchers found that hyponatremia, which is found in almost a quarter of patients with severe heart failure, doubled death rates within 60 days of hospital discharge. Serum sodium levels are easily measured through routine blood tests.

"Even a minor decrease in a person's serum sodium level – levels that are now dismissed by physicians – had a major impact on mortality of heart failure patients," says Mihai Gheorghiane, MD, associate chief, Division of Cardiology, Northwestern Memorial Hospital and Northwestern University Feinberg School of Medicine, and lead presenter of the findings from the ESCAPE trial during a poster session on Monday.

Heart failure is a major health threat in this country, resulting in 1 million hospital admissions each year. "These findings illustrate that not all heart failure is created equally – heart failure accompanied with hyponatremia is especially dangerous. Levels of serum sodium may prove a useful and easily accessible risk assessment tool in the clinical management of patients hospitalized for heart failure," says Dr. Gheorghiane.

The good news is that a separate study presented Monday by Dr. Gheorghiane showed that improvement in sodium serum levels during hospitalization was associated with improved outcomes. In the ACTIV trial, patients with a serum sodium improvement at hospital discharge had a 15.6 percent mortality rate at 60 days post discharge, compared with a 30.4 percent mortality rate in those showing no improvement. "Currently, the medical community is not paying much attention to serum sodium levels in heart failure patients. However, serum sodium appears to be a modifiable target that can be treated," says Dr. Gheorghiane.

A paper authored by Dr. Gheorghiane and published in JAMA in April of 2004 found that the medication tolvaptan was a promising addition to standard therapy for patients hospitalized with heart failure. In addition to reducing fluid buildup and decreasing body weight, tolvaptan improved serum sodium levels in patients with hyponatremia. "This is important because previously, we have not had very effective therapies for treating hyponatremia in patients with heart failure. Now, we think it can be treated, and we have an understanding that treating it can make a huge difference for the patient," says Dr. Gheorghiane.

Sodium is an electrolyte that helps with nerve and muscle function, and also helps to maintain blood pressure. Hyponatremia most commonly occurs in people whose kidneys do not function properly, as well as in those with heart failure, cirrhosis of the liver, and Addison's disease. Sodium must be maintained at a specific concentration in the blood and the fluid surrounding the body's cells for the body to function properly.

Email or share this  
story:

| [More](#)

---

**Story Source:**

The above story is reprinted (with editorial adaptations by ScienceDaily staff) from materials provided by [Northwestern Memorial Hospital](#).

---

Need to cite this story in your essay, paper, or report? Use one of the following formats:

APA

MLA

Northwestern Memorial Hospital (2005, March 20). Serum Sodium Level Is A Major Predictor Of A Poor Prognosis For Heart Failure Patients. *ScienceDaily*. Retrieved August 25, 2011, from <http://www.sciencedaily.com/releases/2005/03/050310104542.htm>

*Note: If no author is given, the source is cited instead.*

**Disclaimer:** *This article is not intended to provide medical advice, diagnosis or treatment. Views expressed here do not necessarily reflect those of ScienceDaily or its staff.*