

IV vitamin C increases risk for death, organ failure in sepsis

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For adults with sepsis who are receiving vasopressor therapy in the

intensive care unit (ICU), intravenous vitamin C is associated with an increased risk for a composite of death or persistent organ dysfunction at 28 days, according to a study published online June 15 in the *New England Journal of Medicine* to coincide with the annual Critical Care Reviews Meeting, held from June 15 to 17 in Belfast.

François Lamontagne, M.D., from the Université de Sherbrooke in Canada, and colleagues conducted a trial in which 872 adults with [sepsis](#) who were receiving vasopressor therapy in the ICU were randomly assigned to an infusion of either vitamin C (435 patients) or matched placebo (437 patients).

The researchers found that the primary outcome (composite of death or persistent organ dysfunction on day 28) occurred in 44.5 and 38.5 percent of patients in the vitamin C and placebo groups, respectively (risk ratio, 1.21; 95 percent confidence interval, 1.04 to 1.40; $P = 0.001$). Death occurred in 35.4 and 31.6 percent of patients in the vitamin C and placebo groups, respectively, at day 28 (risk ratio, 1.17; 95 percent confidence interval, 0.98 to 1.40), and persistent organ dysfunction occurred in 9.1 and 6.9 percent, respectively (risk ratio, 1.30; 95 percent confidence interval, 0.83 to 2.05).

"This was an unexpected finding, and the secondary analyses—which included the evaluation of five biomarkers of tissue dysoxia, inflammation, and endothelial injury measured up to day seven—did not determine a putative mechanism for harm," the authors write.

Nova Biomedical Canada provided glucometers, testing strips, and control solutions.

More information: François Lamontagne et al, Intravenous Vitamin C in Adults with Sepsis in the Intensive Care Unit, *New England Journal of Medicine* (2022). [DOI: 10.1056/NEJMoa2200644](https://doi.org/10.1056/NEJMoa2200644)

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