

# Glucose levels linked to cardiac surgery outcomes

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(HealthDay)—For patients undergoing cardiac surgery, hyperglycemia is

associated with worse outcomes for patients without diabetes, but with better outcomes for patients with insulin-treated diabetes, according to a study published online Jan. 19 in *Diabetes Care*.

Giampaolo Greco, Ph.D., from the Icahn School of Medicine at Mount Sinai in New York City, and colleagues conducted a multicenter cohort study in 4,316 [cardiac surgery](#) patients who underwent surgery in 2010. Glucose was measured every six hours for 48 hours postoperatively. The authors examined the correlations between maximum [glucose levels](#) and outcomes, including cost, hospital length of stay (LOS), and cardiac and [respiratory complications](#).

The researchers found that increasing glucose levels correlated with a gradual worsening of outcomes among patients without diabetes. Hyperglycemia ( $\geq 180$  mg/dL) correlated with an additional cost of \$3,192, an additional hospital LOS of 0.8 days, a 1.6 percent increase in infections, and a 2.6 percent increase in respiratory complications. Optimal outcomes correlated with glucose levels of 180 to 240 mg/dL for patients with insulin-treated diabetes. This level of hyperglycemia correlated with cost reductions of \$6,225, a 1.6-day reduction in hospital LOS, a 4.1 percent reduction in infections, and a 12.5 percent reduction in respiratory complications. Outcomes did not differ significantly when hyperglycemia was present for patients with non-insulin-treated diabetes.

"These findings support further investigation of a stratified approach to the management of [patients](#) with stress-induced postoperative hyperglycemia based on prior diabetes status," the authors write.

One author disclosed financial ties to the pharmaceutical and medical device industries.

**More information:** [Abstract](#)  
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