

# Diabetes identified as a risk factor for surgical site infections

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Diabetic patients are at considerably increased risk for developing surgical site infections (SSIs) while undergoing most types of surgeries, compared to non-diabetic patients, according to a new study published online today in *Infection Control & Hospital Epidemiology*, the journal of the Society for Healthcare Epidemiology of America (SHEA).

"Diabetes has been recognized as a risk factor for [infection](#) following some surgeries, but has been a source of debate for other procedures," said Emily Toth Martin, PhD, lead author of the study and assistant professor of epidemiology at the University of Michigan School of Public Health. "This study is a first step in our efforts to identify patients at high risk of SSIs. We hope this research will lead to better strategies to lower the number of these infections nationwide."

The researchers conducted a systematic review and meta-analysis spanning 94 studies published between 1985 and 2015, and analyzed data based on estimates of diabetes, SSIs, types of procedure, blood glucose levels and body mass index.

They found that diabetes patients undergoing surgery were 50 percent more likely to develop an SSI compared to patients without diabetes (6 percent vs. 4 percent).

SSIs were the most frequent cause of hospital-acquired infection, occurring in 4% of surgeries in this study. These infections are estimated to have an annual financial impact of more than \$3 billion nationally and

are the largest contributor to the overall costs of healthcare-associated infections. Efforts to reduce the rates of SSIs are becoming more urgent since the introduction of penalties for hospital readmissions by the Centers for Medicare & Medicaid Services.

Previous studies had found increased risk for [diabetic patients](#) during several types of surgery, but the new research confirmed that a broader range of procedures had elevated risk of SSIs, including arthroplasty, breast, cardiac and spinal [surgeries](#).

"Hospitals routinely monitor glucose levels in surgical patients, but heightened awareness among healthcare professionals of infection prevention measures is warranted for diabetic patients before and after surgery," said Martin.

In 2014, SHEA released the Compendium of Strategies to Prevent Healthcare-Associated Infections in Acute Care Hospitals: 2014 Updates, a series of evidence-based recommendations that provide a framework for healthcare institutions to prioritize and implement strategies to reduce the number of infections. The recommendations provide best-practices for SSI prevention and surveillance.

**More information:** Emily Toth Martin, Keith Kaye, Caitlin Knott, Houn Nguyen, Maressa Santarossa, Richard Evans, Elizabeth Bertran, Linda Jaber. "Diabetes and Risk of Surgical Site infection: A systematic review and meta-analysis." Web (October 27, 2015).

Provided by Society for Healthcare Epidemiology of America

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