

## **Supplemental perioperative oxygen and the risk of surgical wound infection: a randomized controlled trial.**

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Belda J, Aguilera L, de la Asunción JG, et al. Supplemental perioperative oxygen and the risk of surgical wound infection: a randomized controlled trial. JAMA. 2005;294(16):2035-42.

<https://psnet.ahrq.gov/issue/supplemental-perioperative-oxygen-and-risk-surgical-wound-infection-randomized-controlled>

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This study addresses the benefits of a low-risk intervention to reduce postoperative surgical site infections, an emphasis recently publicized through the 100,000 Lives Campaign. The randomized-controlled trial of 300 elective colorectal surgery patients demonstrated that 80% fraction of inspired oxygen (FiO<sub>2</sub>) perioperatively reduced the incidence of postoperative wound infections compared to the patients receiving 30% FiO<sub>2</sub>. The authors suggest that use of oxygen therapy provides a low-cost intervention that poses an opportunity for important reduction in poor patient outcomes. Of note, an accompanying editorial (link provided below) discusses these study findings in the context of past conflicting research and advocates for preferential use of quality improvement strategies that demonstrate unquestioned benefit, such as the timing and delivery of prophylactic antibiotic therapy. Many of these interventions continue to be underutilized.