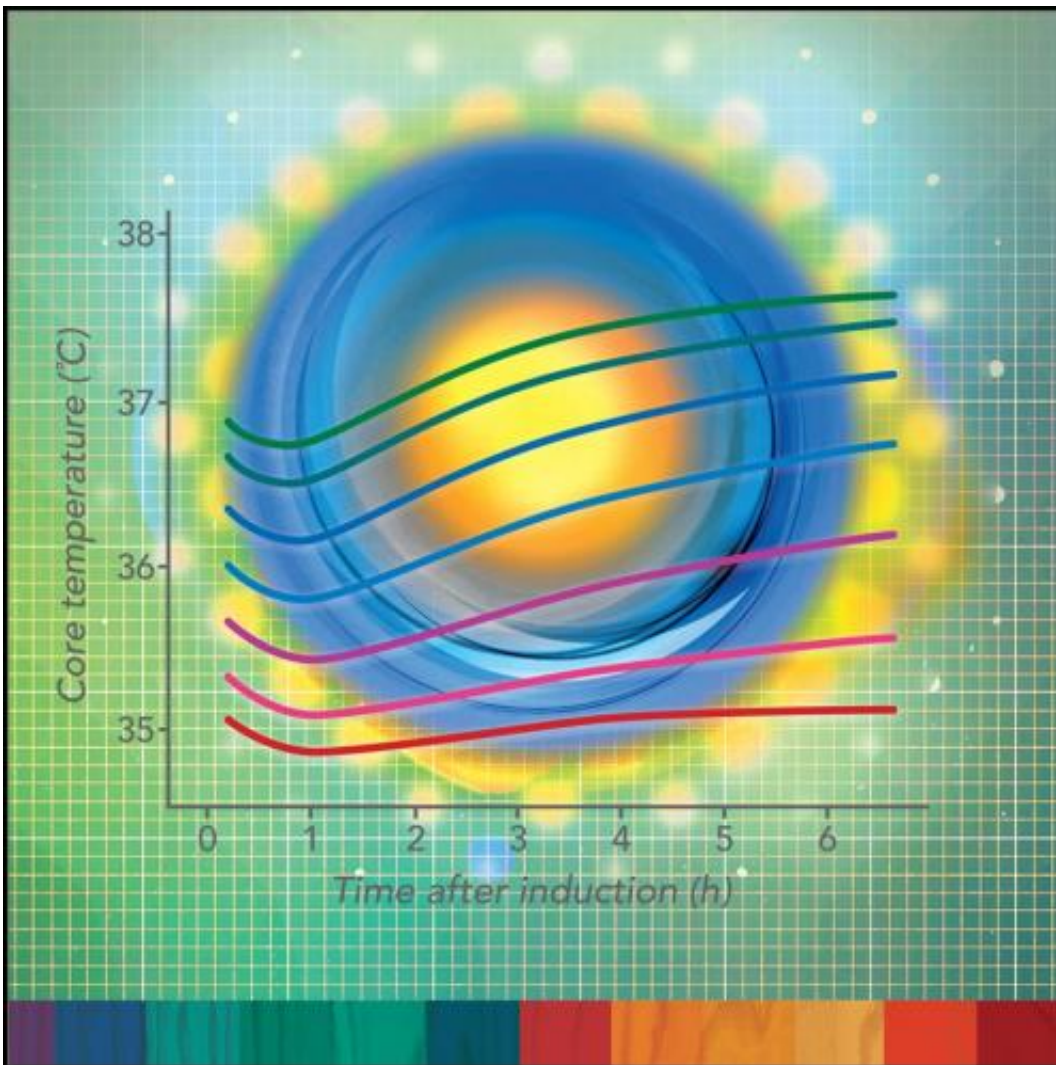


Patients actively warmed during surgery still experience hypothermia, study finds

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Patients actively warmed during surgery still experience hypothermia, study finds. Credit: American Society of Anesthesiologists

Body temperature decreases during the first hour of surgery, even when patients are actively warmed with forced air, reports a new study published in the February issue of *Anesthesiology*, the official medical journal of the American Society of Anesthesiologists (ASA). Furthermore, patients who experience the most hypothermia are more likely to require blood transfusions.

"Hypothermia is common during surgery because anesthetics disrupt normal control of body temperature and because operating rooms are kept cool," said study Daniel Sessler, M.D., who led the study and is the Michael Cudahy Professor and Chair of the Department of Outcomes Research at the Cleveland Clinic. "Consequently, body temperature typically decreases about four degrees Fahrenheit in unwarmed surgical patients. This sort of moderate hypothermia can cause serious complications including blood loss and wound infections."

Warming surgical patients to help prevent hypothermia is now the standard-of-care. The most common type of warming is forced air, which essentially blows warm air through a cover that surrounds the patient. Many studies show that patients warmed with forced air have a normal body temperature at the end of surgery.

The goal of the current study was to evaluate body temperature patterns in warmed surgical patients, and determine whether even short periods of low temperature increased blood loss or prolonged hospital stays.

In the study, the investigators evaluated records of intraoperative [core body temperature](#) patterns in nearly 59,000 surgical patients, all of whom were warmed with forced air.

The study found that 64 percent of [surgical patients](#) became hypothermic, with core temperatures below 36°C during the first hour of anesthesia. Nearly half of patients had a continuous core temperature

less than 36°C for more than one hour. Twenty percent of patients had a continuous core temperature below 36°C for more than two hours. Core temperatures then gradually increased, and most [patients](#) had normal temperatures by the end of surgery. Patients who became most hypothermic were most likely to need blood transfusions.

An accompanying editorial commented favorably on the study's findings:

"A critical implication of this study is that current standards and practice routinely lead to intraoperative hypothermia, which is associated with a higher transfusion requirement. These results should be an impetus for changes in practice that lead to lower rates of intraoperative hypothermia," said editorial author Harriet Hopf, M.D., department of anesthesiology, University of Utah School of Medicine in Salt Lake City. "This study starts a new conversation on perioperative temperature management. Future studies should evaluate the effectiveness of interventions to reduce the degree and duration of intraoperative [hypothermia](#) and the effect of these interventions on the broad range of outcomes known to be temperature sensitive."

Provided by American Society of Anesthesiologists

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