

Aggressive warming during non-cardiac surgery fails to reduce major complications

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Reuters Health - 15/04/2022 - There appears to be no benefit to aggressively warming patients to 37 C during major non-cardiac surgery, according to results of the PROTECT study.

"It is simply unnecessary, and it doesn't improve any substantive outcomes," lead investigator Dr. Daniel Sessler of Cleveland Clinic, Ohio, says in a news release.

The study results were presented at the American College of Cardiology 2022 Scientific Session and simultaneously published in *The Lancet*.

During surgery, body temperature generally decreases and forced-air heaters are often used to keep patients warm during the procedure, with a target temperature of 36 C.

The PROTECT trial sought to determine whether more aggressive warming of patients to 37 C would reduce the risk of cardiac complications, which are a leading cause of death in the first month following major surgery.

The findings are based on 5,013 adults who had various types of major non-cardiac surgery at 13 medical centers, mostly in China. Roughly half were randomly assigned to routine care, with a target body temperature of 35.5 C, and half to aggressive warming, with a target body temperature of 37 C.

The results showed no significant between-group difference in the primary outcome, a composite of myocardial injury, non-fatal cardiac arrest and all-cause mortality within 30 days of surgery, as assessed in the modified intention-to-treat population.

The primary outcome occurred in 9.9% of the aggressively warmed group and 9.6% of the control group.

There were also no between-group differences in the number of infections or blood transfusion requirements.

"At least over a 1.5 C range from very mild hypothermia to full normothermia, there was no evidence that any substantive outcome varied. Keeping core temperature at least 35.5 C in patients having surgery appears sufficient," the researchers write.

"This study shows that it is reasonable to keep patients warm, but we saw no evidence whatsoever that it makes a difference if they're just above or just below 36 C," Dr. Sessler adds in the news release.

"Surgical patients should still be warmed, but there's no need to be super-aggressive about the warming," Dr. Sessler advises.

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