

Hypothermia during surgery linked with increased risk for infection

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A Henry Ford Hospital finds that hypothermia, a relatively common but unintentional occurrence during surgery, is associated with an increased risk for infection in patients who undergo surgery to repair a hip fracture.

Researchers theorize that advancing age and lower [body mass index](#) (BMI) may be linked to the [hypothermia](#).

In a retrospective study, researchers analyzed data from 1,525 patients who underwent [hip fracture](#) surgery from January 2005 - October 2013. This is believed to be the largest patient cohort of orthopedic patients studied for hypothermia and related complications. Key findings:

- Hypothermia occurred in 13.2 percent of the cases, and 13.6 percent of cases when a re-warming device was used.
- Patients in the middle to late 70s and those with lower BMI were more at risk for hypothermia.
- The odds of deep surgical site infections were 3.3 times higher in patients who developed hypothermia than those who did not.

The study is being presented at the American Academy of Orthopedic Surgeons annual meeting.

Craig Silverton, M.D., a Henry Ford Hospital orthopedic surgeon and the study's senior author, says the association between hypothermia, advancing age and BMI and post-surgery infections, despite the use of re-

warming devices are new, sobering risk factors for which physicians need to be aware.

"We know that anesthesia can profoundly affect the body's ability to maintain its internal temperature," Dr. Silverton says. "What this study demonstrates is that orthopedic patients in their 70s and those with low body mass further compounds the body to regulate its temperature. Further study is needed to look at the association between infection and hypothermia when a re-warming device is used."

Each year, an estimated 250,000 people ages 65 and older are hospitalized for hip fractures in the United States, according to the Centers for Disease Control and Prevention. Most fractures occur from falling.

For their study, Dr. Silverton and researchers sought to evaluate the frequency of hypothermia during hip fracture surgery and the impact of hypothermia on post-surgery complications. Researchers found no correlation between hypothermia and sex or race.

Hypothermia is defined as a core body temperature less than 96.8 degrees Fahrenheit. This can occur during surgery for several reasons including uncovered skin, the action of anesthesia drugs and administering cold fluids either intravenously or to flush body parts. As a result, patients are more susceptible to infection and more likely to bleed, and the effect of anesthesia drugs may be prolonged.

Provided by Henry Ford Health System

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