

Regional anesthesia reduces complications and death for hip fracture patients

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In a study of more than 18,000 patients having surgery for hip fracture, researchers at the Perelman School of Medicine at the University of Pennsylvania found that the use of regional anesthesia versus general anesthesia, was associated with a significant reduction in major pulmonary complications and death. The new study will be published in the July issue of the journal *Anesthesiology*.

"[Hip fracture](#) is a common and costly event among [older adults](#)," said lead study author Mark D. Neuman, MD, assistant professor of Anesthesiology and Critical Care and senior fellow at the Leonard Davis Institute for [Health Economics](#). "One out of five hip fracture patients dies within a year of their injury. There is an urgent need for better information to guide patients and clinicians make decisions about anesthesia for hip fracture surgery, but so far very few large [observational studies](#) in the general population have examined this issue."

Hip fractures are a global public health problem, occurring 1.6 million times worldwide, and their incidence is anticipated to grow rapidly during the next three decades because of the aging of the population. Most hip fractures occur in people older than 65, with the mortality and morbidity complications increasing rapidly after age 80. A hip fracture almost always requires surgical repair or replacement, followed by weeks to months of physical therapy.

Dr. Neuman and his co-authors examined a retrospective cohort of

patients undergoing surgery for hip fracture in 126 hospitals in New York in 2007 and 2008, which included a total of 18,158 patients. They tested the association of regional (epidural, spinal or nerve block) versus [general anesthesia](#) with inpatient mortality, major inpatient pulmonary complications, and major inpatient [cardiovascular complications](#).

Among patients undergoing hip fracture surgery, the researchers found a 29 percent lower adjusted odds of mortality among patients receiving regional versus general anesthesia. They also found a 24 percent decrease in the adjusted odds of any inpatient pulmonary complication with [regional anesthesia](#).

"These findings have important implications for practice, policy, and research related to the treatment of older adults with hip fracture," said Lee A. Fleisher, MD, chair and Robert Dunning Dripps Professor of Anesthesiology and Critical Care and the senior author of the study. "Given the high rate of mortality associated with hip fracture and the large and growing worldwide public health burden attributed to complications of hip fracture care, our findings highlight an important potential opportunity to improve outcomes among a growing population of vulnerable surgical patients."

Provided by University of Pennsylvania School of Medicine

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