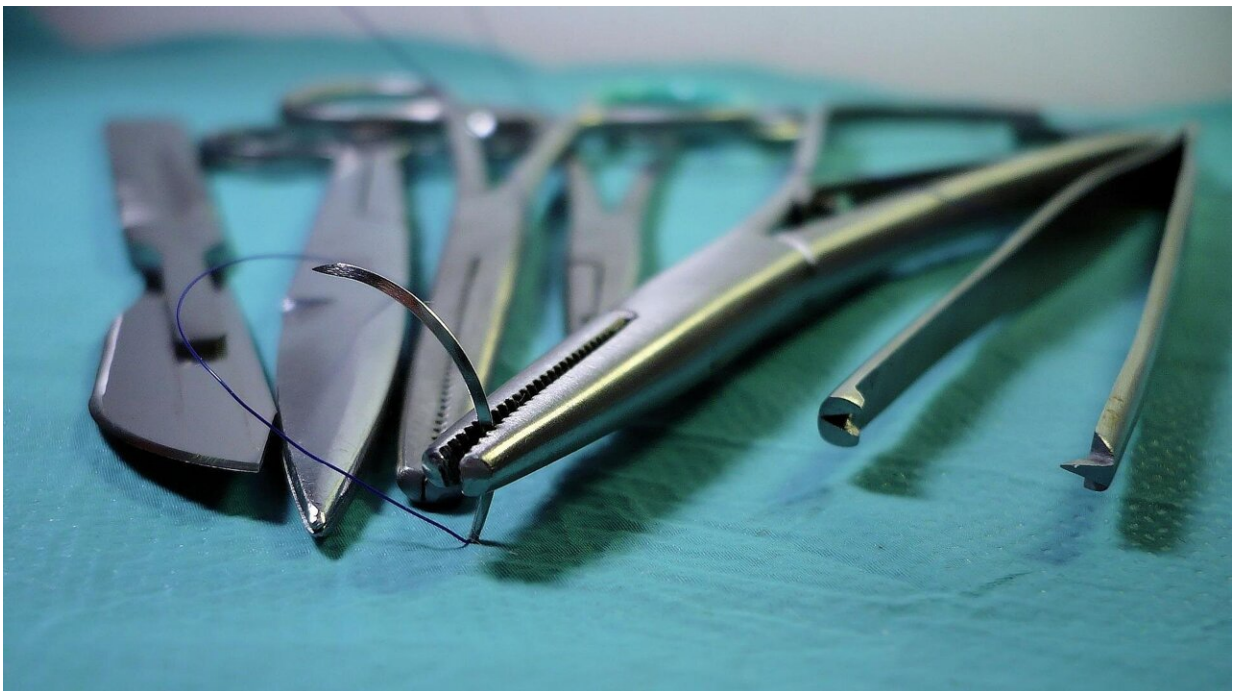


# No difference between spinal versus general anesthesia in patients having hip fracture surgery, finds study

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There are no differences in the safety or effectiveness of the two most common types of anesthetic (spinal versus general anesthesia) in patients undergoing hip fracture surgery, according to the findings of a new study led by the University of Bristol in collaboration with University of

Warwick researchers. The findings, published in the *British Journal of Anesthesia*, analyzed previously published data on nearly 4,000 hip fracture patients.

Hip fractures are devastating injuries and remain one of the largest health care challenges of the twenty-first century. The incidence increases with advancing age and the number of hip fractures is expected to rise to 6.26 million per year in 2050. In 2017, hip fractures cost the National Health Service (NHS) over £1 billion, which is projected to increase to £5.6 billion in 2033. Patients with hip fractures have a relatively high risk of dying within a year of their injury.

Almost all patients with a hip fracture undergo [surgery](#), requiring anesthesia to be performed so that surgery is safe and not painful. Nearly all patients will receive either spinal or general anesthesia. Given the risk profile of hip fracture patients (older age, frailty, and comorbidities like cardiac and [respiratory diseases](#)), surgery is associated with a high risk of developing post-operative complications including delirium, myocardial infarction, pneumonia, stroke, and death.

While previous studies have attempted to determine how the type of anesthesia might influence the outcome, until now, studies have remained inconclusive. In this new study, the researchers aimed to determine the [clinical effectiveness](#) and safety of spinal anesthesia compared with general anesthesia in patients undergoing hip fracture surgery by using a recently developed core outcome set, as well as outcomes highlighted as important by patients in previous initiatives. They conducted a [meta-analysis](#) on the results of 15 hip fracture Randomized Controlled Trials (RCTs) using modern anesthetic techniques published between 2003 and 2022 and involving 3,866 patients, aged between 66 to 86 years, who had all undergone hip fracture surgery with either a spinal or general anesthetic.

The researchers found that with the exception of [acute kidney injury](#), there were no differences between spinal and general anesthesia in hip fracture surgery patients in terms of mortality, [acute coronary syndrome](#), hypotension, acute kidney injury, delirium, pneumonia, orthogeriatric input, being out of bed at day-one post-operatively, pain, and in important patient defined outcomes (return to pre-operative residence, quality of life, and mobility status).

Mr. Gulraj Matharu, the study's senior author and a clinical lecturer at the University of Bristol's Bristol Medical School, said, "Our findings suggest there is no difference in outcomes for patients when having either spinal or [general anesthesia](#) for hip fracture surgery. The clinical decision to use a particular anesthetic is a complex process and should be based on the patient's risk profile and preference, as well as the expertise of the anesthetist. Our findings are therefore reassuring for clinicians who can continue to use either type of anesthetic at this time.

"However the evidence we assessed ranged from high to very low quality studies. Furthermore, most studies only reported one to three outcomes from the recently devised core outcome set and only a few studies reported on any outcomes that were considered important to patients. This is something that can be improved on when designing future research studies in this area. Therefore we feel that outcomes which are specifically important to patients (including pre-operative residence, quality of life, and mobility status) should be incorporated into future trials comparing anesthetic techniques in patients undergoing hip fracture surgery."

**More information:** Setor K. Kunutsor et al, Clinical effectiveness and safety of spinal anaesthesia compared with general anaesthesia in patients undergoing hip fracture surgery using a consensus-based core outcome set and patient-and public-informed outcomes: a systematic review and meta-analysis, *British Journal of Anaesthesia* (2022). [DOI:](#)

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