

# Orthopedic surgery generally safe for patients age 80 and older

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Over the past decade, a greater number of patients, age 80 and older, are having elective orthopaedic surgery. A new study appearing in the *Journal of Bone and Joint Surgery (JBJS)* found that these surgeries are generally safe with mortality rates decreasing for total hip (THR) and total knee (TKR) replacement and spinal fusion surgeries, and complication rates decreasing for total knee replacement and spinal fusion in patients with few or no comorbidities (other conditions or diseases).

"Based on the results of this study, I think very elderly [patients](#), particularly those with few or no comorbidities, should strongly consider the benefits of these procedures," said lead study author Hiroyuki Yoshihara, MD, PhD, an orthopaedic surgeon at State University of New York (SUNY) Downstate Medical Center and Nassau University Medical Center.

According to 2006 U.S. Census Bureau data, Americans who are at least 85 years old represent the fastest-growing population and are expected to account for 2.3 percent of the U.S. population in 2030 and 4.3 percent in 2050. Reflecting this trend, and despite the fact that very [elderly patients](#) are at greater risk for post-surgical complications and diminished outcomes due to a greater number of comorbidities (unrelated diseases and conditions), the number of elective orthopaedic surgeries for patients age 80 and older continues to rise.

In the study, researchers analyzed data for patients age 80 and older, and

those ages 65 to 79, from the Nationwide Inpatient Sample (NIS). Patient sex, race, comorbidities, complications, mortality, duration of hospital stay, whether or not patients were discharged to their home or to a rehabilitation facility, and total hospital charges were retrieved and analyzed.

Of the patients in the NIS database who were at least 80 years of age, 417,460 underwent TKR; 233,277 THR; and 70,203, spinal fusion between 2000 and 2009. In the 65 to 79 patient range, 1,868,983 underwent TKR; 768,999, THR; and, 522,369, spinal fusion.

### **Among the findings:**

- Most surgeries in the 80 and older age group involved patients ages 80 to 84: spinal fusion (79.3 percent), THR (68.9 percent) and TKR (73.9 percent).
- The overall in-hospital [complication rate](#) remained stable, declining slightly from 2000 to 2009 in the 80 and older patient group for spinal fusion (from 17.5 percent to 16.1 percent) and for TKR (from 9.9 percent to 9.1 percent). The complication rate increased for THR from 9 percent to 10.3 percent.
- The overall in-hospital complication rate significantly decreased in patients without a comorbidity, or with a small number of comorbidities, for spinal fusion and TKR; and remained stable in those without a comorbidity, or with a small number of comorbidities, for THR in the 80 and older patient group.
- The in-hospital mortality rate in the 80 and older age group averaged .9 percent for [spinal fusion](#), .5 percent for THR and .3 percent for TKR.
- Although the overall in-hospital complication and mortality rates were significantly higher for patients age 80 and older compared to patients age 65 to 79 for all three procedures, the difference was small.

"Despite stable or increased in-hospital complications, the in-hospital mortality rate decreased over time for all three procedures," said Dr. Yoshihara. "I think this finding may reflect improvements in medical treatment for complications during the last decade.

"As life expectancy continues to increase, I hope that very elderly patients who have had inadequate results from exhaustive conservative treatment (for various orthopaedic conditions) undergo the procedures and have better life quality," said Dr. Yoshihara.

Provided by American Academy of Orthopaedic Surgeons

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