

Study suggests women have higher risk of hip implant failure

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Women appear to have a higher risk of implant failure than men following total hip replacement after considering patient-, surgery-, surgeon-, volume- and implant-specific risk factors, according to a report published Online First by *JAMA Internal Medicine*, a JAMA Network publication.

Total [hip replacement](#), also known as total [hip arthroplasty](#) (THA), is more often performed in [women](#) than men. Sex-specific risk factors and outcomes have been investigated in other major surgical procedures and, in theory, might be more important to study in THA because of anatomical differences between men and women, the authors write in the study background.

Maria C.S. Inacio, M.S., of the Southern California Permanente Medical Group, San Diego, and colleagues examined the association between sex and short-term risk of THA revision. A total of 35,140 THAs with three years of median follow-up were identified in a study population in which 57.5 percent of the patients were women and the average age of the patients was almost 66 years. The patients were enrolled in a total joint replacement registry from April 2001 through December 2010.

"In our analyses of a large THA cohort, including a diverse sample within 46 hospitals, we found that at the median follow-up of 3.0 years women have a higher risk of all-cause (HR [hazard ratio], 1.29) and aseptic (HR, 1.32) revision but not septic revision (HR, 1.17)," the authors comment.

A higher proportion of women received 28-mm femoral heads (28.2 percent vs. 13.1 percent) and had metal on highly cross-linked polyethylene-bearing surfaces (60.6 percent vs. 53.7 percent) than men. Men had a higher proportion of 36-mm or larger heads (55.4 percent vs. 32.8 percent) and metal on metal-bearing surfaces (19.4 percent vs. 9.6 percent). At five-year follow-up, implant survival was 97.4 percent. Device survival for men (97.7 percent) vs. woman (97.1 percent) was significantly different. After adjustments, the hazard ratios for women were 1.29 for all-cause revision, 1.32 for aseptic revision and 1.17 for septic revision, according to the study results.

"The role of sex in relationship to implant failure after total hip arthroplasty (THA) is important for patient management and device innovation," the study concludes.

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