

# What's the 'true' rate of dislocation after total hip replacement?

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The cumulative incidence of hip dislocation following total hip replacement is about 50 percent higher than suggested by simple analysis of hospital data, reports a study in *The Journal of Bone & Joint Surgery*.

In the first two years following total hip arthroplasty (THA), the "true" rate of hip dislocation is 3.5 percent, according to the report by Lars L. Hermansen, MD, of Hospital of South West Jutland, Esbjerg, Denmark, and colleagues. "Since our results are based on a large cohort over a five-year inclusion period and include all hospital contacts in Denmark within the first two years after THA, we believe to have found the 'true' occurrence of dislocation within this patient group and time frame," the researchers write.

## **'Comprehensive' approach needed to capture true risks of dislocation after THA**

Hip dislocation is a common and devastating complication following THA and is one of the leading reasons for revision. Previous studies have reported widely varying rates of dislocation following THA, reflecting differences in study methods and patient populations. Some dislocations may be treated without a [surgical procedure](#) or hospital admission; other patients may undergo revision at a different hospital than where the primary THA was performed.

Dr. Hermansen and colleagues sought to develop a "more thorough and comprehensive method" for estimating the actual cumulative incidence of dislocation. With use of a national database (the Danish Hip Arthroplasty Register), the researchers identified 31,105 cases of primary THA for osteoarthritis performed in Denmark between 2012 and 2014.

The researchers then used a nationwide hospital database (the Danish National Patient Register) to identify patients who underwent treatment for hip dislocation within two years after primary THA. The study used a two-year window because most dislocations of primary hip replacements occur within that time.

"Our review of patient files identified 1,861 dislocations in 1,079 THAs, which corresponds to a two-year cumulative incidence of 3.5 percent," Dr. Hermansen and coauthors write. More than 40 percent of these patients had at least two dislocations. Three-fourths of initial dislocations occurred within the first three months postoperatively.

By linking the hip replacement registry to the national patient database, the researchers identified many dislocations that would otherwise have been missed. Several additional cases were identified by reviewing alternative procedure codes in patient files. The "true" rate of 3.5 percent "was a 50 percent increase compared with the correctly coded dislocations captured by administrative register-data only," the researchers write.

The study also looked at [risk factors](#) for dislocation following primary THA. Risk was lower in patients younger than 65 years old, higher in those over 75 years old, and lower in men than women. Patients in [better health](#) (according to the American Society of Anesthesiologists Physical Status Classification System) were also at lower risk of dislocation.

Several surgical factors were also associated with a lower risk of dislocation: cemented fixation, lateral surgical approach, larger femoral head size, and use of dual-mobility cups. The researchers note that a large majority of patients underwent THA via the posterior approach, which is more commonly used in Denmark compared to other countries.

The results suggest that rates of hip dislocation following THA—as shown by in-depth analysis of unique and comprehensive Danish health databases—are higher than suggested by administrative [hospital](#) data only. Dr. Hermansen and colleagues conclude: "Comprehensive search algorithms are needed in order to identify all dislocations so that this complication can be accurately reported in national registers."

**More information:** Lars L. Hermansen et al. "True" Cumulative Incidence of and Risk Factors for Hip Dislocation within 2 Years After Primary Total Hip Arthroplasty Due to Osteoarthritis: A Nationwide Population-Based Study from the Danish Hip Arthroplasty Register. *Journal of Bone & Joint Surgery* (2020).

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