

## **Outcomes of Primary and Revision Total Hip Arthroplasties In Patients with History of Alcohol Use Disorder**

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**INTRODUCTION:** Alcohol use disorder is one of the most prevalent mental health disorders. Data on alcohol use disorder and how it affects the outcomes of primary and revision total hip replacement (THA) are scarce. The purpose of the study was to investigate the incidence of alcohol use disorder and its influence on the risk of any revision, reoperation, and infection on contemporary primary and revision THAs.

**METHODS:** We identified 1,629 patients (1,994 hips) who underwent primary (1,592) or revision THA (402) at a single tertiary care academic medical center between 1982 and 2019 with alcohol use disorder identified from a known diagnosis in the EMR. This represented 5% of primary and revision THAs. Patients were then 1:2 matched with 3,804 patients with no history of alcohol use disorder (3,184 primaries and 804 revisions). Mean age was 63 years, 72% were male, and mean BMI was 30 kg/m<sup>2</sup>. Mean follow up was 7 years.

**RESULTS:** Among primary THA patients with alcohol use disorder, the risk of any revision (HR=1.3), any reoperation (HR=1.8), and any infection (HR=1.9) were all significantly increased (all p<0.05) compared to controls. Aseptic loosening and dislocation (26% each) were most common in the study group vs. aseptic loosening (37%) and dislocation (16%) in controls. In revision THA patients with alcohol use disorder, there was an increased risk of any rerevision (HR=1.4, p=0.009) and any reoperation (HR=1.3; p=0.04), but not any infection when compared to controls.

**DISCUSSION AND CONCLUSION:** Alcohol use disorder is present in 5% of primary and revision THAs. In primary THAs, it resulted in a 30%, 80%, and 90% increased risk of any revision, reoperation, and infection, respectively. In revision THAs, it resulted in a 40% and 30% increased risk of any rerevision and reoperation. Surgeons may consider alcohol use disorder optimization prior to THA.