

## **No Difference In Dislocations Between Dual Mobility versus 40mm Heads in Total Hip Arthroplasty for the Treatment of Femoral Neck Fractures: A Multi-Centered Review**

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**INTRODUCTION:** Total hip arthroplasty (THA) is increasingly utilized to manage femoral neck fractures. However, the heightened risk of dislocation in this population underscores the need to identify the optimal prosthetic construct. This study compares outcomes between dual mobility (DM) bearings and 40mm femoral heads in patients undergoing THA for femoral neck fractures.

### **METHODS:**

This was a multi-center retrospective study performed at three high-volume academic institutions from 2014-2024. 137 patients who underwent THA for femoral neck fracture who received either a DM implant or 40mm femoral head were included. Data on demographics, cup size, dislocation rates, reoperation rates, and indication for reoperation were collected.

### **RESULTS:**

89 patients were treated with a DM implant, while 48 had a 40mm head. Female patients were more likely to receive a DM (61.8%) than 40mm head implant (25.0%) while males were less likely to receive a DM (38.2%) than 40mm head implant (75.0%) ( $p < 0.001$ ). The average cup size was 53mm (SD 4.16) in the DM group and 56.8mm (SD 3.48) in the 40mm head group ( $p < 0.001$ ). There was no statistical difference between reoperation or postoperative dislocation rates between the two groups. The DM group had five reoperations (5.62%): two for dislocation (2.25%), two for infection (2.25%), and one for fracture (1.12%). The 40mm head group had four reoperations (8.33%), including three for dislocation (6.25%), and one for fracture (2.08%).

### **DISCUSSION AND CONCLUSION:**

This multicenter study found that optimal functional outcomes may be observed within both prosthetic types in treating femoral neck fractures with THA. Smaller cup sizes are more likely to require DM, possibly because a 50-56mm cup (depending on the system) is needed to accommodate a 40mm head. Given the comparable low rates of dislocation between the groups, it is reasonable to base the choice of prosthesis on surgeon preference and cost.