**TITLE:** Patient outcomes after vascularized fibular graft for treatment of femoral head avascular necrosis: An active duty cohort

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**INTRODUCTION:** Vascularized fibula strut graft surgery for the treatment of femoral head avascular necrosis (AVN) has shown some promise for patients whom are considered too young for total hip arthroplasty surgery. However, what is less clear is the function preserving ability of this surgery. The purpose of this investigation will be to analyze a young active duty patient cohort's patient reported outcomes and review the challenges of total hip arthroplasty after vascularized fibula strut graft surgery

**METHODS:** A retrospective cohort of patients who underwent vascularized fibula strut graft surgery for femoral head avascular necrosis will be analyzed. Patient reported outcomes will be obtained through query of our institution’s quality improvement patient survey database. In addition to analyzing standard patient reported validated scores will analyze Visual Analog Scale (VAS) scores, return to active duty status and short term follow up conversion rate to total hip arthroplasty.

**RESULTS:**

Expect that vascularized fibula strut graft surgery for treatment of femoral head avascular necrosis results in moderate patient reported outcomes with moderate short term conversion rates to total hip arthroplasty. Conversion surgery to total hip arthroplasty presents unique surgical challenges.

**DISCUSSION/CONCLUSION:** This investigation may serve to improve orthopaedic care delivery by aiding in patient selection for fibula strut graft surgery for treatment of femoral head AVN and by facilitating the pre-operative consulting regarding expected outcomes. Additionally, conversion to total hip arthroplasty after vascularized fibula strut graft surgery presents unique surgical challenges.