

# Bariatric Surgery Prior to Total Hip Arthroplasty: Does Timing or Type Matter?

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## INTRODUCTION:

Morbid obesity is a known risk-factor for increased complications following total hip arthroplasty (THA). Thus, many orthopaedic surgeons recommend bariatric surgery (BS). However, there is no consensus on the type (commonly either a Roux-en-Y gastric bypass (RYGB) or sleeve gastrectomy (SG)) and timing of BS prior to THA. Therefore, the purpose of this study is to compare BS recipients prior to THA to assess differences in 90 day to 2-year medical/surgical complications as well as revisions for: (1) type of BS (RYGB and SG); and (2) timing of BS. Additionally, we aim to assess risk factors for post-operative prosthetic joint infections (PJIs), dislocations, and revisions.

## METHODS:

We queried a national, all-payer database to identify patients undergoing primary THA from January 2010 to October 2020 (n=715,100). Patients were then divided into six cohorts: two cohorts without history of BS (Body Mass Index (BMI) kg/m<sup>2</sup> 20-35 (n=59,995)) and BMI >40 (n=36,799)); two cohorts with previous RYGB (n=9,087) or SG (n=8,873); and two cohorts that underwent BS either six to twelve months (n=412) and greater than twelve-months (n=1,655) prior to the THA. Bivariate *chi-square* analyses of medical and surgical outcomes at 90-days to two-years were conducted. Multivariate logistic regressions identified independent risk factors for PJI's, dislocations, and revisions.

## RESULTS:

At 90-days to 2-years, no differences in post-operative medical/surgical complications or revisions were seen among timing or type of BS ( $p>0.05$ ). The BMI >40 kg/m<sup>2</sup> cohort had the highest complication profile among all other cohorts (for all time points, odds ratio (OR) 2.0,  $p<0.116$ ). Timing and type of BS has similar odds of PJIs, dislocations, and revisions ( $p>0.05$ ).

## DISCUSSION AND CONCLUSION:

Patients undergoing RYGB or SG six to twelve-months and greater than one-year prior to THA showed similar complications profiles. These results suggest, bariatric patients do not need to wait one year before undergoing a THA.

Table 1: Demographic and Clinical Characteristics of Patients Undergoing Primary THA	Table 2: Risk factors for PJI in patients undergoing THA	Table 3: Risk factors for Dislocation in patients undergoing THA	Table 4: Risk factors for Revision in patients undergoing THA																																																																																																																																	
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