

## Paper #52

# Preoperative Patient Expectations of Elective Reverse Total Shoulder Arthroplasty

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### Summary:

Patients have the highest expectations for pain relief and performing simple tasks after reverse shoulder arthroplasty. Patients with higher preoperative function, osteoarthritis and no previous joint replacements have greater expectations of reverse shoulder arthroplasty.

### Abstract:

## Introduction

The purpose of this study was to determine the most important preoperative expectations in patients undergoing primary elective reverse total shoulder arthroplasty (RSA), and to identify predictors of greater expectations in these patients. We hypothesized that younger patients, patients with better preoperative function, patients with shoulder osteoarthritis (OA), and those who had no prior joint replacements would have higher expectations of RSA.

## Methods

333 primary RSA performed for a diagnosis of cuff tear arthropathy (n = 242), osteoarthritis (n = 68) or post-traumatic arthritis (n = 23) at one institution were studied prospectively. Expectations were assessed preoperatively using a validated nineteen question shoulder expectations survey. Preoperative patient reported factors were measured with American Shoulder and Elbow Surgeons (ASES) shoulder score, Shoulder Activity Scale (SAS), ShortForm-12 (SF-12) mental and physical component scores, and visual analog scale (VAS) for pain, fatigue and general health. We also examined age, sex, body mass index (BMI), education level, history of previous joint replacement and history of contralateral reverse shoulder arthroplasty. Descriptive statistics were used to identify the total number of preoperative expectations and the most important expectations. Pearson correlations or Wilcoxon-Mann-Whitney tests were used for univariate analysis to determine characteristics associated with a greater level of expectations, and a Poisson regression model was performed to control for potential confounding variables.

## Results

The mean age (and standard deviation) was 72.1± 8.7 years (range 45-97 years). The study population was 64% female. One hundred and ninety (59%) had a history of at least one previous joint replacement (hip, knee or

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shoulder). Twenty seven (8.3%) had a history of a contralateral RSA. Patients had the highest level of expectations for an average of 7 out of 19 questions. Relief of nighttime pain, relief of daytime pain, improvement in self-care, improvement in ability to drive or put on a seatbelt, and improved ability to perform daily activities were each very important to approximately half of patients (range 46-49%).

Age, sex, BMI, education, ASES shoulder score, SF-12 mental component scores and VAS scores were not associated with a greater number of expectations. Multivariate analysis showed better preoperative SAS scores and SF-12 physical component scores were associated with greater expectations ( $p < 0.001$ ). A diagnosis of OA was associated with greater expectations when compared to CTA ( $p < 0.001$ ) and post-traumatic arthritis was associated with the lowest expectations ( $p = 0.044$ ). History of either contralateral RSA or any previous joint replacement were independent predictors of lower expectations ( $p < 0.001$ ).

## Conclusion

Patients have the highest expectations for pain relief and performing simple tasks after RSA. Patients with higher preoperative function, OA and no previous joint replacements have greater expectations of RSA. There are also several patient factors correlated with greater expectations for the majority of specific questions. Notably, worse preoperative function, older age and female sex were associated with higher expectations related to overhead and non-overhead sports. These patients may benefit from counseling as to the improvements they are likely to obtain from surgery.