



# Rotator Cuff Repair with Concomitant Subacromial Decompression is Associated with Lower Reoperation Rates at 2, 4, and 6 Years

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# Disclosures

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# Introduction

There is **conflicting evidence** on the benefits of concomitant arthroscopic subacromial decompression (ASD) during arthroscopic rotator cuff repair

- **No difference** in patient reported outcomes
- **Varying results** on effect on reoperation rates



The **purpose** of this study was to compare the 2, 4, and 6-year reoperation rates in patients undergoing RCR with or without concomitant ASD.

# Materials and Methods

Retrospective cohort analysis using the **Mariner dataset** of the **PearlDiver Database**.

- Identified primary arthroscopic RCR performed in 2015 (to allow for **minimum 6-year follow-up**).

## **Cohorts:**

- Arthroscopic RCR with ASD (n = 8,994)
- Arthroscopic RCR without ASD (n = 2,194)

## **Exclusion:**

- <18 years old, open RCR, bilateral surgery, previous RCR

# Primary Outcomes

## 2, 4, and 6-year reoperation rates

- All-cause reoperation
- Revision RCR
- Shoulder arthroplasty
- Biceps tenodesis
- Biceps tenotomy/debridement
- Distal clavicle excision
- Other arthroscopic procedures

# Statistics

## Univariate Analysis

- Demographics, comorbidities, and reoperations analyzed using Chi-Squared and Student T-tests as appropriate
- Number Needed to Treat (NNT)

## Multivariate Analysis

- Logistic regression
- Sex, CHF, COPD, smoking, cancer metastasis, obesity, and pulmonary circulatory disorders included as independent variables

# Results

After univariate analysis at 6-year follow-up, the **NNT** for ASD to prevent 1 reoperation were as follows:

- All-cause revision = 24
- Revision RCR = 50
- Shoulder arthroplasty = 63

# Results

Concomitant ASD led to **decreased rates of**

- All-cause reoperation
- Revision RCR
- Shoulder Arthroplasty

At 2, 4, and 6 years postoperatively

Procedure by Reoperation Timepoint	OR (95% CI)	P
2 Years		
All-Cause Reoperation	0.61 (0.51-0.73)	<0.001
Revision Rotator Cuff Repair	0.68 (0.53-0.86)	<0.001
Shoulder Arthroplasty	0.46 (0.34-0.63)	<0.001
Biceps Tenodesis	0.71 (0.43-1.2)	0.19
Biceps Tenotomy / Debridement	0.79 (0.59-1.1)	0.12
Distal Clavicle Excision	0.67 (0.39-1.2)	0.16
Other arthroscopic procedure	0.92 (0.69-1.2)	0.59
4 Years		
All-Cause Reoperation	0.60 (0.51-0.70)	<0.001
Revision Rotator Cuff Repair	0.63 (0.50-0.78)	<0.001
Shoulder Arthroplasty	0.55 (0.41-0.74)	<0.001
Biceps Tenodesis	0.63 (0.40-0.99)	0.05
Biceps Tenotomy / Debridement	0.73 (0.56-0.96)	0.02
Distal Clavicle Excision	0.71 (0.43-1.2)	0.18
Other arthroscopic procedure	0.79 (0.61-1.0)	0.07
6 Years		
All-Cause Reoperation	0.59 (0.51-0.69)	<0.001
Revision Rotator Cuff Repair	0.61 (0.49-0.76)	<0.001
Shoulder Arthroplasty	0.54 (0.41-0.72)	<0.001
Biceps Tenodesis	0.63 (0.41-0.99)	0.05
Biceps Tenotomy / Debridement	0.73 (0.56-0.94)	0.02
Distal Clavicle Excision	0.66 (0.41-1.1)	0.09
Other arthroscopic procedure	0.79 (0.61-1.0)	0.08

CI, confidence interval; OR, odds ratio.



# So What?

At 6-year follow-up, patients undergoing arthroscopic RCR with concomitant ASD were:

- **41% less likely** to undergo any all-cause revision
- **39% less likely** to undergo revision RCR
- **46% less likely** to undergo shoulder arthroplasty

