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# Reverse Total Shoulder Arthroplasty Pain and Function: New Perspectives from a 10-Year Multicenter Study at the 7-Year Time Point

Ryan Jeffrey Krupp, MD, Prospect, KY UNITED STATES

C. Benjamin Ma, MD, San Francisco, CA UNITED STATES

John Nyland, EdD, DPT, Louisville, Kentucky UNITED STATES

Charles L. Getz, MD, Philadelphia, PA UNITED STATES

Makaram S Srinivasan, MBBS, MS (Orth), DNB (Orth), FRCS, M.Ch (Orth), Blackburn, Lancashire UNITED KINGDOM

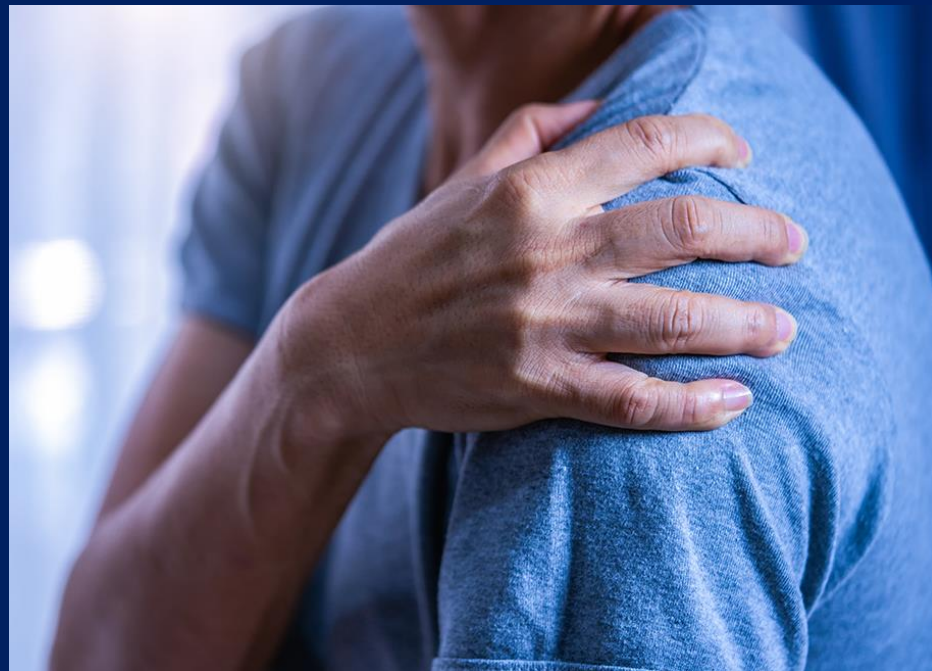
Norton Orthopedic Institute, San Francisco Orthopaedic Institute, Rothman Institute, Royal Blackburn Hospital,  
Louisville, Kentucky, UNITED STATES

# Disclosures

- Dr. Krupp - Arthrex: paid presenter or speaker; Biomet: paid consultant; DJO: research support; Rotation Medical: research support; Stryker: paid consultant or speaker; Zimmer: paid consultant or speaker, research support.
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# Summary

- Careful follow-up between 6 months and 1 year after reverse total shoulder arthroplasty may identify patients that need assistance reversing higher pain, lower function expectation trends, or for optimizing shoulder use and longevity in patients with lower pain, higher function expectations.



# Purpose

- Reverse total shoulder arthroplasty (RTSA) can decrease shoulder pain and improve function. Less is known about its influence on physical health-related quality of life (PHRQOL) and mental health-related quality of life (MHRQOL).<sup>3,4</sup> The study hypothesis was that shoulder function, pain, and pain medication use would influence PHRQOL and MHRQOL.



# Methods

- This prospective cohort study involving participants recruited from 6 orthopedic specialty care clinics evaluated the influence of RTSA on PHRQOL, MHRQOL, shoulder function, pain, instability, and medication use over the initial 7-years of a 10-year study.
- Clinical examination, the **American Shoulder and Elbow Surgeons (ASES) score**, **Short Form (SF)-12 PHRQOL** and **MHRQOL** assessments, the single assessment **numeric shoulder function evaluation (SANE)**, **visual analog scale (VAS) shoulder pain score**, and **medication use data** were collected pre-RTSA, and at 6-weeks, 6-months, 1-year, 2-years, 3-years, 5-years, and 7-years post-RTSA.

# Results

- Two hundred participants (108 female) of  $69 \pm 8.3$  years of age, primarily with gross rotator cuff deficiency or glenohumeral joint osteoarthritis (90%, 180/200) underwent pre-RTSA evaluation.
- Active shoulder flexion, and external rotation mobility improved by 6-months and remained improved. Shoulder flexion, abduction, external rotation, and internal rotation strength improved by 6-months and remained improved.
- Patient reported ASES, SANE and VAS pain scores improved by 6-weeks and remained improved, as medication use for shoulder pain decreased ( $p < 0.0001$ ).<sup>1,2,5</sup>
- SF-12 PHRQOL scores improved by 6-months and remained improved ( $p < 0.0001$ ). Significant relationships were observed between shoulder function (ASES or SANE) and SF-12 (PHRQOL and MHRQOL) scores ( $p < 0.0001$ ).

# Conclusion

- After early pain relief (6-weeks post-RTSA), participants improved function and PHRQOL (6-months to 1-year post-RTSA) while coping with pain. Careful follow-up at this time may identify patients that need assistance reversing higher pain, lower function expectation trends or to optimize RTSA use and longevity in patients with lower pain, higher function expectations. All patients might benefit with improved PHRQOL and MHRQOL.



Thanks for your attention!



[john.nyland@nortonhealthcare.org](mailto:john.nyland@nortonhealthcare.org)



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