a conservative post-operative regimen, sling immobilization for 6 weeks, on ROM following arthroscopic cuff repair.

Methods: 56 patients with full-thickness rotator cuff tears were prospectively followed for 1 year. Patients with preoperative stiffness were excluded. ROM was assessed preoperatively and at 2, 6, 12, 24, and 52 weeks postoperatively. Pre- and postoperative ASES and Constant scores were recorded. 43 patients (77%) had an MRI at one year postoperatively to assess repair integrity.

Results: During the first 6 weeks postoperatively 43 patients (77%) had "good" PROM (elevation $> 100°$ and external rotation (ER) $>30°$), while 13 (23%) were "stiff" (elevation $< 100°$ and/or ER $<30°$). No patients were stiff at one year. 44% of the repairs were intact at 1 year by MRI. There was a trend for better healing in the "stiff" group: 70% of repairs were intact on MRI, compared to 38% in the "good ROM" group ($p=0.13$). There was no difference in ASES, Constant scores, or ROM at 1 year between groups.

Conclusions: Six weeks of immobilization after arthroscopic rotator cuff repair does not appear to result in long-term stiffness. Additionally, patients with perioperative stiffness trended toward better tendon healing. Early PROM is not necessary to avoid stiffness after arthroscopic rotator cuff repair, and may have a detrimental effect on tendon healing.

The Effect of Rehabilitation on Cuff Integrity and Range of Motion Following Arthroscopic Rotator Cuff Repair: A Prospective, Randomized Study of a Standard vs. Decelerated Rehabilitation Protocol (SS-23). *Allen Deutsch, MD, David Guelich, MD, George Mundanthanam, MD, Christopher Govea, MD, John Labis, MD*

Summary: A prospective, randomized study of 70 patients determined the effect of 2 rehabilitation protocols on repair integrity and motion following arthroscopic cuff repair. The only difference between protocols was that passive forward elevation began on post-op day #7 in the Standard group and after 4 weeks in the Decelerated group. Patients underwent ultrasound at 1, 2, 3, and 6 months. For post-op ROM, no significant difference was found between groups. At 6 months, 81% of cuffs were intact for the Standard group vs. 91% for the Decelerated group. ($p>0.05$) The decelerated rehabilitation protocol resulted in fewer re-tears without postoperative stiffness.

Purpose: The effects of rehabilitation on repair integrity following arthroscopic cuff repair have been poorly studied. A prospective, randomized study was carried out in order to determine the effect of 2 different rehabilitation protocols on structural integrity and range of motion (ROM) following arthroscopic cuff repair.

Methods: Seventy patients undergoing arthroscopic rotator cuff repair were randomized to either a Standard (37 patients) or Decelerated (33 patients) rehabilitation protocol. The average age (57 years; range: 29-78 years) and intraoperative tear size were similar for both groups. All repairs were performed by the senior author with a single row of metal anchors with simple sutures. All patients were immobilized in an ultrasling for 6 weeks. For both groups, pendulum exercises were initiated on post-op day #1, supine passive external rotation stretches on post-op day #7, and passive internal rotation stretches at 4 weeks. The only difference between groups was that supine passive forward elevation exercises were started on post-op day #7 in the Standard group and after 4 weeks in the Decelerated group. The strengthening phase was identical for both groups. All patients underwent post-op range of motion measurement and ultrasonography of the shoulder at 1 month, 2 months, 3 months, and 6 months. Dynamic images were reviewed by the senior author and 2 blinded musculoskeletal radiologists. Interobserver reliability was calculated. Chi-square and Student t test were used to determine whether a significant difference could be found between groups with respect to the number of re-tears and postoperative ROM.

Results: For postoperative ROM, no significant difference was found between groups at any of the time intervals. Interobserver reliability for the ultrasound readings was good to excellent with a Kappa value of 0.834. At 6 months, 81% (30/37) of cuffs were intact for the Standard group vs. 91% (30/33) for the Decelerated group. ($p>0.05$) For both groups, 35% (8/23) of large to massive tears were re-torn vs. 4% (2/47) of small to medium tears. ($p<0.05$) There was a trend for re-tears to occur in older patients: re-tear, 62y vs. intact, 56y. ($p=0.11$).

Conclusions: A statistically significant difference was not found between the re-tear rates in the Standard and Decelerated groups (19% vs. 9%); however this difference may be clinically relevant. This study supports the use of a decelerated rehabilitation protocol following arthroscopic cuff repair because it resulted in fewer re-tears and was not associated with postoperative stiffness.

The Operative Management of Rotator Cuff Disease Results in Superior Pain Relief and Functional Improvement Compared to Non-operative Treatment (SS-24). *Theodore A. Blaine, MD, John-Erik Bell, MD, Jessica Lee, MD, Jonathan Packer, MD, Sara Edwards,*