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**PRIMARY REPAIR OF A DISTAL BICEPS TENDON RUPTURE HAS A HIGH COMPLICATION RATE WITH AN OVERALL SUCCESSFUL RETURN TO FUNCTION**

**Introduction:** Distal biceps tendon ruptures are becoming increasingly common occurring most commonly in the dominant arm of men between 30 and 50 years of age.<sup>1,2</sup> The incidence of distal biceps tendon ruptures has steadily increased, with a recently estimated rate of 2.55 per 100,000 patient-years.<sup>3,4</sup> Surgery is the gold standard treatment for optimal clinical and functional outcomes. Although improved strength has been shown after operative repair, there is no evidence available regarding military personnel return to active duty. The purpose of this study was to determine the rate of return to duty and rate of those on profile directly attributed to injury following distal biceps repair.

**Methods:** Retrospective review at a single institution from 2010-2020 for a consecutive series of primary distal biceps repairs performed by multiple orthopedic surgeons on active duty personnel. Exclusion criteria included revision distal biceps repair or known chronic tears >6 weeks. Inclusions criteria was : age 18-65, those on active duty, greater than 1 year follow up and documentation of return to duty and with what restrictions if any. Return to duty and those on profiles or limited duty were investigated. All complications and revisions were reviewed.

**Results:** 62 Active duty personnel identified: 37 Soldiers, 11 Sailors, 8 Marines and 6 Airman. There were 61 males and 1 female. 55/62 (89%) were able to return to duty. One underwent Medical Evaluation Board (MEB) for this injury. 1 retired, 1 separated for other causes and 4 were loss to long term follow up before return to duty could be determined. There were only 2/62 (3%) who were not able to return to full active duty and both were in the Army. We had a total of 20 complications (32.2%). 14 Neuropraxias, most commonly the LABC, of which 13/14 resolved spontaneously. 8/62 (12.9%) required revision surgery due to re-rupture and all but 1 were able to return to full active duty.

**Conclusions:** Distal biceps ruptures are relatively rare, however commonly encountered in the military population. There have been no studies looking specifically at return to duty, what level of duty and how this impacts careers. Our study demonstrates that 89% with primary repair are able to return to duty with no restrictions. There is a 32% complication rate with 13% re-rupture requiring revision surgery; however, despite revision repair all but 1 were able to continue on active duty.