Return to Play following Lateral Ankle Ligament Repair: A Systematic Review

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INTRODUCTION: Lateral ankle ligament repair is typically indicated for active individuals with chronic ankle instability that is refractory to nonsurgical management. Although multiple surgical techniques have been described to address lateral ankle instability, the gold standard is the Brostrom procedure with or without the Gould modification (inferior extensor retinaculum reinforcement). However, few studies have investigated return to play (RTP) following lateral ankle ligament repair and the most appropriate criteria for postoperative RTP have not been established. The purpose of this systematic review was to identify studies that have examined RTP in the setting of lateral ankle ligament repair and to aggregate their results with regard to RTP protocol characteristics and postoperative outcomes.

METHODS: A systematic review of original research articles was performed using PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. To qualify for study inclusion, articles were required to be published in English, Level 4 evidence or higher, and had to examine RTP following either Brostrom repair or modified Brostrom-Gould repair. Open and arthroscopic surgical procedures were included. No restrictions were made regarding publication date and methodological quality. RTP data were extracted to assess return to pre-injury level of competition and criteria for RTP following lateral ankle ligament repair.

RESULTS:

Twenty articles including 1,307 Brostrom repairs or modified Brostrom-Gould repairs were identified. A total of 15 articles (75.0%) utilized the modified Brostrom-Gould technique, 3 articles (15.0%) examined the Brostrom technique exclusively, and 2 articles (10.0%) reported on both surgical techniques. Thirteen articles employed an open surgical approach, whereas 7 articles performed lateral ankle ligament repair arthroscopically. The overall rate of RTP at the pre-injury activity level was 77.5%. There was little agreement between articles regarding the appropriate RTP timeline postoperatively (range: 4-16 weeks), and just 3 of the included articles (15.0%) described a specific RTP protocol based on objective criteria.

DISCUSSION AND CONCLUSION: Nearly one-quarter of athletes who underwent Brostrom repair or modified Brostrom-Gould repair failed to return to their pre-injury level of activity. RTP criteria varied widely among the included articles and were based upon disparate factors including subjective patient symptoms, rigid postoperative timelines, physical exam findings, and functional testing. The results of this systematic review suggest that standardized, evidence-based RTP criteria are needed in order to maximize athletic performance and minimize risk of re-injury following lateral ankle ligament repair.