

# Utilization and Effectiveness of Physical Therapy after Hip Arthroscopy for Femoroacetabular Impingement

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## INTRODUCTION:

Limited literature exists on how postoperative physical therapy (PT) may affect outcomes in femoroacetabular impingement syndrome (FAIS) patients undergoing hip arthroscopy (HA) and how PT measures relate to traditional orthopaedic patient-reported outcomes (PROs). The purpose of this study is to evaluate how the duration of PT may affect outcomes in patients with FAIS using both the Lower Extremity Functional Scale (LEFS) and traditional orthopaedic PRO scores.

**METHODS:** Patients from 2013-2016 undergoing primary HA for FAIS were identified. Patients with a minimum 2-year follow up and fully documented PT notes were included and stratified into three cohorts based on timing of PT discharge: 1) 0-3 months, 2) 3-6 months, and 3) 6-12 months. Predictive regression models were developed to analyze the rate of improvement (ROI) in LEFS scores as it relates to 1) postoperative day (POD) and 2) postoperative PT session number. Two-year PROs were collected and correlated to LEFS scores.

**RESULTS:** Ninety-five patients at mean  $\pm$  SD age of  $34.6 \pm 11.7$  years were included. Mean LEFS scores increased significantly at 6 weeks, 3 months, and time of PT discharge from the initial score ( $p < 0.01$  for all). The predicted ROI in LEFS score was determined to be 3.39% per PT session from sessions 0-13, 1.43% from sessions 14-27, and 0.37% from sessions 28-40. Patients who underwent 3-6 months of PT had significantly better Hip Outcome Scores relative to the 0-3 month cohort and significantly better Visual Analog Scale for Satisfaction scores relative to the 6-12 month cohort. The predicted ROI in LEFS score was determined to be 0.96% per day from POD 0-45, 0.22% from POD 46-139, and 0.03% after POD 139. Moderate correlations were seen between LEFS at time of discharge and all 2-year PROs.

**DISCUSSION AND CONCLUSION:** Patients undergoing HA for FAIS derived substantial benefit from each PT visit during their first 13 PT sessions and then a smaller, yet still meaningful, benefit from sessions 13-27. Following session 40, or approximately 4.5-5 months, patients no longer benefitted from additional PT sessions. Based on PRO scores, patients discharged from physical therapy between 3 and 6 months had the best outcomes. LEFS score had moderate correlation with orthopaedic PRO scores.

Postoperative PT Session vs. LEFS Score

