

## Arthroscopic Transfer of the Long Head of the Biceps Tendon: 2-10 Year Functional Outcome and Clinical Results

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**Objectives:** Evaluation of the mid-term clinical and functional outcome in a cohort of patients who underwent transfer of the long head of the biceps tendon (LHBT).

**Methods:** Patients diagnosed with biceps instability or related pathology that underwent arthroscopic assisted or all arthroscopic transfer of the long head of the biceps tendon to the conjoint tendon were considered. The procedure was performed either as an isolated procedure or in conjunction with another procedure by the senior author. Outcome surveys were collected for 157 patients with a subset of 43 patients available for clinical examination at 2-10 years postop time point. Outcome measures were based on American Society of Shoulder and Elbow Surgeons (ASES), University of California at Los Angeles (UCLA), and L'Insalata questionnaires. Ipsilateral and contralateral metrics were also evaluated.

**Results:** 157 patients (25 female, 132 male; average age 50 years; average postop 4.9 years) were evaluated with L'Insalata, UCLA, and ASES questionnaires, scoring 84.78, 29.77, and 83.4, respectively. In the 33 patients who had an isolated LHBT transfer, the L'Insalata, UCLA, and ASES scores were 79.52, 27.6, and 83.95, respectively. 43 shoulders (7 female, 36 male; average age 50 years; average postop 5.1 years) were available for clinical examination by a physician other than the treating surgeon. There was no statistically significant side-to-side strength difference using a 10-pound weight. All of the patients reported no arm pain at rest with regard to the biceps. 81% of patients reported no biceps tenderness upon palpation of the bicipital groove and 85.8% had a negative throwing test. 95.2% of patients had a negative active compression test. Speed's and Yergason's tests were negative in 90.5% and 95.2% of patients respectively. One patient (3%) complained of fatigue discomfort (soreness) isolated to the biceps muscle following resisted elbow flexion. Five patients (12.0%) had a Popeye sign and one patient (3%) exhibited biceps subsidence. 86% of patients were self-rated as good to excellent, with the remaining 14% reporting fair or poor results.

**Conclusion:** Arthroscopic subdeltoid transfer of the LHBT to the conjoint tendon is an appropriate and reliable intervention for active patients with chronic, refractory biceps pathology. There was no loss of strength for biceps curls. All patients reported no pain isolated to biceps muscle at rest. Ninety-seven percent of patients had resolution of their preoperative biceps symptoms.

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