

# Functional Outcome of Sesamoid Excision in Athletes

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This article out of the American Journal of Sports Medicine reported on patient-reported outcomes and return to sports in an athletic population following sesamoidectomy. Patient charts from a single surgeon's practice were retrospectively reviewed for sesamoidectomies performed after exhaustion of all conservative treatment options. Study analysis consisted of 82 feet that underwent 54 medial, 18 lateral, and 10 bilateral excisions. Patients were divided into athletic, defined as those who participated in sports at a high school level or higher, or non-athletic groups. Patients also underwent several assessments throughout their treatment time frame including FFI-R, SF-12, SANE, VAS, and a questionnaire from the surgeon's practice regarding patient's subjective post-operative return to activity and satisfaction following surgery. A specialized post-operative protocol was followed by all patients which began at 3-4 weeks following surgery.

No foot type was found to have an association with increased risk of sesamoid pathology. But, pathology was found to be more common in dancers and athletes who participate in explosive sports. Osteochondritis was the most common etiology of sesamoid pathology for all study subjects. Overall, the study showed very promising results favoring pain relief, minimal complication, return to pre-injury activity levels, and overall patient satisfaction. Statistically significant improvements were seen for each assessment following excision and no significant difference was found based on patient demographics or laterality of sesamoid excision. Within the athletic patient group, 80% reported return to sport and within that percentage, average return time was 4.6 months. Out of the study participants, three patients reported complications, all of which were surgically corrected. Overall patient satisfaction was found to be 93%.

This article's conclusion clearly acknowledges the difficulty of treating chronic sesamoid pain and the history of sesamoid excision with unfavorable outcomes. The authors attribute their successful patient outcomes to a combination of meticulous surgical technique and a specialized rehabilitation program. Sesamoids can be notoriously challenging to excise, particularly when fragmented, without destroying the surrounding soft tissue structures. The surgical technique emphasized for both medial and lateral approaches focuses on minimal soft tissue disruption and repair of structures following excision. Medial seamoid excisions were performed from a medial approach and lateral sesamoid excisions from a plantar approach. Following medial sesamoid excision, the FHB and abductor hallucis were subsequently repaired along with minimal disruption to the 1st MPJ joint capsule to maintain soft tissue function and prevent deformity.

The importance of aggressive and targeted physical therapy in the post-operative setting continues to be increasingly important for all orthopedic procedures, not only for optimizing surgical outcomes but maximizing patient satisfaction. The authors of this article stress their rehabilitation program's significance being 'as important, if not more so, than the surgical technique'. Another advantage of their targeted rehabilitation program is that it was designed by a ballerina. We all know that physical therapists, just like every other medical specialty, are not created equal and treatment protocol varies dramatically depending on their education and clinic model. Establishing a relationship with your local physical therapy referrals can help ensure your post-operative guidelines and milestones are being met. And while many of our physical therapy referrals are dictated by insurance coverage, being involved in the design of your personal physical therapy protocol (timeline, goals, specific exercises, etc.) can help insure optimal patient outcomes when you are not familiar with the physical therapist you are working with.

I also liked that this article had multiple Patient Reported Outcome Measures (PROMs) used to assess the trajectory of each patient's perioperative course, including individual questions from the surgeon, that are directed towards the functional and lifestyle outcomes following the surgery. The validated Revised Foot Function Index

(FFI-R) is a foot-specific subjective scoring assessment that measures pain and disability with sections focusing on pain, stiffness, activity restriction, difficulty, and social issues. Short Form 12 (SF-12) is a shortened version of SF-36, which is used to measure health-related quality of life for a variety of health conditions. The Single Assessment Numeric Evaluation (SANE) is a patient's single numerical rating of the status of their extremity (ex: "How would you rate your extremity today as a percentage of normal (0 to 100% scale, with 100% being normal)?"). Particularly in an athletic population, pain-scale scores and daily functional activity scores do not address one of the main concerns presented: whether they will be able to return to their activity of choice. Ability to return to activity can directly affect quality of life and treatment goals. Consistent use of PROMs in practice can help direct physician treatment guidelines to better fit patient results. The results of this study show encouraging support that the combination of thoughtful surgical technique with a specialized post-operative rehabilitation course can provide significant pain relief, improved function, improved quality of life, and return to sport following sesamoidectomy in the athlete.