

# SESAMOID INJURIES IN PEDIATRIC AND ADOLESCENT ATHLETES PRESENTING TO SPORTS MEDICINE CLINIC

Andrea Stracciolini, MD<sup>1,2,3</sup>, Marina G. Gearhart, BA<sup>1,2</sup>, Gregory P. Kobelski, BS<sup>1,2</sup>  
 Bridget W. Dahlberg, MPH<sup>1,2</sup>, Cynthia J. Stein MD, MPH<sup>1,2,3</sup>, Dai Sugimoto PhD, ATC<sup>1,2,3</sup>

For further information & questions contact: Sportsmedresearch@childrens.harvard.edu

<sup>1</sup> The Micheli Center for Sports Injury Prevention, Waltham, MA; <sup>2</sup> Boston Children's Hospital Orthopaedics and Sports Medicine, Boston, MA; <sup>3</sup> Harvard Medical School, Boston, MA

## OBJECTIVES

- To analyze sesamoid injuries presenting to sports medicine
- To increase understanding of injury profile, diagnostic evaluation, treatment regime, and return to sport of athletes with hallucal sesamoid injuries

## METHODS

**Design** descriptive epidemiology study

**Setting** tertiary level sports medicine clinic within a pediatric medical center

**Methods** retrospective chart review

**Inclusion criteria** involvement of hallucal sesamoid and sports participation

**Exclusion criteria** chronic disease or condition that might affect bone healing or prior diagnosis of sesamoid injury, history of surgery, and insufficient medical record data available

**Outcome measures** sports, diagnoses, prognoses, imaging tools, treatment type

## RESULTS

Total cohort 766 patients; 80.4% female and 19.6% male

**Leading diagnoses** sesamoditis (63.1%), sesamoid stress fracture (16.8%) sesamoid stress reaction (15.0%)

**Mean time to first clinic visit (days)** 126.4 ± 223.5, 95%CI: 103.1 – 149.8

**Mean time to return to sports (days)** 236.0 ± 280.4 (95%CI: 206.7 – 265.4

**Imaging Modalities** X-ray (63.3%), MRI (45.7%), CT scan (13.8%)

**Treatment** air cast boot (41.9%), PT (34.5%), activity modification (14.5%)

Figure 1. Females with Sesamoid Injury by Sport

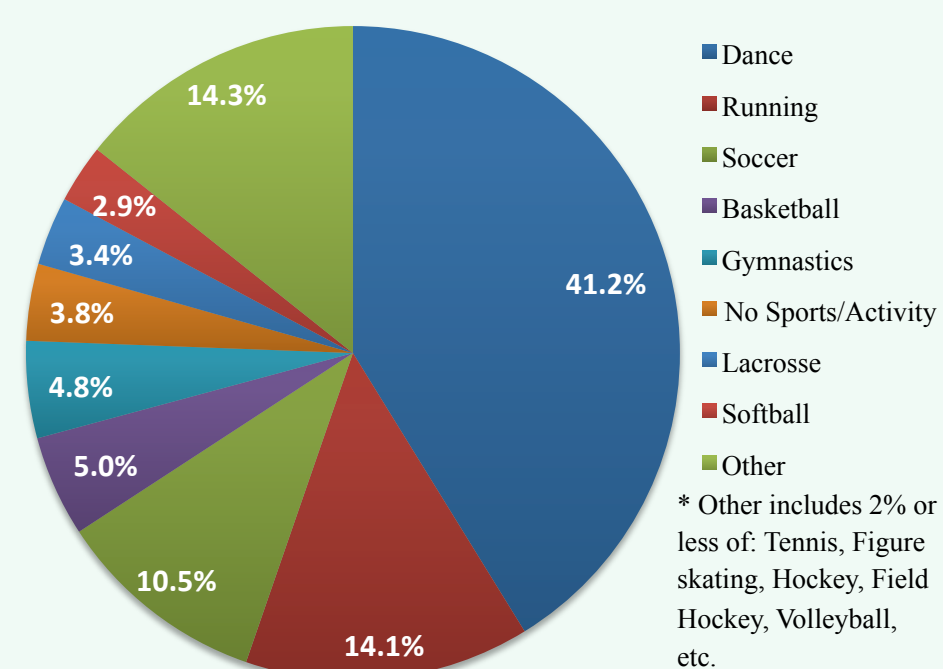


Figure 2. Males with Sesamoid Injury by Sport

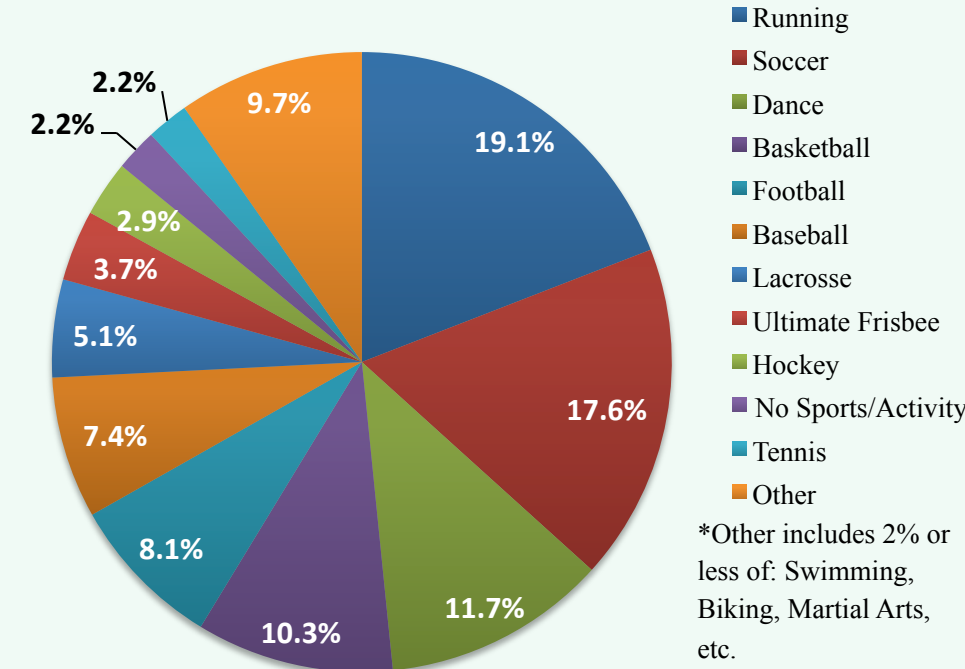


Figure 3. Bilateral Bipartite sesamoids

## CONCLUSIONS

- Sesamoid injuries differed by sex with the majority of patients being female dancers, running, and soccer athletes
- Time to medical attention was often delayed ~ 4 months
- Time to return to sport was ~ 8 months on average
- Sesamoid injuries appear to be overuse in nature possibly related to biomechanical load of sport/activity
- Education is needed to improve time to evaluation and treatment in order to decrease time loss from sport/activity in young athletes with sesamoid injuries