

## **The Prevalence of MTSS Symptoms Among Men and Women NCAA Division III Student Athletes**

AMANDA COMBS and KRISTEN MCALEXANDER

Exercise Physiology Laboratory; Department of Exercise Science and Sport Management;  
Schreiner University; Kerrville, TX

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*Category: Undergraduate*

*Advisor / Mentor: McAlexander, Kristen (kmcalexander@schreiner.edu)*

### **ABSTRACT**

Symptoms of Medial Tibial Stress Syndrome (MTSS) are common among athletes of various sports and levels, but studies describing the prevalence of MTSS symptoms are lacking. Possible contributing factors of MTSS include an individual's flexor digitorum longus attachment and soleus muscle, a pronated foot, large loads of mechanical forces, large calf girth, and gender. No individual factor has been statistically associated with MTSS, and prevention and treatment are difficult to study. Further, no earlier studies have described the prevalence of MTSS symptoms for men and women NCAA student athletes among various sports. **PURPOSE:** To measure and describe MTSS symptoms among men and women NCAA Division III athletes participating in 8 various sports at a rural, liberal arts university. **METHODS:** Seventy-three participants (*M* age= 19.82 years, *SD*= 1.25 years, 58.9% female) representing Baseball, Soccer, Volleyball, Track and Field, and Basketball answered questions from the MTSS Questionnaire. **RESULTS:** Most participants reported experiencing one or more symptoms of MTSS such as pain in one or both shins and being limited or completely unable to practice due to shin pain. All Men's Track and Field and Men's Soccer participants reported experiencing MTSS symptoms. Fifty-two percent of Baseball participants reported symptoms, but no Men's Basketball participants reported symptoms. Female athletes also reported high prevalence of symptoms. Seventy-five percent of Track and Field, 60% of Soccer, 78.4% of Volleyball and 38.7% of Basketball female athletes reported MTSS symptoms. In total, 63.33% of the male participants experienced symptoms of MTSS while 53.5% of the females experienced symptoms. **CONCLUSION:** These results suggest that prevalence of MTSS symptoms may be higher in Male NCAA Division III athletes, and Track and Field, Soccer and Volleyball athletes may experience more MTSS symptoms. Limitations of this study include a small sample size and unequal representation of sports and gender. As most student athletes are unaware of MTSS, future studies should also assess MTSS knowledge among student athletes, coaches, and clinicians. Variations of symptoms among males and females should be investigated due to anatomical differences and biomechanical advantages. Other considerations for future analyses should include differences among specific positions, practice, and training modalities. Our results suggest that administrators and athletic trainers should consider the MTSS Questionnaire as part of an athletic pre-screening protocol. In addition, prevalence of MTSS symptoms should be measured more frequently to evaluate occurrence and treatment effectiveness.