



“Exercise Therapy and Physical Activity Modification for Patients with Sever’s Disease: A Randomized Controlled Trial”

NATA FOUNDATION NEW INVESTIGATOR
RESEARCH GRANT: 2025-2028

FUNDING: \$19,862

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– ESTABLISHED BY STEPHEN E. BAIR

PROJECT SUMMARY

This randomized controlled trial will compare clinical and functional outcomes between a 12-week exercise therapy intervention compared to a conventional pain management approach for patients with Sever’s disease. Both groups will receive conventional care consisting of cushioning heel cups for their footwear, an educational packet, and expert consultation with a certified athletic trainer. Only the experimental group will complete a daily Achilles-tendon loading protocol. Outcomes will be evaluated at baseline, 6-weeks, and 12-weeks, including surveys (symptom severity, quality of life, and perceived improvement); physical activity (wearable monitor); lower extremity function (strength, jump testing); and triceps surae and Achilles tendon structure (B-mode ultrasound and shear wave elastography). This multimodal approach will determine mechanisms related to overall recovery and inform future studies.

IMPACT ON THE ATHLETIC TRAINING PROFESSION

This study is designed to address all known biopsychosocial impairments associated with overuse injuries in youth sports and will provide a critical update for the treatment of Sever’s disease. By positioning athletic trainers as the pivotal first line of care, we will reinforce our essential role in early intervention and maintaining safe sport participation. Our intervention is designed for seamless integration into clinical practice, offering the potential to prevent disability in adulthood and generate substantial healthcare savings.



PRINCIPAL INVESTIGATOR:
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Shawn Hanlon is an Assistant Professor of Kinesiology at California State University Fullerton where he is the Principal Investigator for the Musculoskeletal Health and Performance Research group and Co-Director for the Center for Sports Performance. Dr. Hanlon completed his bachelor’s degree in athletic training from Rowan University (12’); master’s degree in Sports Medicine from the University of Delaware (14’); PhD in Biomechanics and Movement Science from the University of Delaware (22’); and a postdoctoral research fellowship at the University of Colorado, School of Medicine (24’). His research aims to improve the lives of individuals who suffer from tendon injury by developing individualized treatment approaches and to investigate the impact of tendon injury sustained during adolescence on lifelong tendon health.