早稲田大学スポーツ科学学術院スポーツ科学研究センター 主催
早稲田大学スーパーグローバル大学創成支援事業　スポーツ健康科学拠点　共催

第86回東伏見スポーツサイエンス研究会

日時　2024年1月11日（Thursday）　**Presentation: 9:00 - 9:30 am;**
Q & A: 9:30 - 9:40 am; General Discussion: 10:25 - 10:40 am

場所　オンライン開催（Zoom、詳細は案内メールに記載）

演題

Gait-Training Strategies in the Rehabilitation of Running-Related Injuries: From Lab to Field

Alexandra F. DeJong Lempke, PhD, ATC (University of Michigan)

■**Abstract:** Approximately 40% of runners regardless of age and ability levels will develop an overuse injury each year, and thus running-related injuries present a primary clinical concern. Gait evaluations are often conducted for lower extremity injury patients to elucidate contributing biomechanical factors to injury, and findings from such evaluations often drive clinical gait-training interventions. Previous studies have primarily conducted biomechanical assessments in confined laboratory spaces using treadmill systems, which may not translate to outdoor running scenarios. Innovations in wearable technologies offer an opportunity to assess and address biomechanical factors contributing to running-related injuries to overcome previous limitations. This presentation will discuss strategies to leverage wearable technologies for running-related injury rehabilitation and gait-training for one of the most prevalent running-related injuries (exercise-related lower leg pain, or “shin splints”).

■**Bio:** Alexandra DeJong Lempke is an Assistant Professor in the Department of Physical Medicine & Rehabilitation at Virginia Commonwealth University School of Medicine. She received her bachelor’s degree in athletic training from the University of Pittsburgh, her master’s and doctoral degrees from the University of Virginia, and a post-doctoral fellowship at Boston Children’s Hospital with the Micheli Center for Sports Injury Prevention. She was previously a Clinical Assistant Professor at the University of Michigan in the School of Kinesiology. Her research agenda aims to assess and address factors contributing to the development of chronic running-related musculoskeletal injuries. She leverages wearable sport technologies to conduct real-world biomechanical assessments to determine aberrant movement patterns as they relate to pain and dysfunction, and applies field-based interventions to address these identified deficits.

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演題

Physical Activity for Rehabilitation Following Concussion:
A Review of the Past and Present Evidence to Improve the Future

Landon Lempke, PhD, ATC (Virginia Commonwealth University)

■**Abstract:** Concussions are a common injury in sport, military, and the general population that causes a temporary cognitive-motor, oculomotor, and behavioral dysfunction. International concussion guidelines recommend using stepwise criteria to ensure a safe exercise initiation after concussion. Cognitive and physical rest is recommended for at least 24-48 hours post-concussion. However, growing evidence indicates early exercise interventions, even within 24-48 hours, may have therapeutic effects for patients by reducing the days symptoms are experienced and thus days from normal activities missed. This presentation will discuss the current evidence, recommendations, and limitations for physical activity guidelines and exercise rehabilitation for concussion health care.

■**Bio:** Landon Lempke is an Assistant Professor in the Department of Physical Medicine & Rehabilitation at Virginia Commonwealth University School of Medicine. He completed his BS ('16) at Illinois State University, MEd ('17) at the University of Virginia, PhD ('21) at the University of Georgia, and postdocs at Boston Children's Hospital and the University of Michigan ('21-'23). He has over 45 publications in the field of concussion, sports medicine, and biomechanics. His research has been funded by multiple past and present grants from organizations such as the National Athletic Trainers' Association and the American College of Sports Medicine. His current research broadly aims to address how to best prevent, assess, and clinically manage and rehabilitate concussions. Within these domains, his research specifically focuses on reaction time, human movement biomechanics, objective return to play decision-making, and overall optimizing clinical practice related to concussion.

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