Technology and Objective Strength Measures Guide Clinical Decision Making Following ACLR
Amy Devaney PT, DPT, OCS Daniel McGovern
12:00 - 1:00pm
Orthopedic, Manual Therapy, Sports Medicine

The goal of this course is to review criterion-based progression in ACL rehabilitation and take a deeper dive at how we measure and utilize our data to make clinical decisions. Objective strength measures guide clinical decision making in ACLR and the use of technology can assist in a myriad of ways. It has been identified in clinical literature that the use of manual muscle testing and a subjective movement assessment is reliable and valid, however it falls short in specificity and sensitivity.

Despite advancement in surgical technique and more accessible tools to measure strength and motion in the clinical setting;the reinjury rate in athletes following ACLR remains high. This may be attributed in part to varied rehabilitative approaches. For example, the use of OKC exercises in the early stages varies widely as well as the inclusion of plyometrics during later stages.

Utilizing criterion-based rehabilitation that incorporates objective strength measurements and quantitative movement analysis may result in improved outcomes and potential decreased risk of re-injury and/or secondary ACL injury.

Objectives:

1. Review criterion-based progression following ACLR rehabilitation

2. Implement multimodal approach to functional testing with athletes following ACLR.

3. Interpret movement asymmetries associated with lower extremity muscle weakness in athletes following ACLR.

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Garner, J., Parrish, L., Shaw, K., Wilson, S., & Donahue, P. (2020). Using Motion Sensor Technology to Manage Risk of Injury in a Strength and ConditioningProgram for Female Collegiate Athletes. International Journal of Kinesiology and Sports Science, 8(1), 31-36. doi:https://doi.org/10.7575/aiac.ijkss.v.8n.1p.31

Hannon, J. P., Wang-Price, S., Goto, S., Singleton, S., Dietrich, L., Bothwell, J., Bush, C., & Garrison, C. (2021). Twelve-Week Quadriceps Strength as A Predictor of Quadriceps Strength At Time Of Return To Sport Testing Following Bone-Patellar Tendon-Bone Autograft Anterior Cruciate Ligament Reconstruction. International journal of sports physical therapy, 16(3), 681–688. https://doi.org/10.26603/001c.23421

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Amy Devaney PT, DPT, OCS

Dr. Devaney is a board-certified orthopedic specialist and former collegiate athlete. She received her BS in Exercise Science from Elon University in 2007 followed by her Doctor of Physical Therapy from MGH Institute of Health Professions in 2010. She has worked in Orthopedics and Sports Medicine for her entire career. She began her career at MGH Sports and specialized in Rehab and Performance Enhancement for runners. She currently works at Newton Wellesley Hospital as a Sports Clinical Specialist in the Outpatient Physical Therapy Department. She has held teaching positions at Northeastern University and has lectured for local private practices over her 12 years of practice. She has a passion for lower extremity rehabilitation for high school and collegiate athletes.

Daniel McGovern, PT, DPT, SCS, ATC, CSCS, FAFS

Dr. McGovern is a board-certified sports clinical specialist and athletic trainer. He is currently the Physical Therapist for Boston College Athletics and teaches in the DPT program at MGH Institute of Health Professions. He has earned a Doctor of Physical Therapy degree from the MGHIHP and holds Bachelor of Science degrees in Sports Medicine and Physical Therapy from the University of Connecticut. Additionally, he is a licensed athletic trainer and a certified strength and conditioning specialist. In 2018, Dan completed a Fellowship in Applied Functional Science (FAFS) through the Gray Institute. Dan has been training and rehabilitating athletes from youth to professional levels for over 30 years."