

## Update in Concussion: Exertional Testing and Treatment

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3:45 - 5:15pm

Neurology, Orthopedic, Manual Therapy, Sports Medicine

The guidelines for concussion rehabilitation have changed dramatically in the past five years. The contemporary evidence supports the recommendation for early physical activity following a concussion. This course will use current evidence to guide therapists to implement early, and safe physical activity for individuals who have had a concussion. The presentation will guide clinicians through the process of understanding the pathophysiology of autonomic dysregulation, its clinical presentation, safe exercise testing, and exercise prescription to facilitate a fast, and full recovery. A presented case review will allow clinicians to participate in the clinical decision-making process.

Following the presentation, the learner will be able to :

1. Recognize the symptoms of autonomic dysregulation following a concussion.
2. Describe the benefits of aerobic exercise following a concussion.
3. Select an appropriate exercise tolerance test for an individual s/p concussion.
4. Identify indications to terminate an exercise tolerance test for an individual s/p concussion.
5. Interpret the results of an exercise tolerance test as normal or abnormal.
6. Develop an individualized FIIT exercise prescription based on results from an exercise tolerance test.
7. Progress an exercise prescription for an athlete s/p concussion to facilitate safe return

1. Ellis MJ, Leddy JJ, Willer B. Physiological, vestibulo-ocular and cervicogenic post-concussion disorders: an evidence-based classification system with directions for treatment. *Brain Inj.* 2015;29:238-248.

2. Giza C. The new neurometabolic cascade of concussion. *Neurosurgery.* 2014;75(4):S24-S33.

3. Lal A, Kolakowsky-Hayner SA, Ghajar J, Balamane M. The effect of physical exercise after a concussion: a systematic review and meta-analysis. *Am J Sports Med.* 2018;46:743-752

4. Leddy JJ, Haider MN, Hinds AL, Darling S, Willer BS. A preliminary study of the effect of early aerobic exercise treatment for sport-related concussion in males. *Clin J Sport Med.* 2019;29:353-360.

5. Leddy J, Ellis M. Early subthreshold aerobic exercise for sport-related concussion: A randomized clinical trial. *JAMA.* 2019;E1-E7

6. Management of Concussion-mild Traumatic Brain Injury Working Group. VA/DoD Clinical Practice Guideline for the Management of Concussion-Mild Traumatic Brain Injury. Washington, DC: US Department of Veterans Affairs/Department of Defense;2016.

7. Quatman-Yates CC, et al. Physical therapy evaluation and treatment after concussion/mild traumatic brain injury, Clinical Practice Guidelines. J Orthop Sports Phys Ther. 2020;50(4):CPG1-CPG73."

Jodi Rozanski, PT, DPT, NCS, OCS, is a Clinical Assistant Professor and Associate Director of Clinical Education at Sacred Heart University in Fairfield, CT, where she teaches musculoskeletal examination and intervention. Jodi is a dual-board certified clinical specialist in neurologic and orthopaedic physical therapy as granted by the American Board of Physical Therapy Specialties. Her clinical experience is in the outpatient setting treating patients with orthopedic, neurologic, vestibular, concussion, and medically complex conditions. Jodi is an APTA Credentialed Clinical Instructor and she continues to be active in physical therapy clinical practice.

Kate MacLeod, PT, DPT is a Board-Certified Clinical Specialist in Neurologic Physical Therapy. She graduated from the University of New Hampshire with a B.S. in Kinesiology with a concentration in Exercise Science and later went on to pursue her Doctorate in Physical Therapy at Springfield College. During her clinical education rotations, she became involved in the treatment for concussion and vestibular disorders, which led to her interest in treating the condition. Kate is a part of the Stamford Hospital's Concussion Center multidisciplinary team and is passionate about providing the highest quality care to her patients in the outpatient rehabilitation department HSS Rehabilitation brought to you by Stamford Health. Kate not only treats concussion, but various other orthopedic and neurological conditions. She also spent two years as a research assistant in the cardiovascular research laboratory at Spaulding Rehabilitation Hospital in an adaptive rowing program.